

### Volume: (14) / N°: (01)-(2023), p 702-718

# Studying the importance of modern technologies and media in improving the quality of distance education through online participatory learning among students.

(study on students of the Institute of Science and Technology of Physical and Sports Activities at M'sila

University)

دراسة أهمية التقنيات والوسائط الحديثة في تحسين جودة التعليم عن بعد من خلال التعلم التشاركي الإلكتروني بين الطلاب (دراسة ميدانية على طلاب معهد علوم وتقنيات النشاطات البدنية والرياضية بجامعة المسيلة )

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Received: 08/01/2023 Accepted: 17/04/2023 Published:01/06/2023

#### Abstact:

Participatory learning is one of the modern learning methods that are used in modern teaching to encourage students to interact with each other and actively participate in groups, which leads to the growth of positive interaction between learners of different abilities, The current study aims to know the importance of modern technologies and media in improving the quality of distance education through online participatory learning among students of the Institute of Science and Technology of Physical and Sports Activities at M'sila University by conducting a field study on a sample of 60 students, (Master 1 and Master 2) they was chosen randomly. Where the researcher used the descriptive method that is appropriate for this study, and after statistical treatment using the program (spss) and using the statistical method (k2), it was found that modern technologies and media contribute effectively to the development and improvement of the quality of distance education through electronic participatory learning among students

Key words : modern technologies and media, participatory learning, distance education, University student

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الملخص : يعد التعلم التشاركي إحدى أساليب التعلم الحديثة التي تستخدم في التدريس الحديث وتنمية المهارات الاجتماعية، وتكوين الاتجاه السليم نحو المواد الدراسية، إذ تهدف الدراسة الحالية لمعرفة أهمية التقنيات والوسائط الحديثة في تحسين جودة التعليم عن بعد من خلال التعلم التشاركي الإلكتروني بين طلاب معهد علوم وتقنيات النشاطات البدنية والرياضية بجامعة المسيلة من خلال القيام بدراسة ميدانية على عينة من طلاب الماستر 1 والماستر 2 والبالغ عددهم 60 طالب اختيروا بطريقة عشوائية ، حيث استخدام الباحث المنهج الوصفي الذي يتناسب مع هذه الدراسة وبعد المعالجة الإحصائية باستخدام برنامج (spss) وباستخدام الأسلوب الإحصائي (k2) تبين أن التقنيات والوسائط الحديثة الطلاب

- الكلمات المفتاحية : التقنيات والوسائط الحديثة ، جودة التعليم ، التعلم التشاركي الإلكتروني ، الطالب الجامعي

### Introduction and problem of the study:

The development of information technology, networking and communication systems has led to a clear change in all fields, especially in the field of education, educational institutions are no longer the only educational environment to provide teaching and learning services, with the emergence of the term e-learning to a large extent in education services,

e-learning is one of the most important applications of communication technology in the field of education and the development of this concept to show the concept of the second generation of e-learning, which is participatory e-learning, as the world passed through several revolutions that had an impact on all fields of life ,Among these revolutions is the electronic revolution, which was reflected in the development of the educational process and the introduction of various modern technologies to it.

The term collaborative e-learning appeared due to the learners' need for social interaction, as (**Downes**)explained that the social and participatory feature is the distinguishing characteristic of participatory e-learning software which is the second generation of e-learning Participatory, e-learning is used to support and motivate learners to discover ideas and important points according to their abilities and capabilities, and to encourage them to share ideas directly via the web (**Ibrahim Abdel-Wakeel**, **2012**, **p. 435**, **436**).

Through the previous presentation, we find that differentiated e-participatory learning overcomes the shortcomings of traditional learning environments, as it is characterized by comprehensiveness, (interaction, sharing, complementarity, diversity, flexibility, and availability), It saves time and cost, and the learner can access it from anywhere and at any time, Through the collaboration and sharing made possible by e-learning tools and services Participatory e-learning tools are carefully selected to be managed and operated within a selective and integrated set of course design models. so e-learning techniques and tools can be used in traditional learning as well, taking into account the importance of choosing the appropriate tools for each. e-learning has goals that must be achieved in order to benefit from it in the educational process in a large way, including providing an educational environment rich in resources that serves the educational process in all its axes, and modeling education and presenting it in a standard form such as: optimal use of multimedia technologies and model question banks, It also allows the dissemination of technological innovations in all educational institutions, and prepare teachers generation and learners in a good way to able them to deal with modern technological innovations (Al-Dahah, 2004, p. 244).

Participatory e-learning has several characteristics, the most important of which is that it applies many educational theories such as intended learning, distributed experiences, resource-based learning, as well as individual responsibility.

It includes group activities carried out by the learners, and contributes to increasing interaction and mutual dependence among the learners, as the learners help each other in

finding appropriate answers to solve problems, by collecting, analyzing, discussing and interpreting data, and it also provides collective feedback through group activity and work. And the extent to which they achieve the goals, and students share information, communicate together, coordinate activities, and cooperate in building and learning their knowledge quickly.

Collaborative learning focuses on educational fields and is used by different or disparate learners working on the same subject of learning through computers branching from a main office, or through different networks, providing the opportunity to inquire about their questions and learn from each other by providing what the learners have learned collaboratively (Hubaishi, 2009 p., 222).

The use of e-participatory learning provides many possibilities for the educational process by encouraging students to use different learning resources, directing their efforts towards accessing information, collecting and organizing it, and presenting educational material in synchronous and asynchronous ways in a timely manner to the student, as well as providing sharing tools and various brainstorming tools. It helps develop their thinking skills, which increases the student's ability to see the situation from the perspectives of others (Dua Labib, 2007, pg. 56). Participatory learning is in line with the principles of the constructivist theory, as it makes the learner the focus of the educational process, and makes him search, experiment, and discover.

To a number of these principles, the most important of which are .. Maher Sabry and Ibrahim Tajuddin refer The learner constructs a meaning for what he learns by himself, as the meaning is formed within his cognitive structure through the interaction of his senses with the outside world by providing him with information and experiences that enable him to link the new information with what he has and in a manner consistent with the correct scientific meaning.

The learner does not build his knowledge in isolation from others, but builds it through a process of social negotiation with them. (Sabri, 2000, p. 68, 69)

Participatory e-learning is a means to bring about active teaching/learning, and this learning can be applied through many teaching models and educational theories such as behaviourism, constructivism and communication. Choosing the tools and technologies that can be employed using appropriate teaching methods: how to employ technologies is more important than their quality

Participatory e-learning takes place through the successful implementation of modern teaching methods. The storage and dissemination of participatory educational content in a digital form that allows simultaneous and asynchronous communication and interaction between learners and each other, and between learners and the teacher,The learner's previous knowledge is the focus of the learning process, since the individual builds knowledge in the light of his previous experience

Accordingly, the global cognitive acceleration that is taking place in our current era, in which information and communication technology has opened a new resource of the educational and learning process resources from the emergence of computers, the Internet, and various digital and other media, as education through these new technological media has become one of the most important requirements of the age.(batat noureddine,2022,p189).

Although distance learning has roots dating back to the middle of the last century, it has become an urgent demand for the present time, to the extent that it has become called the education system of the twenty-first century, It contributes to the development of formal education within the university and in educational schools, and helps graduates who have not completed their university studies to obtain their university qualifications through them.

Therefore, it is obligatory for all branches of higher education to access electronic participatory learning and the exploitation of modern technologies and media in the process of training and supervising students due to its great importance in terms of time gain and ease of interaction between students and teachers, which saves effort and money. Through Moodle and other media and using them in teaching, follow-up and evaluation, this study aimed to show the importance of electronic participatory learning among students in

academic achievement, as (Muhammad Saad Zaghloul and Makarem Abu Harjah) (2001 AD) indicate that a lot of research in the field of sports activities emphasized the importance of the relationship between the effectiveness of teaching and the means of educational technology, which leads to the improvement of the process, The importance of educational technology in the field of learning physical education activities can be explained in the attractiveness of teaching and its effectiveness in stimulating and reviving activity in the learner and influencing the behavioral trends and scientific and social concepts of the learner as a means of comparison, The performance of the model, as it is possible to teach large numbers of learners, the effect of education remains, and time is saved, taking into account individual differences among learners. Through the above, it is possible to study **the importance of modern technologies and media in improving the quality of distance education through electronic participatory learning among students of the Institute of Science and Technology of Physical and Sports Activities at M'sila University**?

#### **General question:**

Do modern technologies and media contribute to improving the quality of distance education through online participatory learning among students?

#### Partial questions :

- Do modern technologies and media contribute to raising the level of knowledge achievement through electronic participatory learning among students?

-Do modern technologies and media raise the level of communication through participatory e-learning among students?

- Do modern technologies and media facilitate the teaching and learning process through online participatory learning among students?

**General hypothesis** : Modern technologies and media contribute to improving the quality of distance education through online participatory learning among students

#### Partial hypotheses :

-Modern technologies and media contribute to raising the level of knowledge achievement through participatory electronic learning among students

- Modern technologies and media raise the level of communication through participatory elearning among students

-Modern technologies and media facilitate the teaching and learning process through online participatory learning among students

#### 1- Study Aims:

\*Demonstrating the importance of modern technologies and media in collaborative elearning for students of the Institute of Science and Technology of Physical and Sports Activities

\*A study of the importance of participatory learning in improving the quality of distance education among students of the Institute of Science and Technology of Physical and Sports Activities at the University of M'sila through modern technologies and media.

\*Determining the principles and criteria for designing the participatory e-learning environment necessary to develop achievement and self-efficacy for students of the Institute of Science and Technology of Physical and Sports Activities

\*Measuring the effectiveness of the participatory e-learning environment in developing the cognitive achievement to the students of the Institute of Science and Technology of Physical and Sports Activities for the concepts of search engines.

\*Knowing the correlation between cognitive achievement and self-efficacy in the participatory e-learning environment for students of the Institute of Science and Technology of Physical and Sports Activities

#### 2-Importance study:

the importance of the study lies in the importance of e-participatory learning, which is an educational method based on creating an effective environment that allows the student to cooperate with all students and participate with them in building educational content. . Participatory e-learning also encourages students to search, discover and experiment, in

addition to paying attention to the learner's mind and the processes that take place within it in an interactive social framework.

And interest in employing participatory strategies in e-learning environments and the use of participatory learning to support student learning, and benefit from it in various fields, and the use of e-participatory learning environments in teaching educational courses and study materials through groups, and providing the opportunity for learners to practice their social activities to develop their knowledge and develop their performance skills in stages different educational programs through e-participatory learning because of its many advantages.

#### 3-Key words:

**3-1- Modern technologies and media**: It is the media that the teacher employs in teaching Science, including the Internet, computers, e-mail, and a projector, data, video conferencing, and mobile(mhdjar yassin ,basmail bahria, , 2011, p 221).

**3-2- Participatory e-learning**: Participatory e-learning is a pattern of learning based on social interaction between learners as they work in small groups sharing the task or achieving common educational goals through group activities in a coordinated effort using various communication services and tools via the web, and then It focuses on generating knowledge and not receiving it, and thus education transforms from a teacher-centered system that controls it to a learner-centered system in which the teacher participates. Educational activities and the exchange of roles and tasks are distributed to each learner in order to

develop motivation among students (Al-Dasouki, 2015, p. 129).

. **3-3-Quality in Education:** It is a comprehensive and integrated system that deals with the various aspects of the educational system from inputs, processes and outputs with the aim of improving its products. **(AI-Harthy, 2014, p. 30)**.

As defined by Mahfouz Ahmed Gouda, it is: "the extent of conformity with the requirements. (djaoudat, 2008, p. 19).

**4-university students:** they are the most aware and capable in terms of scientific exchange. they obtain a university formation which affects their personality and refines their values. they are 2nd year Master at physical education at scientific and techniques of physical and sports education at Mohamed Boudhiaf university of Msila .(Nasereddine Barkati ,2022,p625)

#### 4-Previous studies:

**4-1-The study of Nora Abdullah Al-Bunyan**: The impact of the collaborative learning pattern in the cloud computing environment to develop the technological competencies of computer teachers. The research sample consisted of 25 female teachers from the central region in Al-Baha who studied technological competencies using the participatory learning style in cloud computing.

**4-2-Study by Marian Milad Mansour**: The effectiveness of the participatory learning style based on electronic learning anchors in teaching the Scratch programming language to develop some performance skills and technological thinking in the preparatory stage. E-learning anchors The research was applied to a sample of 65 female students from the first preparatory grade from Al-Khayyat Preparatory School for Girls in Assiut, where an achievement test was used for the knowledge of the programming language unit Scratch and the skill performance observation card.

**4-3-study by Gultan Hijazi and Hassan Ribhi** :The effectiveness of a strategy in active learning based on sharing via the web in improving social competence and motivation for learning among students of the Faculty of Education at Al-Aqsa University. The study sample consisted of 25 female students from the Faculty of Education at Al-Aqsa University. The study used measures of social competence and motivation to learn

**4-4-study of Wafa Saleh Al-Din Ibrahim Al-Dossary**: The impact of collaborative learning via the web based on communication theory on academic self-efficacy and mastery motivation for a special diploma student in educational technology. (0.2) They are the social network site (face book). Collaborative web editors (wiki) on academic self-efficacy and

mastery motivation among (26) first-year students with a special diploma specializing in educational technology at the Faculty of Specific Education, Minia University, in the second semester of the academic year 2013/2014 AD. The two scales were applied before and after participatory learning, The results showed that participatory learning via the web led to an increase in the level of academic self-efficacy and the level of mastery motivation among the students of the study sample.

### Field Study:

### 5-Psychometric characteristics of the questionnaire:

### 5-1-Content Validity :

The initial image of the tool was shown to a number of professors in psychology and educational sciences, and a professor in the Department of Physical Education and Sports ,this is to express an opinion on the questionnaire axes, and the validity and appropriateness of the phrases put in place to know the extent of the importance of modern technologies and media in improving the quality of distance education through online participatory learning among students. **table n: (01)** 

Axis	Stander	Mean	correlation
ΤοοΙ	deviation		coefficients
participation of modern technologies	2.41	20.06	0.70**
in raising thr level cognitive acheivment			
The contribution of modern technologies and media in	2.24	21.68	0.72**
raising the level of communication			
The effectiveness of modern technologies and media	3.45	20.10	0.66**
in the teaching and learning process			

#### 5-2-internal Validity:

it means the internal validity of the questionnaire and it is experimental scores of the test attributed to the real scores free from measurement errors, the square root of the coefficient of stability of the tool; so is the coefficient of internal Validity = 0.84. **table n: (01)** 

### 5-3 Internal Consisitency Validity:

The correlation coefficients were calculated between each items of the questionnaire axes, and the correlation coefficients between the scores of, Validity of the internal consistency of the questionnaire axes with the total score of the questionnaire **N=20** 

**5-4-Reliability :** The reliability coefficients of the data collection tool were calculated by using Alpha Cronbach equation .

The reliability coefficients of the data collection tool were calculated by using Alpha Cronbach equation reliability of the questionnaire value Alpha = 0.76 **table n: (02).** 

Alpha Cronbach	ltems
0.76	30

### 6-Field Study:

6-1-study Methodology : Both Nasseri Salah Eddine and Issam Samir affirm that the methodology is an approved and controlled change in the specific conditions of an accident and the observation and interpretation of the resulting changes in the event itself (Moussaoui Alaeddine et al ,2022 p561).

**6-2-Study population:** our study population consists of students master 1 and master 2 studied in Institute of Science and Technology of Physical and Sports Activities at M'sila University)

6-3-study Sample: The sample consisted of 46 students master 1 and master 2 of the Institute of Science and Technology of Physical and Sports Activities at M'sila

6-4-study Tools: to collect the data we used a questionnaire in this study in order to answer

the questions of the study , then the researcher exposed this questionnaire for many experts .

### 6.5-Study variables :

-Independent variable: modern technologies and media

-dependent variable: the quality of distance education

6-6-fields of study:

-Spatial field: This study was done in the Institute of Science and Technology of Physical and Sports Activities at M'sila University.

**-Temporal field:** This study was extended during the two seasons (2019/2020) in which the scoping study was done ,and the academic season (2019/2020) where the application of study field started from October until late December( 2020).

**7-Study results:** After unpacking the questionnaires' data into the computer and rocessing them in the Statistical Package for Social Science (SPSS) version, (SPSS program) It is one of the most important statistical programs used in the social and economic sciences. It is known as a statistical program consisting of a set of programs prepared in advance for entering, modifying, displaying and analyzing statistical data., we obtained the following results:

### 7-1- Presentation and analysis of the first hypothesis results:

To verify the validity of the first hypothesis "Modern technologies and media contribute to raising the level of knowledge achievement through participatory electronic learning among students " we used in this hypothesis, the (K2) test to indicate the differences between the frequencies. We may obtain the following results, as shown in table n: (03) Table :(03) N=60

Axes	Axes		Degree		SIG
		Yes	no		
participation of modern technologies in raising thr level cognitive achievement	Repetition	50	10	6.60	0.005*
Taising the level cognitive achievement	Percentage	77.30%	22.70%		
Total score for a questionnaire	Repetition	49	11	2.24	0.039*
Total scole for a questionnaire	Percentage	72.30%	27.70%		

Statistically significant at the level of 0.01

Statistically significant at 0.05 level \*

The frequency and percentage was calculated of the first axes, (K2) was calculated to denote the differences between grades (yes / no) and it is clear from the table that the degree of participation of modern technologies in raising the level cognitive achievement was (YES) reached 77.30% with(50) Repetitions and( no) reached 22.70% with (10) Repetitions, it appears from the application of (K2) to the axis of participation of modern technologies in raising thr level cognitive achievement, and on the overall score of the questionnaire that there is statistical significance for the first axis at the level of significance 0.01, and for the questionnaire as a whole at the level of significance 0.05, and upon it, the results indicate that Modern technologies and media contribute to raising the level of knowledge achievement.

### 7-2- Presentation and analysis of the second hypothesis results:

To verify the validity of the second hypothesis Modern technologies and media raise the level of communication through participatory e-learning among students" we used in this hypothesis, the (K2) test to indicate the differences between the frequencies, we may obtain the following results, as shown in **table n: (04)** N=60.

Axis		Degree		К2	SIG
		Yes	no		
The contribution of modern technologies and media	Repetition	51	9	8.40	0.002**
in raising the level of communication	percentage	79%	21%		
Total score for a questionnaire	Repetition	49	11	3.26	0.039*
	percentage	72.30%	27.70%		

The frequency and percentage was calculated of the second axis, (K2) was calculated to denote the differences between grades (yes / no) and it is clear from the table that the degree of The contribution of modern technologies and media in raising the level of communication

was, (yes) reached (79%) with(51) Repetitions and( no) reached 21% with (09) Repetitions it appears from the application of (K2) to the axis of The contribution of modern technologies and media in raising the level of communication, and on the overall score of the questionnaire that there is statistical significance for the first axis at the level of significance 0.01, and for the questionnaire as a whole at the level of significance 0.05. And upon it, the results indicate that Modern technologies and media raise the level of communication through participatory e-learning among students.

### 7-3-Presentation and analysis of the third hypothesis results:

To verify the validity of the third hypothesis "Modern technologies and media facilitate the teaching and learning process through online participatory learning among students ." we used in this hypothesis, the (K2) test to indicate the differences between the frequencies. We may obtain the following results, as shown in table n: (05). Table :(05) N=60

Axes		Degree		К2	SIG
		Yes	no		
The effectiveness of modern technologies and media in the teaching and learning process	Repetition	53	07	6.67	0.010*
	percentage	82%	18%		
Total score for a questionnaire	Repetition	49	11	4.27	0.039**
	percentage	72.30%	27.70%		

Statistically significant at the level of 0.05\* Statistically significant at the level of 0.01

The frequency and percentage was calculated of the third axis, (K2) was calculated to denote the differences between grades (yes / no) and it is clear from the table that Modern technologies and media facilitate the teaching and learning process through online participatory learning among students was, (yes) reached (82%) with(53) Repetitions and ( no) reached 18% with (07) Repetitions it appears from the application of (K2) to the axis of The effectiveness of modern technologies and media in the teaching and learning process, and on the overall score of the questionnaire that there is statistical significance for the first axis at the level of significance 0.01, and for the questionnaire as a whole at the level of significance 0.05. and upon it, the results indicate that that Modern technologies and media facilitate the teaching and learning process.

#### **Main Results:**

Main Results of study are:

-Modern technologies and media contribute to improving the quality of distance education through online participatory learning among students.

-Modern technologies and media contribute to raising the level of knowledge achievement through participatory electronic learning among students.

- Modern technologies and media raise the level of communication through participatory elearning among students.

-Modern technologies and media facilitate the teaching and learning process through online participatory learning among students.

#### Main Recommendations:

\*Designing an integrated system for e-learning at the level of educational institutes and institutions to design and test teaching and management systems for the programs that you intend to activate before starting to provide e-learning programs in order to provide all its requirements and maintain the required level of quality and adherence to standards. The required budget must also be provided for the e-learning programs to be offered throughout the period that the student will spend in learning, in a manner that maintains the applicable quality standards.

\*Observance of quality standards in the various stages of program and e-course design: elearning institutions must ensure that the programs and courses are equivalent to the degrees granted and adhere to the approved controls and standards. It should also ensure that there is the ability to review, develop and update the contents of the article periodically

\*The educational material and teaching and evaluation strategies should be improved based on feedback to meet the needs of institutions and learners. It should also be keen to adapt and take into account the differences between learners and their learning styles when designing content, in addition to taking into account the clarity of educational objectives and the mechanisms of measurement and evaluation.

\*The institution must ensure that the e-learning programs are presented in a way that provides the student with fair opportunities to reach the levels required to complete the graduation requirements. This is done through the development of infrastructure and continuous improvement of services, in addition to effective supervision, periodic and continuous follow-up, and permanent evaluation of the educational system and its outputs

\*Facilitating access to electronic libraries and scientific books, and this is to assist them in making sound decisions about their studies and evaluating their academic path according to clear performance criteria

#### **References**:

-Ibrahim Abdel-Wakeel Al-Far (2012): Educational Technology of the Twenty-First Century, 1st Edition, Egyptian Books and Documents House, Egypt..

-Iman Mohamed Al-Ghareeb (2003): e-learning is an introduction to non-traditional training. The Arab Organization for Administrative Development and Research and Studies in Egypt..

-Al-Dasouki, Wafa Salah El-Din Ibrahim (2015): The Impact of Collaborative Learning via the Web Based on Communication Theory on Academic Self-Efficacy and Proficiency Motivation for a Special Diploma Student in Education Technology, Association of Arab Educators: Journal of Arab Studies in Education and Psychology, p. (62) (129-162), Cairo, Egypt.

-Mai Abdullah.and eddahas (2007): e-learning. Evolution continues, training and technology. The General Organization for Technical Education and Vocational Training, Issue No. (96), January. Al Riyadh, Saudi Arabia..

-Hobeishi Dalia Khairy Omar (2009): Employing participatory e-learning in developing field training for students of the Computer Teacher Preparation Division in the faculties of specific education. Master Thesis, Mansoura University, Faculty of Specific education, Egypt.

-Harthy Ibrahim bin Ahmed Muslim (2014), First Edition, Riyadh: King Fahd National Library, Saudi Arabia.

-djaoudat Mahfouz Ahmed: (2008), Total Quality Management: Concepts and Applications, Third Edition, , Dar Wael for Publishing and Distribution, Amman.

-batat noureddine : (2022),The role of e-learning in developing the university education environment in institutes of science and technology of physical and sports, The journal « sports creativity » (Volume 13, Issue 02),2022,p189, University of M'sila.

-Nasereddine Barkati : (2022) Psychosocial Compatibility and Its Relation with Self Esteem of Students at Sciences and Techniques of Physical and Sports Activities Institution,The journal « sports creativity »(Volume 13, Issue 02), 2022, p 617-635, University of M'sila.

-Moussaoui Alaeddine, Ghribi Hichem, Cherifi Walid: (2022), The effect of a proposed educational program based on the principles of the pragmatic theory in the curriculum in achieving cognitive and social competencies for the physical and sports education class in high school , the journal « sports creativity »(Volume13, Issue 02), (2022), p 553-572, University of M'sila

- Rabh Berbakh, Amar Ammour: (2022), The Difficulties Faced by Graduate Students when Using the (SPSS) in their Research Projects: The journal « sports creativity »( Volume13, Issue 02)p333/358 University of M'sila.