



***The effectiveness of e-learning in the Algerian University
-Oran's University as a Model-***

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Abstract

The main aim of this study is to demonstrate the impact of e-learning on the level of student achievement at Oran's University. The study sample consisted of 150 students from various disciplines. It was randomly selected. Many statistical methods were used to address the search results such as (arithmetic mean, standard deviation and percentages). According to the SPSS program output, the study confirm the effectiveness of e-learning and its positive role in motivating students. The students are aware of the concept of e-learning and they agree that the site (e-learning) contributed to improving the level of educational achievement.

Keywords: E-Learning; University of Oran; Advantages; Evaluation; Effectiveness.

1. INTRODUCTION

The use of information and communication technologies (ICTs) nowadays has political, cultural, economic and social implications. Indeed, we note that thanks to ICTs, many countries in the world such as the United States, Japan, England, etc., have become countries of knowledge, scientific research and information.

These computerised countries provide their citizens with different chances and opportunities in various fields: trade, health, education, etc. Thus, the individual is called upon to develop new skills and to broaden, to a greater or lesser extent, his or her vision of the new technologies and the Internet (HAMDAD, 2021, p. 233).

The use of Information and Communication Technologies (ICTs) is gradually being adopted in the new teaching practices of schools and universities for both teachers and students. This practice revolutionized the world of education and training and allowed the emergence of e-learning (SLIMANI & BENTAHAR, 2019, p. 85).

The emergence of e-learning is one of the most remarkable reflections of using technology in scientific research. The concept of e-learning is predominantly centered on employing advanced technical tools in the educational process. Moreover, it goes beyond what is called physical or spatial presence; where knowledge reaches students and learners while they are in their homes. They attend lectures and lessons through this new style, and they communicate and conduct discussions with professors without the need to go to university. Recently, the world is witnessing a digital revolution. Information and communication technologies ICTs marked the decisive factor in these transformations and changes, which impacted many fields, especially the education and scientific research sector.

Recently, the Arab countries, including Algeria, have adopted this style of education and the new forms of these universities, with the advent of the Internet. The internet and the services it provides have become a part of the life of modern societies.

Its technologies that rely on computers and networks have invaded all life facilities, and resulted in enabling it to transform the face of life through providing the necessary tools for communication in an interactive way between the various layers of the society.

Therefore, it has become a necessity for any society that seeks development to spread informatics culture to cope with the changing needs of the era. Undoubtedly, the university has a special place in the society due to the responsibility it is in charge of such as producing good citizens. The world now is living the technology and internet era which helps go beyond the geographic borders in education. Today we speak about e-learning, virtual learning, or distant learning which are now very crucial for improving the education quality owing to the flexibility regardless time, location, age, social and professional status; this flexibility is not found in traditional learning (Bourane & Ramani , 2021, p. 224). Furthermore, the electronic revolution which started with the appearance of the internet brought about radical changes in educational styles. The concept of e-learning gained solid ground internationally thanks to the advantages it has such as developing intellectual capacities and practical and scientific skills. In the long run, the Algerian universities will find themselves obliged to implement recent training projects such as virtual learning which helps the student study anywhere without the need for a teacher permanently through taking advantage of the advantages provided by ICTs in the process of modernizing the higher education and scientific research sector.

Through this study, we seek to pinpoint the significance of e-learning in improving the level of academic performance of students and try to assess the experience of Oran's University e-learning website and its level of efficacy. The study found that different students are enthusiastic about using this technology. We reached acceptable results with students through using this site and benefiting from its advantages, as well as motivating students and improving their academic performance.

Problematic:

E-learning is one of the most rapid growing domains due to the scientific and technical developments and the increasing demand for the integration of technology in education in order to build a generation that can cope with the recent terms. This led to the increasing need for technology in education. Thus, it is necessary for educational institutions to prepare their students to face the recent developments and push them to the use of e-learning. To do so, we have to study the status-quo of these institutions to suggest the best ways for development.

The integration of e-learning has become an obligatory way, to access information and produce knowledge, this technique tends to be generalized in universities around the world, where it represents an essential factor of performance (MADENE, 2021, p. 941).

In the era of the spread of the Covid-19 virus throughout the world, Algeria, like many countries, is opting for countries are opting for sanitary containment as a prevention strategy to deal with the spread of the of the coronavirus. To ensure the follow-up of training in schools, high schools and universities, the use of the internet is a necessity, even an obligation, in order to keep the pedagogical and didactic contact between the different components of the teaching-learning situation.

Technology and e-learning have been used in order to overcome the deficits of the classical ways of teaching or to substitute them if necessary. Such substitution could be exemplified by what happened during the COVID-19 pandemic where universities around the world had to make recourse to distant education (Azieb, Bougherza, & Boulfelfe, 2021, p. 691).

Based on what has been said so far, we find ourselves obliged to grapple with the following question: To what extent has e-learning of Oran University contributed in increasing the students' levels of assimilation at the faculty of economics, social, and human sciences during the academic year 2020-2021?

Furthermore, the following sub-questions arise:

- What is meant by e-learning and virtual university? And what is their status-quo in Algeria?
- What are the characteristics of e-learning?
- What are the pros and cons of e-learning?
- To what extent is e-learning effective at the University of Oran concerning the students' performances?

Aims of the study:

The study aims at:

- 1- Shedding light on the concepts and terms of e-learning and its challenges and obstacles.
- 2- Showing the importance of e-learning for the Algerian university.
- 3- Showing the extent to which students of Oran University interact with the virtual learning site of the university.
- 4- Suggesting ways to face the obstacles that stand in front of e-learning at the university based on the findings of the study.

Hypotheses:

The study is based on one main hypothesis and two sub-hypotheses as shown in figure 1.

-The main hypothesis:

E-learning helps to improve students' educational attainment

- Sub-hypothesis one:

E-learning impacts positively the students' performance.

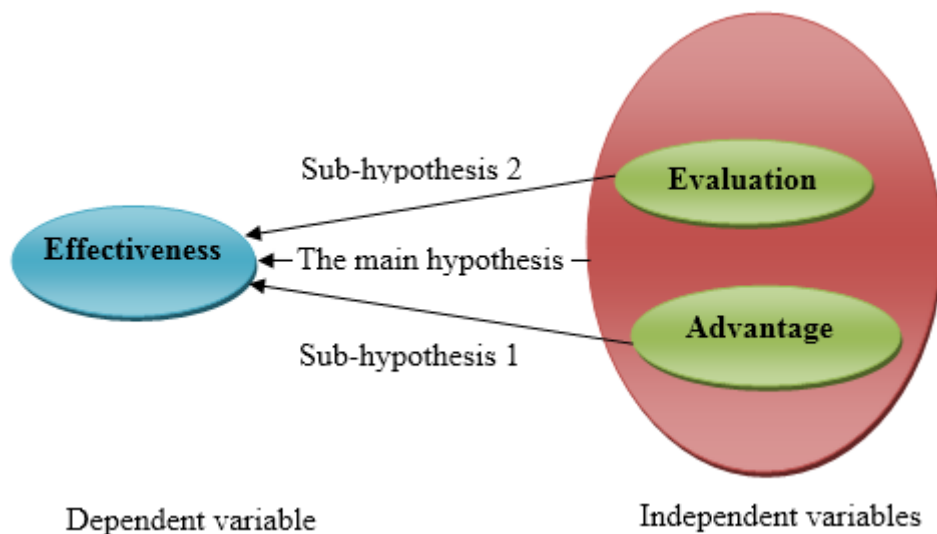
- Sub-hypothesis two:

The positive evaluation of Oran's University site web from the students' point of view increases the level of effectiveness of the e-learning.

To answer the various questions, the study has been divided into the following chapters:

- ✓ Definition of e-learning;
- ✓ Advantages and disadvantages of E-learning and its Obstacles;
- ✓ Practical Study on Oran's University E-learning Site.

Fig.1. The study model



Source: Designed by the author.

2. What is e-learning?

2.1 Definition of e-learning:

E-learning, online learning, or digital learning is an evidence based strategy for actively engaging students in the learning process (Sabri & Benmostefa, 2021, p. 246).

E-learning, also called virtual learning, is a form of distant education. It is a way of training and learning using ICTs such as computers, nets, and multimedia; it can solve some problems. It relies on pictures, drawings, computers, data-shows, digital tablets, smartphones, electronic conferences (Djebbari & Djebbari, 2021, pp. 79-81), ...as shown in Figure 2.

Fig.2. Diverse tools and media of e-learning



Source: SAYAH Fatima, 2021, Evaluating the Effectiveness of e-Learning in the Algerian University From Students' Point of View -Skikda's University as a model- Journal of Studies and Research, Volume 13, Number 1, p. 486.

According to the European Union, e-Learning is defined as: "the use of new multimedia technologies of the Internet to improve the quality of learning by

facilitating access to resources and services on the one hand, and distance exchange and collaboration on the other hand" (AWT, 2008). It is also defined as the education that is provided via internet or intranet, or through the multimedia such as CDs and DVDs (Bosman , 2002, p. 1). « E-Learning is the use of information and computer technologies, to create learning experiences » (Horton, 2006, p. 9). It is a creative way to transmit knowledge characterized with good design, interactivity, and student-centeredness for any student anywhere at any time thanks to the characteristics and the resources available in digital technologies. It is a system that allows transmitting the scientific subject through various tools without the need of the students' presence in the classrooms regularly since the student will be responsible for his learning. It relies on images, videos, research engines, digital libraries, and digital portals either distantly or in presence. It relies on many tools such as internet, email, and computer (Mikidache, 2021, p. 364).

E-learning is defined as "the education that is characterized by the ease of updating and modifying the information provided, beside increasing the possibility of communication to exchange views, experiences and views between students and their teachers or between students and each other" (ghazali, 2017, p. 36).

It is a set of concepts, methods and tools using multimedia and Internet technologies to improve the quality of learning by facilitating access to resources and services, as well as remote exchanges and collaboration (DEIRA & KESSIRA, 2016, p. 139).

Another definition of e-learning focuses on organisational purposes. Thus, according to the definition issued by the Henri Tudor Research Centre in Luxembourg, e-learning represents "any mode of learning based partly or entirely on information and communication technologies with the aim of facilitating the organisation and access to training and learning (Cedefop, 2005, p. 20).

Meeting the needs of a digital age with regard to higher education and new critical thinking skills' demands involves mastering certain digital skills and especially eportfolio (SABRI, 2018).

2.2 Characteristics of e-learning:

E-learning has many characteristics such as:

- It is so flexible that the students can study at anytime anywhere according to their pace;
- It is not limited to providing lessons and content; rather, it gives importance to the curriculum elements (objectives, content, styles, assessment, and tasks);
- It relies on multimedia (audiovisuals, texts, motion) via electronic devices such as computers;
- It changes the image of the traditional learning, where the teacher is the source of knowledge, into an interactive atmosphere between the student and the various learning resources, the student and his colleagues, and the student and his teacher. The student does not substitute the teacher; rather, it assists him (SAYAH , 2021, p. 475).

2.3 The Importance of E-learning:

Its most important goals can be summarized in the following points (BELLATRACHE & ALOUTTI , 2020, p. 269):

- The continuous need for training and education due to the development in the different scientific domains;
- The need for education and training in the suitable time and place for the learner;
- E-learning provides a new culture that is digital which focuses on treating knowledge. This culture enables the learner to control his learning through building his own world when interacting with the other available electronic data; this corresponds with the constructivist learning theory;

- It provides a rich educational atmosphere that has many sources and serves the educational process;
- It is one of the most recent styles in the domain of education and training as it works to reduce the costs in big companies such as the Saudi ARAMCO and ABM and CISCO which used this technique and saved lot of money that had been allocated for training and education;
- It helps exchange expertise through setting communication channels and forums that enable the learners, trainers, and all the stakeholders to share experiences virtually;
- It provides educational opportunities for all the layers of the society;
- It gives access to education anytime anywhere according to the learner's choice;
- It helps developing and enriching the learning process;
- It enhances the efficacy of the teachers and increases their experience in preparing educational subjects;
- It helps reducing the costs of education;
- It boosts autonomy and self-reliance.

E-learning is characterized with high flexibility as it takes place anywhere anytime, with any tool, and in any domain. Table 1 shows the most important differences between traditional education and e-learning (SAYAH , 2021, p. 482).

Table 1. Comparison between virtual learning and traditional learning

Element	e-learning	Traditional learning
The subject from the content, style and design	Well-designed and exciting	Traditional, limited and typical
Access	In real time at any time	Limited

Quality	Constant	Variant
Results measurement	Automatic	Hard
Data storage	Constant	Variant
Relative cost	Low	High
Satisfaction	Generally high	Variant
Suitability	Very high	Variant
Flexibility	Very high	Limited
Autonomy	Very high	Limited
Dialogue	Universal	Local/regional
Creativity opportunities	High	Variant

Source: SAYAH Fatima, 2021, op-cit, p. 482.

3. Advantages and disadvantages of E-learning and its Obstacles:

3.1. Advantages of E-learning:

Today, the world needs e-learning to keep up in pace with the era's increasing demands. The e-learning has many characteristics that can overcome a lot of obstacles that hinder the spread of education worldwide.

Interestingly, embarking students in an online learning course of action might help them develop valuable skills such as collaboration, problem-solving, critical thinking, communication, creativity, and navigating and evaluating information through technology. These skills as well as others obtained through e-learning are recognized as 21st century skills since they are essential for success in the 21st century workplace (Sabri & Benmostefa, 2021, p. 246) and (LAHOUAL & SOUISSI, 2020, p. 157).

It enables the learner to choose the time and place of study, and re-study if he wants. Its pros can be summarized in the following points (KESSIRA & KECHAD , p. 24):

- It uses the technological advance and ICTs in making a giant leap in education and in creating new learning styles that overcome the obstacles of traditional learning;
- It widens the learners' and teachers' knowledge;
- It equips students with the necessary skills for the use of ICTs;
- It gives an easy access to information and saves times;
- It helps overcome rarity in some scientific fields through enabling the supervisor to supervise many students;
- It allows a flexible schedule that balances between studies and work;
- It is the best solution to teach the individuals who are geographically far;
- It realizes life-long education;
- It develops the teacher's role in the educational process so that he can cope with the continuous scientific and technological developments;
- It lowers the costs and saves time since there is no need to travel;
- It is characterized with the diversity of the educational tools and the educational subjects starting from the normal texts, images, videos, visual conferences, chats, emails...etc;
- It develops the skills of using ICTs;
- It helps spread the electronic culture in the society to make an electronically intellectual society that keeps up in pace with the technological developments;
- It can be a direct process with direct contact between the teacher and the student, or indirect where the subject is available on the net for all the learners at anytime;

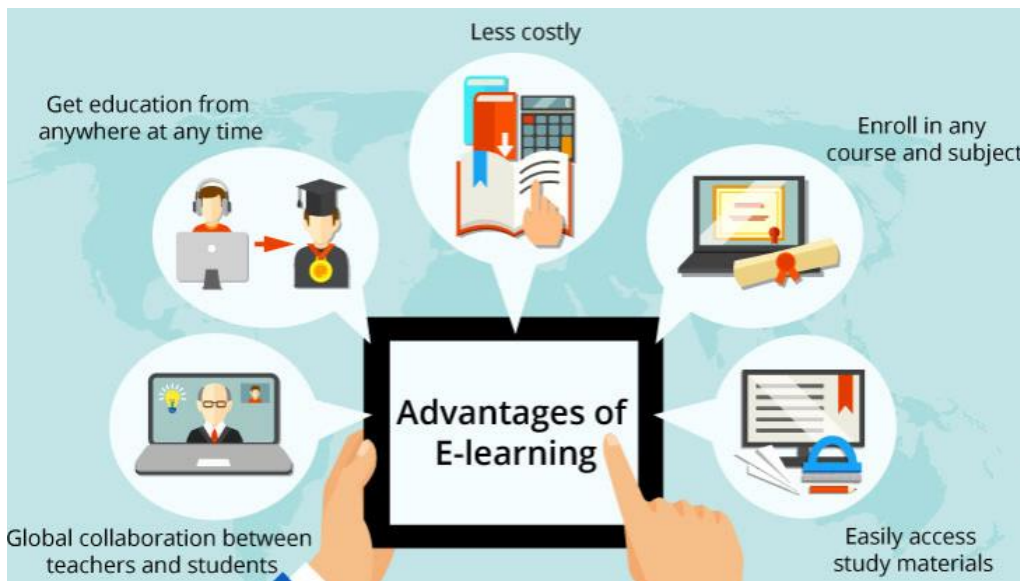
- It helps interaction between the various cultures;
- It widens the student's communication through local and international communication nets;
- It increases the learner's competencies and performance, and develops his character and autonomy, as shown in Figure 3 (Chloe , 2021);

E-learning is different from the other learning styles in the sense that it takes place at the suitable time and place based on the learner's personal needs concerning content and form and pace; each learner moves to the next step when he makes sure he mastered the first;

-Theoretically, it establishes a culture that can be called "digital culture". It is different than the traditional "the print culture" in the sense that it focuses on processing knowledge while the traditional produces it. Through this culture, the learner can monitor his learning through building his own world when interacting with the other data that are available electronically; this is the basis of constructivism where the learner becomes the axis of the educational process unlike the traditional methods;

- It helps in providing learning opportunities for all the layers of the society regardless their sex or social class. Furthermore, it enables those who did not finish their studies to carry on their courses. Moreover, it develops the mind, enriches education, and gives freedom of expression as the student can ask at anytime without any fear or shyness like what happens when he is surrounded by colleagues. (LAHOUAL & SOUISSI, 2020, p. 158).

Fig.3. Some Advantages of E-learning



Source: [Chloe Daniel](#) August 27, 2021, [The Ultimate Guide of E-learning, Methods, Advantages, and Why you Need?](#), Mytutorsource, <https://mytutorsource.com/blog/e-learning-2/>

3.2. Disadvantages of E-Learning:

Despite the advantages of e-learning, it has some negative sides:

- The learner does not get an instant feedback;
- The absence of the human touch and face to face interaction;
- Difficulty of evaluation and controlling in exams;
- Low quality education;
- Focus on the scientific side in the educational process;
- The irrational use of technology in the non-productive countries and spread of plagiarism;
- Marginalization of the teacher;
- Difficulty of collective interaction between the students, and the students and the teacher;

- Absence in conferences;
- Focus on audio-visual senses rather than the rest of the senses such as touching, smelling which causes a deficiency in practical and scientific studies;
- The competition between e-learning and traditional learning causes a collective shift towards the electronic universities;
- Hacking databases and sites;
- Difficulty of performing social, cultural, and sport activities that accompany the scientific activities impacts the learner's character negatively;
- The possibility of cheating as about 695 cases have been reported in 2014 where students resorted to cheating while 227 students relied on plagiarism (SAYAH , 2021, p. 478).

3.3 Obstacles of E-Learning:

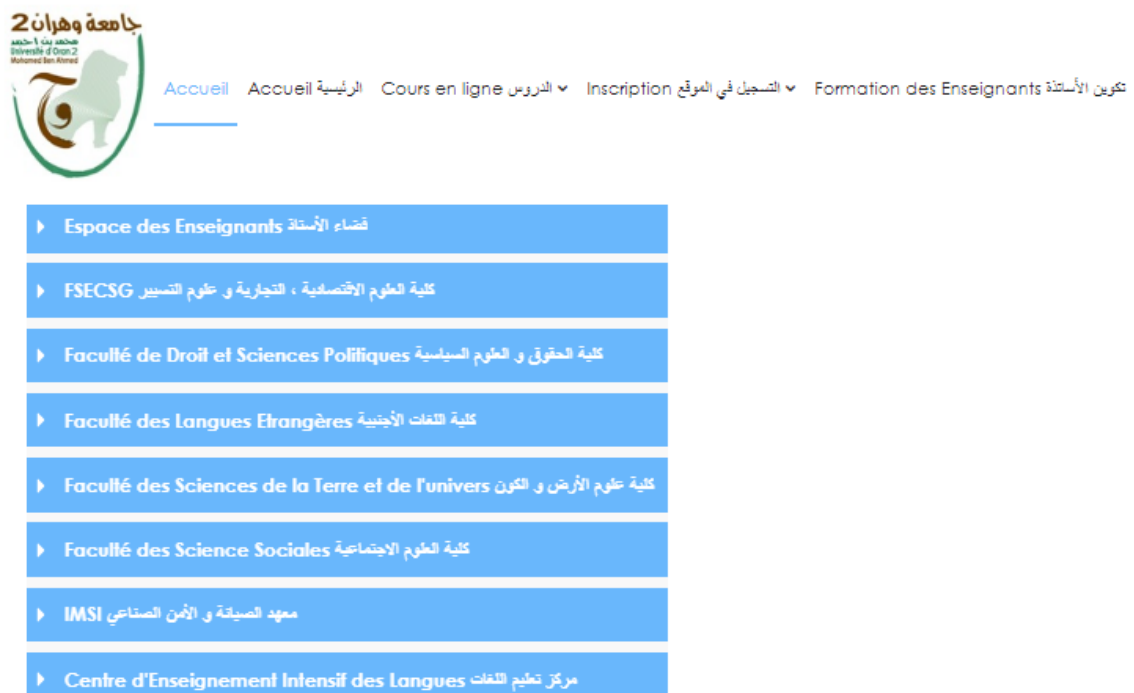
E-learning in the Algerian university faces many obstacles such as:

- Low internet access: internet access in Algeria is among the lowest in the world;
- Weakness of the universities sites: sites are not updated and organized due to the absence of specialists in this domain;
- Lack of the teachers' awareness and care about e-learning due to the negligence of teachers to such kind of education as they belong to the old educational generation;
- Lack of importance from the university in e-learning: it is not activated in some countries as they do not deploy all their capacities;
- Absence of the student's desire in e-learning as he wants ready-made conferences and prefers traditional learning since it does not require the student to make efforts (SAYAH , 2021, p. 478).

4. RESULTS AND DISCUSSION

In order to solve the issue of lack of supervisors, improve the quality of training, and keep up in pace with the quality requirements, some new ways of training and education that include new pedagogical measures have been adopted. Therefore, the national project of distant learning has been launched aiming at making a leap in education and scientific research. The Ministry of Higher Education and Scientific Research has started since 2003 equipping all the institutions with the e-learning equipments. Oran's University has been among the first to adopt e-learning. Figure 4 shows the electronic site of the university.

Fig.4. The e-learning platform of Oran's university



Source : <https://elearn.univ-oran2.dz/>

4.1 Methodology:

Through this study, we try to show the extent of e-learning impact on the students' performance and its efficacy on the university students (university of Oran). The questionnaire has been designed according to Likert 5 points scale where each statement has 5 choices: strongly agree, agree, neutral, disagree, and strongly disagree.

Each choice has 5 measurement degrees from 5 to 1 according to the order as shown in table 2 (Harold & Terano , 2015, p. 91) and (Owusu-Manu, Torku , Pärn, Addy ,, & Edwards, 2017, p. 1849).

The 5-point Likert scale analysis is frequently used because respondents can easily answer questions in this format. It is usually made up of a 5-point grading scale running from end to another with a neutral point in the middle.

The Likert scale is used to measure respondents' attitudes to a particular question or statement. The Likert scale asks how much a person agrees or disagrees with a particular statement or question.

A Likert scale is a uniform scale from which respondents choose the level of agreement or disagreement. It can be used to measure the analysis of the product or service, whether the respondent is satisfied or has problems with a particular product or service.

Table 2. Likert scale interpretation and distribution of values

Likert Scale	Likert description	Range-Value	Verbal Interpretation
5	Strongly agree	4.50-5.00	Highly Acceptable
4	Agree	3.50-4.49	Acceptable
3	Neutral	2.50-3.49	Moderately Acceptable
2	Disagree	1.50-2.49	Fairly Acceptable
1	Strongly disagree	1.00-1.49	Not Acceptable

Source: Harold Jan R. Terano, Development and Acceptability of the Simplified Text with Workbook in Differential Equations as an Instructional Material for Engineering, Asia Pacific Journal of Multidisciplinary Research Vol. 3 No. 4, 89-94 November 2015 Part I, p. 91. And Owusu-Manu¹ , D., Torku² , A., Pärn³ , E., Addy⁴ , M.N. and Edwards⁵ , D.J., 2017, AN EMPIRICAL ASSESSMENT OF INNOVATION

PRACTICES OF QUANTITY SURVEYING FIRMS IN GHANA, Journal of Construction Project Management and Innovation Vol. 7 SI (1): p. 1849.

The study has been carried out during the period from 21-May-2020 to 30-November11-2021 on the university students in many fields (economics, management and commerce, social and human sciences). To design the questionnaire, we relied on the study of Ali Qashmar (2018), (CHIG , 2008, p. 497), Walid Ahmed Ghitan, El Mhissen et al., Kleiman and Djibrin et al. We designed a questionnaire of 39 statements.

4.2 Sample:

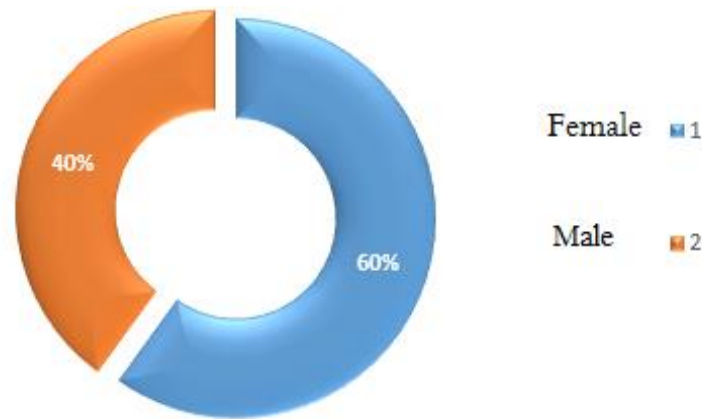
The sample of the study is made up of 150 students from the University of Oran, Females represent 60% as shown in table 3 and figure 5. We can notice the disparity in the sample members as the category of 21 to 22 years old is the most recurrent with a rate of 80%, then from 23 to 24 with 11.33%, and 2.67% for the last category of 26 years old and more as shown in tables 4 and 5, and figures 5 and 6.

Table 3. Respondants' Demographical Features

Demographical Variables	Demographical Features	N	%
Sex	Female	90	60
	Male	60	40
	Total	150	100
Age Group	21-22	120	80
	23-24	17	11.33
	25-26	9	6
	Over 26	4	2.67
	Total	150	100

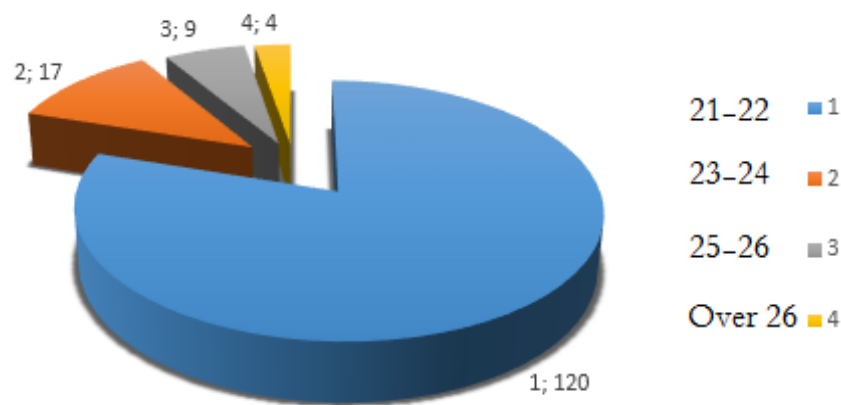
Source: Conceived by the author based on the Data collected

Fig. 5. Distribution of the sample by gender in percentage



Source: Conceived by the author based on the Table N° 3

Fig. 6. Distribution of the sample by Age Group in percentage



Source: Conceived by the author based on the Table N° 3

4.3 Statistical Analysis of the Study Results and Hypotheses Testing:

4.3.1 Validity of the study tool:

To confirm the validity of the questionnaire and its internal consistency, we used Chronbach's Alpha to check the stadiness which must be more than 0.6. To measure the correlation, the internal consistency, and to analyze the independent variables and filter the study model we used Kaiser- Meyer- Olkin (KMO) coefficient whose value must be superior to 0.5. (SAYAH , 2018, p. 233) To analyze the data, it is usually coded as follows (Table 4).

Table 4: KMO measure and interpretation

KMO measure	Interpretation
$KMO \geq 0.90$	Marvelous
$0.80 \leq KMO < 0.90$	Meritorious
$0.70 \leq KMO < 0.80$	Average
$0.60 \leq KMO < 0.70$	Mediocre
$0.50 \leq KMO < 0.60$	Terrible
$KMO < 0.50$	Unacceptable

Source: SAYAH Fatima, 2018, Le rôle de e-leader d’opinion dans la décision d’achat des produits innovants - Cas du consommateur algérien, Thèse de Doctorat en science de gestion université de Tlemcen, p. 233.

4.3.2 The results of the reliability analysis

As for Chronbach’s alpha, we notice that all the values are superior to 0.6 while Rho values are superior to 0.8 i.e. all the dimensions are acceptable in moral limits inferior to 5% which means that the dimensions’ consistency and validity are excellent. This allows us to say that all the dimensions are consistent and valid in moral values inferior to 5%; this makes the study sample suitable for study and hypotheses testing.

According to the table below, all variables are correlated with each other: we accept the correlation, since Cronbach's coefficient, KMO values and Bartlett's index are highly significant. The data are indeed suitable for factoring since:

- ✓ The KMO values are above 0.7;
- ✓ Cronbach's Alpha is excellent for all variables;
- ✓ Bartlett's tests are also highly significant for all variables $p=0.000$;
- ✓ All values of the explained variances exceed 70%. (See Table 5).

Table 5: The results of the reliability analysis

Cronbach's Alpha, Rh de DG (ACP) and KMO value

Variable	Code	Items	Cronbach's Alpha	Rh de DG (ACP)	KMO	Sig
Advantages	Adv	13	0.782	0.814	0.891	0.000
Evaluation	Eval	23	0.817	0.793	0.754	0.001

Source: Conceived by the author based on the SPSS Outputs

4.3.3 Hypotheses Testing:

▪ **Sub-hypothesis One:**

E-learning impacts positively the students' performance.

Dimension one results (advantages of e-learning): through the results shown in table 06, we notice that the average of the answers of the sample members is 3.08 and the standard deviation is 0.585 which is acceptable and ,thus, the orientation is “agree” i.e. the members of the sample agree that e-learning has many advantages and completes the traditional learning. Moreover, the value of the dual correlation was 0.462 determination coefficient reached 0.281 i.e., the determination average which means 28.1% of the efficacy of e-learning is due to its advantages and 71.9% is due to other factors such as random error which pushes us to accept the first sub-hypothesis (See table 8).

Table 6. (Arithmetic mean and standard deviation) values

Variables	Code	Mean	Standard deviation	Sig
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Advantages	Adv	3.08	0.585	0.000
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Source: Conceived by the author based on the SPSS Output

▪ **Sub-hypothesis two:**

The positive evaluation of Oran's University site web from the students' point of view increases the level of effectiveness of the e-learning.

Results of the second dimension (evaluation of e-learning): through the results shown in table 7, we notice that the global average of the members' answers is 2.91 and the standard deviation is 0.486 which is acceptable and, thus, the orientation is "agree" i.e. the members of the sample agree in their evaluation of the university site; they evaluate it positively and appreciate its role in increasing academic performance.

As for the second hypothesis, the dual correlation of the evaluation was 0.372 and the determination coefficient was 0.197 i.e. 19.7 % of the e-learning efficacy is due to the advantages that e-learning provides while the rest 81.3% is due to other factors such as random error. Through table 8, we find that the morality level equals 0.000 which is inferior to 0.05 and, thus, there is a statistically significant effect of the role of e-learning in developing the students' performance i.e. evaluation improves the efficacy of e-learning. This pushes us to accept the second sub-hypothesis.

Table 7. (Arithmetic mean and standard deviation) values

Variables	Code	Mean	Standard deviation	Sig
Evaluation	Eval	2.91	0.486	0.000

Source: Conceived by the author based on the SPSS Output

Table 8. Sub-hypothesis Testing

Variables	R	R2	F	β	Sig
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Advantages	0.462	0.281	227,00	0,392	0.000
Evaluation	0.372	0.197	164,00	0,291	0.000

Source: Conceived by the author based on the SPSS Output

▪ **The main hypothesis:**

E-learning helps to improve students' educational attainment Upon what has been said and from the results shown in table 9, we see that the global average of the answers of the members of the sample about this dimension is 3.27 and the standard deviation is 0.459 which is acceptable and, thus, the orientation is “agree”; this means the sample members agree on the efficacy of Oran university site web and its role in increasing the students' performance.

Table 9. (Arithmetic mean and standard deviation) values

Variables	Code	Mean	Standard deviation	Sig
Effectiveness	Effec	3.27	0.459	0.000

Source: Conceived by the author based on the SPSS Output

As for the main hypothesis testing, the dual correlation reached 0.389 while the determination coefficient reached 0.214 i.e. 21.4% of e-learning efficacy is due to the programs it provides and the rest is due to other factors such as random error. From table 10 we find that the morality level is equal to 0.000 which is inferior to 0.05 of the significance level and ,thus, there is a statistically significant effect of the e-learning effect in developing the students' performance i.e. all the advantages and evaluation improve the efficacy of e-learning. This pushes us to accept the main hypothesis.

Table 10. The main hypothesis Testing

	R	R²	F	β	Sig
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Effectiveness	0.389	0.214	204.98	0.3927	0.001
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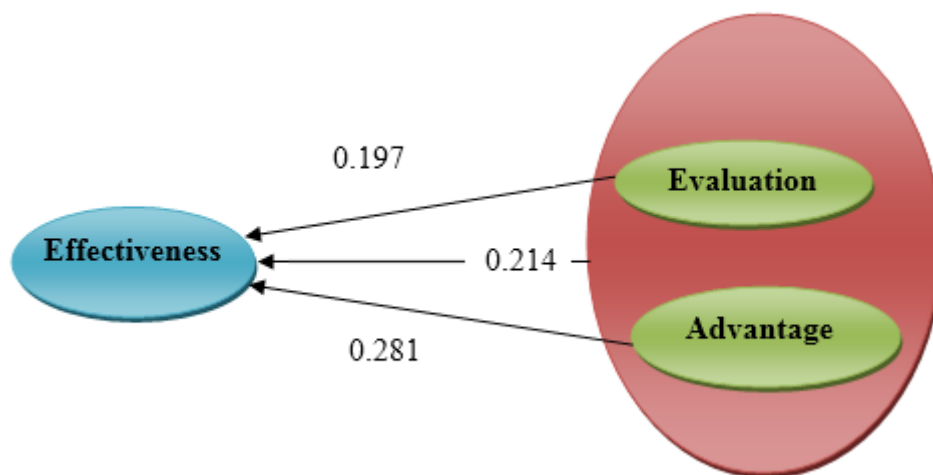
Source: Conceived by the author based on the SPSS Output

4.3.4 The study results:

Oran university students are aware of the concept of e-learning.

- The members of the sample agree on the importance of e-learning in promoting education. However, they consider it complementary to traditional learning which can never be abandoned.
- Members of the sample confirm the efficacy of e-learning and its positive role in motivating students.
- Informants agree that the site contributes to improving the students' academic performance.

Fig.7. The conceptual research model



Source: Conceived by the author based on the SPSS Output

5. Recommendations:

We recommend:

- Raising the teachers and students' awareness about the importance of e-learning through developing the electronic culture;
- Organizing training sessions at universities for students and instructors;
- Organizing special trainings that aim at equipping the teachers with the necessary skills for lesson planning electronically;
- Spreading scientific and technical awareness about the benefits of e-learning;
- Adopting educational and scientific strategies in the domain of e-learning;
- Using e-learning for self-study;
- Providing good internet access at universities and campuses for teachers and students;
- Providing training opportunities for teachers and university students to equip them with the necessary skills for internet and computer using and all e-learning software;
- Training students on how to use the sites and showing the advantages that can be gained;
- Organizing trainings that aim at explaining requirements of e-learning and the new roles that teachers and students must do;
- Monitoring the enrolled students and motivating the ones who log in the most on the site;
- Trying to use the site's advantages optimally and not limiting to uploading lessons only.

6. Conclusion:

Through this study, we tried to shed light on the importance of e-learning and its effect and efficacy on Oran university students' academic performance. The sample included 150 students from different fields. We relied on many statistical tools to process data. Findings showed (according to figure 7) the efficacy of e-learning and its positive role in motivating the students. Furthermore, most of the students are aware of the concept of e-learning and agree that the site of Oran University contributes to enhancing the academic performance due to its advantages.

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