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EFL Distance Learners' Perceptions of Attitudes, Ease of use, and Interaction as Determinants of Satisfaction

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Abstract

The aim of this study is to explore English as a Foreign Language (EFL) students' perceptions of distance learning in the aftermath of the COVID-19 pandemic lockdown. Specifically, it investigates students' attitudes, perceived ease of use, online course flexibility, and interaction as determinants of learning satisfaction, based on their experiences with distance learning in the Moroccan context. An online questionnaire was administered to 147 undergraduate EFL learners from three different higher education institutions: the Faculty of Arts and Humanities, and Higher School of Education and Training in Béni mellal, and the École Normale Supérieure (ENS) in Rabat. The research findings indicate that the main factors influencing students' online learning satisfaction are their attitudes towards online learning, online course flexibility, and student-teacher interaction. The results have implications for promoting distance learning among students.

Keywords: Distance Education; Attitudes; Interaction; Ease of Use; Satisfaction

1. Introduction

Rapid and relentless technological advancements, including the development of educational technology tools, have contributed to the widespread adoption of distance education. As a result, the use of information and communication technology (ICT) has become ubiquitous within the educational process over the past few decades in many educational institutions around the world. Consequently, distance education has become one of the most innovative teaching approaches in the twenty-first century, aligning with the post method era. One of the principles of this post method era is the integration of technology in language teaching.

Before 2020, distance education was introduced and practiced by many institutions, particularly in developed countries witnessing technological revolution, as an alternative to face-to-face traditional education. However, as an aftermath of the Corona Virus pandemic outbreak in the spring term of the year 2020, educational institutions worldwide shifted to distance education. This abrupt shift to distance education has caused many challenges and difficulties for both learners and teachers alike, particularly in institutions that had not been accustomed to this mode of education.

Although this change in the mode of teaching could be more convenient for the digital native students who have become more accustomed and attached to ICT tools, its use as a learning tool must have posed many challenges to the vast majority of students and teachers alike in the state. In fact, students have different attitudes towards the use of ICT tools for learning purposes, including the use of computers, emails, social media websites, cell phones, etc. Additionally, they have varying perceptions of the utility of ICT tools for learning compared to the traditional methods they are accustomed to. Most importantly, students vary in terms of the extent to which they are ready to accept the use of these ICT tools to learn or simply shift to online learning. Hence, all these factors might influence the quality of learning and their satisfaction with distance learning. Therefore, the objective of this study is to investigate the impact of students'

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attitudes, perceived online course flexibility, ease of use of platforms, student-student and student-teacher interaction on their satisfaction with online learning, based on their own experiences.

2. Literature review

Before reviewing the literature on distance education and the different factors that come into play to determine the learners' satisfaction with online learning, it is worthwhile to explain the different concepts used in this new model of learning. The first section of this literature review will cover such concepts as distance education, e-learning, and online learning.

Distance education is defined by [30] as a "wide range of elements and practices ranging from traditional print-based correspondence courses, to courses delivered entirely online" (p. 2). In distance education, the learning setting is no longer confined to the classroom but has changed to different places, which could serve as potential study environments such as the home, garden, workplace, cafe shop, etc. Therefore, most distance learning takes place in the different potential learning settings. Moreover, distance learning provides opportunities for synchronous learning, where instruction occurs at a specific time, as well as asynchronous learning, which can be accessed at any time based on each learner's schedule [30]. However, as Mason (1998b) argues, numerous distance education institutions provide multi-synchronous learning, which integrates both synchronous and asynchronous delivery methods, to take advantage of the benefits offered by each learning approach [cited in 30, p. 10].

On the other hand, e-learning is a concept that was first used by White in 1983 to conceptualize the use of electronic devices to facilitate the learning process. Therefore, according to [29], e-learning is defined as "learning via electronic sources, such as television, computer, videodisk, teletext, videotext" (p. 13).

Online learning is another concept related to and used interchangeably with e-learning. [30] defines it as "the delivery of a distance course using online components rather than more traditional methods of delivery" (p. 27). A common definition of online learning describes it as a form of learning that occurs either partially or fully on the net, allowing users to access resources without being limited by time or location [28]. While e-learning and online learning are used interchangeably, online learning refers to a more web-based system that provides access to learning content without being limited by time and location, which makes it distinct form e-learning. Although online learning has advantages over traditional face-to-face learning [23], obstacles and failures are inevitable in dealing with this mode of learning [see 27]. Enlisting challenges and failures faced by online learning users is beyond the scope of this study. Therefore, the focus of this study is primarily on the learners' attitudes toward online learning, the ease of use of platforms, interaction, and satisfaction.

Given the recent abrupt shift to online teaching and total reliance on internet-based education due to the Coronavirus pandemic lockdown, a model of technology adoption seems appropriate for predicting students' satisfaction with this new mode of learning. The aim of Technology Acceptance Model (TAM) is to describe the determinants of information technology acceptance [9, 11]. TAM postulates that a potential user's attitude toward using a given system or application is a function of two particular beliefs: perceived usefulness and perceived ease of use. In other words, students' beliefs—such as whether a particular system or technology is useful and easy to use—shape their attitude toward the technology and, consequently, their acceptance and adoption of it. On the one hand, perceived usefulness is defined as "the degree to which a person believes that using a particular system will enhance his or her job performance" [10, p. 320]. On the other hand, perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" [10, p. 320].

Students' attitudes towards ICT tools and distance learning are crucial for the success of this new mode of education, as they determine their readiness and acceptance of it. Therefore, it is important to define 'attitude' as a key concept, as it is essential for understanding the technology acceptance model used in this study.

Attitude is a hypothetical construct that does not lend itself easily to definition. Many theorists attempted to define attitudes. In their book titled "*The Psychology of Attitudes*", [13] defines an attitude as 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor' (p. 1). According to [13], an attitude is manifested through the expression of an evaluative approval or disproval towards stimuli. Many academics perceive evaluation as the main element of attitudinal responses [see 13, 14, 15]. In line with this, [15] describe attitude as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object" (p.6). Therefore, in this definition, attitude refers to the learned ideas or beliefs that predispose a person to act in a way that could be either favourable or unfavourable toward the object. However, theorists such as [1, 14] among others,

went even beyond the simple explanation of an attitude in terms of predisposition and favourable or unfavourable response to involve affect, cognition and behaviour. For instance, [1] contends that "people's attitudes follow spontaneously and consistently from beliefs accessible in memory and then guide corresponding behavior" (p.2). This definition shows the spontaneous and consistent attitude-behaviour connection as being mediated by beliefs stored in long-term memory.

According to technology acceptance model, perceived usefulness and perceived ease of use are assumed to be the two essential determinants of users' acceptance of computers [10]. Moreover, [9] posits that The TAM motivational variables: "attitude toward using, perceived usefulness and perceived ease of use, taken together, fully mediate between system design features and self-reported usage behavior" (p. 109). In other words, the characteristics of the system, such as usefulness and ease of use, appear to influence behaviour through the mediation of the developed attitudes, which feed into the ultimate satisfaction or dissatisfaction with the behaviour.

Distance education, similar to any other mode of teaching and learning, has its limitations. According to [25], one of the major limitations of distance education is the lack of face-to-face interaction between students and instructor and among students (p. 339), which is a key feature of traditional classes. Since students and instructors are geographically separated, face-to-face interaction is replaced by technology- and web-based pedagogical interactions. Thus, interaction is highlighted as a catalyst component of distance education [19]. The importance of interaction in distance education is well documented in literature [see 5, 6, 22]. So, in the context of distance education, [19] distinguished between three types of interaction: learner-content interaction, learner-instructor interaction, and learner-learner interaction. [6] added a fourth dimension, which is that of interaction with the system.

The research literature regarding the importance of interaction in education, particularly in web-based distance learning, is extensive [6, 22, 24, 26]. It has been argued that the increased satisfaction of both students and teachers in distance learning is determined by the quality and quantity of interactions [22, p. 22]. High-quality interactions are important in all forms of education, whether technology-based or more traditional [17]. More specifically, it is argued that interaction is a critical indicator of student satisfaction [17, 20].

2.1. Previous research

Previous studies on distance learning have sought to identify and predict the various variables that shape learners' online learning satisfaction. Some of the reviewed studies suggest that students' satisfaction is related to factors such as attitudes, perceived ease of use, course flexibility, student-student interaction, student-instructor interaction, and course organization [see 3, 4, 8, 21, 22, 26, 27].

[32] conducted a study to examine students' attitudes toward e-learning and found that gender, technology usage, and skills had statistically significant effects, with students generally holding positive attitudes toward e-learning. In contrast, [8], in their longitudinal study, found no statistically significant differences in satisfaction based on gender, age, or level of study. Additionally, participants in their study rated their online learning experience as moderately satisfactory, with "lack of interaction" being the main reason for dissatisfaction.

[27] investigated the critical factors which affect learners' satisfaction in online learning. The results of their study revealed that among the main factors that affect learners' perceived satisfaction are computer anxiety, e-Learning course flexibility, perceived usefulness, and perceived ease of use.

[26] investigated the relationship between student-instructor and student-student interactions and student learning satisfaction in a distance learning context. The study found that both student-instructor and student-student interactions were significant determinants of student learning satisfaction. Similarly, [16] examined the extent to which interaction and other predictors contribute to student satisfaction in online learning settings. Their results indicated that learner-instructor interaction is a strong predictor of student satisfaction, whereas student-student interaction did not significantly contribute to predicting student satisfaction. Likewise, [31], who investigated the impact of various forms of interaction on the satisfaction of 280 undergraduate students at a higher education institution in Singapore, found that different aspects of student satisfaction were associated with three types of interaction: formal student-student, informal student-student, and student-instructor.

The present study aims to investigate key determinants of Moroccan students' satisfaction with distance learning. The first objective is to explore students' attitudes toward distance education, their perceptions of ease of use, online course flexibility, and interactions with instructors and other students, as well as their overall satisfaction with this mode of

learning. Additionally, the study seeks to determine which of these factors predict learners' satisfaction within the Moroccan context.

3. Research Methodology

The aims of the present study are to explore EFL students' online learning experiences and their level of satisfaction with distance education at three Moroccan higher education institutions. The study employs a quantitative research design, using an online questionnaire to capture students' perceptions of online learning and examine the impact of demographic variables, such as gender, on their beliefs.

The present study is designed to address the following research hypotheses: Research Hypothesis 1: Students have positive attitudes towards distance learning. Research Hypothesis 2: There is a significant impact of students' perceptions and attitudes towards distance learning on their satisfaction with it.

3.1. Sample

The sampling technique used in this study is convenience sampling. The researcher selected the sample from individuals who were readily accessible [7]. The study was announced online to various EFL classes, including those in my own institution, across two cities: Beni Mellal and Rabat. Students were chosen based on their availability and willingness to participate in the study.

The participants in this study consisted of 147 EFL undergraduates from three higher education institutions: the Faculty of Arts and Humanities (112, 76,2%), the Higher School of Education and Training (11, 7,5%) in Beni Mellal and the School of Education in Rabat (24, 16,3%). 54 of the participants were male (36,7%), and 93 of them were female (63,3%) participants. Regarding their instructional levels, 60 students (40.8%) were in Semester 2, 31 (21.1%) were in Semester 4, and 56 (38.1%) were in Semester 6. Concerning the platforms used for online learning, 95 students (64.6%) reported using Microsoft Teams, 26 students (17.7%) used Google Classroom, 14 students (9.5%) used Moodle, 9 students (6.1%) used Google Meet, and 3 students (2%) used Zoom.

3.2. Instrumentation

This study investigated Moroccan undergraduate students' self-reported attitudes and perceptions of distance education through responses to an online survey. Students' attitudes and perceptions of online learning were measured using 34 forced-choice items based on existing literature in the field of online leaning, particularly [1]. The survey collected data on four demographic variables: gender, instructional level, home institution, and platforms used for online learning. In addition to these demographics, the survey included five-point-Likert-type items with response options ranging from 1= "strongly disagree" to 5= "strongly agree." Higher scores indicate a more positive perception of the distance education-related trait being measured by the subscale. The questionnaire included six subscales, which are introduced below.

3.2.1. Independent variables

- Attitudes towards online learning: The items of this subscale are developed for the sake of this study to measure students' attitudes towards online learning. It includes five statements, such as the following: 1. I enjoy learning courses online. 2. I think that learning courses online is efficient.
- Online course flexibility [2]: This subscale assessed students' perceptions of the flexibility characteristic of distance education. It contains five statements as follows: 1. Taking courses via the Internet allowed me to arrange my work for the class more effectively. 2. Taking courses online allowed me to spend more time on non-related activities.
- Perceived ease of use of platform [2]: This subscale assessed students' perceptions of ease of use of the platforms employed in distance education. It comprises five statements, such as the following: 1. Learning to operate web-based learning platform would be easy for me. 2. I would find it easy to access the web-based learning platform to accomplish what I need to do.
- Learner perceived interaction with other students [2]: This section included items regarding the students' perceptions of the extent to which distance learning increased their chances of interacting with other students. It contains five statements, such as: 1. I learned more from my fellow students in online classes than in traditional class courses. 2. Interacting with other students using web-based learning platforms became more natural as the course progressed.
- Learner perceived interaction with instructor [2]: This section included items regarding the students' perceptions about the opportunities that distance education provides for interacting with their instructor. It

consists of five statements as follows: 1. Interacting with the instructor using a web-based learning platform became more natural as the course progressed. 2. Interaction with the instructor via the platform is easier than in traditional classroom settings.

3.2.2. Dependent variable

- Perceived online learning satisfaction [2]: This subscale measured students' satisfaction with their distance education experience. Higher scores indicated greater levels of satisfaction with distance education. It includes five statements, such as: 1. I am satisfied with my online learning experience. 2. I feel that I have learned more from online courses than from classroom instruction.

Regarding the reliability of the scales, the learners' attitudes scale achieved a Cronbach's alpha of 0.86. The online course flexibility scale had a reliability coefficient of 0.79. The scales for ease of use of platforms and student-student interaction both reached a reliability coefficient of 0.81. The student-teacher interaction scale obtained a Cronbach's alpha of 0.80, and the online learning satisfaction scale reached a Cronbach's alpha coefficient of 0.84.

3.3. Data analysis

The questionnaire data are analysed quantitatively using different statistical tools assisted by the Statistical Package of the IBM statistics program (SPSS), version 21. Descriptive statistics, including means and standard deviations, are calculated for all scales. Additionally, inferential statistics, such as the independent t-test, are used to determine whether there are significant differences between the means of the two groups based on gender. Finally, multiple linear regression is conducted to identify the independent variables that explain the dependent variable, satisfaction. This regression analysis allows us to predict the value of the dependent variable (Y) based on the linear relationship with the independent variables (X) [18].

4. Research Findings

First, descriptive statistics is carried out in order to gain a general understanding about the sample's attitudes and perceptions regarding online learning.

Table 1 Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Learners attitudes	147	1.00	5.00	3.08	0.93
Online course flexibility	147	1.20	5.00	3.00	0.83
Ease of use of platforms	147	1.33	5.00	3.48	0.80
Student-student interaction	147	1.00	5.00	2.80	0.93
Student-teacher interaction	147	1.00	5.00	3.15	0.86
Online learning satisfaction	147	1.00	5.00	2.68	0.91
Valid N (listwise)	147				

As suggested by Table 1, the results of the descriptive statistics demonstrate that the majority of the respondents' scores on the different variable range from average to relatively high ones. For instance, students' score on online learning attitudes is relatively high (M= 3.08; SD= 0.93). This means that the sample of the study have positive attitudes towards online learning. Students' perceptions concerning the flexibility of the online courses and ease of use of learning platforms are quite positive as well with mean scores of (M= 3.00; SD= 0.83) and (M= 3.48; SD= 0.80) respectively. This implies that the respondents seem to be familiar with the different learning platforms and appreciate the flexibility of the online courses, a feature which traditional-class courses lack. As far as student-student and student-teacher interactions, they are moderately high (M=2.83; SD=0.93) and relatively high (M=3.15; SD=0.86) respectively. Being the lower mean score of both interaction types registered by the sample, the student-student interaction seems be more constricted than teacher-student interaction in online learning. Finally, the sample's score on the online learning satisfaction is averagely positive (M= 2.68; SD= 0.91).

Table 2 The impact of gender on students' attitudes and perceptions about online learning

	Sex	N	Mean	Std. Deviation	t	Sig. (2-tailed)
Learners attitudes	male	54	3.35	0.84	2.75	0.00
	female	93	2.92	0.95		
Online course flexibility	male	54	3.33	0.81	3.41	0.00
	female	93	2.82	0.79		
Ease of use of platforms	male	54	3.83	0.66	3.89	0.00
	female	93	3.28	0.81		
Student-Student interaction	male	54	2.91	0.76	.99	0.32
	female	93	2.74	1.02		
Student-Teacher interaction	male	54	3.20	0.86	.46	0.64
	female	93	3.12	0.86		
Online-learning satisfaction	male	54	2.94	0.89	2.40	0.01
	female	93	2.54	0.90		

An independent-sample t-test was conducted to investigate whether there are significant differences between male and female respondents' scores on the online learning-related variables. The results revealed significant differences between male and female respondents regarding their attitudes toward distance learning, perceptions of online course flexibility, ease of use of learning platforms, and overall satisfaction with distance learning.

First, significant differences were found in respondents' scores on attitudes toward online learning (t = 2.75; p ≤ 0.01), with male respondents having a higher mean score (M = 3.35; SD = 0.84) compared to female respondents (M = 2.92; SD = 0.95). Similarly, there were significant differences in perceptions of online course flexibility (t = 3.41; p ≤ 0.01), with males reporting a higher mean score (M = 3.33; SD = 0.81) than females (M = 2.82; SD = 0.79).

A similar pattern of significant differences was observed in respondents' perceptions of the ease of use of platforms (t = 3.89; p ≤ 0.01), with males scoring higher (M = 3.83; SD = 0.66) compared to females (M = 3.28; SD = 0.81). Given the above results, it is not surprising that similar patterns were found in male and female respondents' satisfaction with the online mode of learning (t = 2.40; p = 0.01), with male respondents reporting a higher level of satisfaction (M = 2.94; SD = 0.89) compared to female respondents (M = 2.54; SD = 0.90). On the other hand, the differences between male and female students' views on student-student and student-instructor interactions in online learning were not significant.

However, there were no significant differences between male and female students regarding their views on student-student and student-instructor interactions in online learning.

Table 3 The impact of students' attitudes and perceptions about online learning on their satisfaction

Model		Beta	t	Sig.
	Learners attitudes	0.35	4.30	0.00
	Online course flexibility	0.30	3.98	0.00
	Ease of use of platforms	0.05	.99	0.32
	Student-student interaction	0.18	2.15	0.03
	Student-teacher interaction	0.14	2.97	0.00

In order to assess the contribution of the investigated students' attitudes and perceptions about online learning in predicting online learning satisfaction, a multiple regression analysis was conducted.

The regression results show that students' attitudes towards distance learning and online course flexibility affect their distance learning satisfaction: attitudes (t= 4.30; P≤ 0.01) and online course flexibility (t= 3.98; P≤ 0.01). Moreover, student-teacher interaction also contribute to the prediction of learners' distance learning satisfaction (t= 2.97; P≤ 0.01). On the other hand, the impact of student-student interaction and ease of use of platforms on learners' distance learning satisfaction is not significant.

5. Discussion

The aim of the present study was to unveil the impact of Moroccan EFL students' attitudes towards distance education, perceived ease of use, online course flexibility, and perceived interaction with the instructor and other students on their satisfaction with this mode of learning.

In several areas, the results of the study were consistent with other studies [8, 21, 26, 32]. For instance, in line with the study results of [32], the results of this study revealed that the sample of the study have positive attitudes towards distance learning. This implies that the students seem to accept this new mode of learning. Moreover, their perceptions about the flexibility of the online courses and ease of use of learning platforms are quite positive as well. Being digital natives, the students seem to find the learning platforms easy to use while appreciating the online course flexibility. As for student-student and student-teacher interactions, they are rated as moderately high and relatively high, respectively. The lower mean score of student-student interaction, compared to teacher-student interaction, suggests that student-student interaction is more constrained in online learning. Additionally, in accordance with [32] and [21] studies, the sample of the current study is moderately satisfied with distance learning. Overall, while the participants have positive attitudes towards distance learning and appreciate its flexibility and ease of use, their satisfaction with this mode of learning remains moderate. One possible reason for this moderate level of satisfaction with distance learning could be the abrupt shift to this new mode of learning, which students were not accustomed to, as all the learning was carried out face to face prior to the pandemic.

It is found that the main factors that affect Moroccan students' online learning satisfaction are their attitudes towards online learning, online course flexibility, and student-teacher interaction. This result conforms to and consolidates results of previous researchers. For instance, the study of [27] found out that factors such as attitudes and course flexibility contribute to the perceived satisfaction. Indeed, students' attitudes are a catalyst in mediating between beliefs about the utility of a given system or application and their satisfaction with that technological tool or its acceptance. However, ease of use, which is one of the determinants of TAM model along with usefulness [see 9, 11] was not found to instigate satisfaction. Moreover, in line with [8] and [16] study results, this study revealed that student-instructor interaction is among the main predictors of student satisfaction. This finding suggests that student-teacher interaction is perceived by the sample as more vital for the online learning process than student-student interaction, as it significantly influences their distance learning satisfaction. One implication of this result is that in distance learning, where face-to-face interaction is absent, teachers need to design their courses in ways that foster interpersonal interactions, regardless of geographical distance.

Unlike [8] study results, which revealed no statistically significant differences at the level of satisfaction based on gender, this study results indicate that male students display higher attitudes towards online learning, and show more positive perceptions of online course flexibility and ease of use of platforms than female ones. Therefore, male learners exhibit more satisfaction with the online mode of learning than female ones.

5.1. Implications of the study

The findings of the study have implications for promoting online learning among students. Teachers need to effectively utilize the flexibility of online courses and their interactions with students to enhance their attitudes toward distance education and, consequently, their satisfaction with this mode of learning.

6. Conclusion

This study investigates the impact of Moroccan EFL students' attitudes towards distance education, perceived ease of use, online course flexibility, and perceived interaction with the instructor and other students on their satisfaction with this mode of learning. The results of this study indicate that, although the participants of the study have positive attitudes towards online learning and perceive it as flexible and easy to use, their overall satisfaction with this mode of

learning is moderate. Furthermore, the main factors shaping students' satisfaction with online learning are their attitudes towards it, the flexibility of the online courses, and student-teacher interaction.

Compliance with ethical standards

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Disclosure of conflict of interest

The author has no conflicts of interest to declare. The author alone is responsible for the content and writing of the paper.

Statement of informed consent

Informed approval was obtained from all participants involved in the study.

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