

التعليم المدمج - استراتيجيات جديدة
لاستخدام التكنولوجيا الحديثة في التعليم
د . وجدان سعيد مسعود الأطرش - كلية الاقتصاد - العجيلات -
جامعة الزاوية

الملخص :

تُحاول هذه الدراسة التعرف على الإطار المفاهيمي و العلمي لدمج التكنولوجيا الحديثة في عملية التعليم ، وتبين أهم أهدافه، كما توضح أهم المتطلبات الواجب توافرها عند عملية دمج التكنولوجيا الحديثة بالتعليم و التي تؤدي إلى تعميق و تعزيز عملية التعلم لدى الطالب ، حيث تناولت هذه الدراسة أيضا الإيجابيات والسلبيات الناجمة عند عملية الدمج التكنولوجي ، كما تتطرق إلى الحديث عن الأنماط المستخدمة و التي من بينها استخدام التكنولوجيا الحديثة حضوريا و التعرف على أهم محاوره والشروط اللازمة عند استخدام التعليم الحضوري وتوضيح أهم الصعوبات التي قد تواجهها ، وانطلاقا من العيوب التي ظهرت استخدام التعليم الإلكتروني والتعليم بالطريقة التقليدية تم مزج كلا الطريقتين لانتاج استراتيجية جديدة يطلق عليها اسم التعليم المدمج أو الخليط الذي هو اساس هذه الدراسة ، حيث تم الحديث عن الاستراتيجيات و المتطلبات الهامة وتحديد المعوقات ، و ختمت هذه الدراسة بأهم التوصيات للاستفادة القصوى من استخدام التكنولوجيا الحديثة في عملية التعليم و التعلم حتى يتحقق الهدف من ورائها .

The Blended Learning

(A new strategy for using modern technology in education)

Dr.Wejdán Saed Alatrash

Abstract

This study attempts to identify the conceptual and scientific framework for integrating modern technology into the education process. and shows its most important objectives. and clarifies the most important requirements that must be met when integrating modern technology into education. which leads to deepening and enhancing the student's learning process. And the negatives resulting from the process of technological integration. and it also touches on



talking about the patterns used. including the use of modern technology in presence. and identifying the most important axes and the necessary conditions when using face-to-face education and clarifying the most important difficulties that you may face. and based on the defects that have emerged using e-learning and education in the right way. The traditional two methods were mixed to produce a new strategy called blended or blended learning, which is the basis of this study. where the important strategies and requirements were discussed and the obstacles were identified. and this study concluded with the most important recommendations to make the most of the use of modern technology in the process of learning and learning until The goal is achieved by it.

Keywords: a modern technology, blended education, technology.

Introduction

In our time and with the progress of mankind. education has become the first building block on which countries depend in their progress. As it develops and develops its means. a conscious generation is produced that seeks creativity in all fields and thus contributes to the progress and advancement of the country. and education is one of the priorities that we always strive to improve by using Many modern methods and methods.

There is no doubt that the teaching process has a significant importance in developing and strengthening scientific research in all fields. whether theoretical or applied. However, the requirements of the tight organization of the educational process and its evaluation in objective. accurate ways require finding controls and ethics that will control all stages of teaching in order to advance this message to The best and the achievement of good quality in education in all its methodological stages in form and substance. where technology occupies the role of a guide who guides teachers to direct educational materials to students; Because technology gives more opportunities for students to understand the material because it changes the way lessons and materials are presented. The use of computers brings the attention of the student to use as an assistant or even a teacher. thanks to the many and varied programs on computers. The use of the Internet also helps students to communicate with teachers and with each other, and to participate

in activities. research and information exchange. as the Internet is a very rich source of information that concerns all domains.

The problem of studying

Given the importance of the educational process in the education system as a basic base for the rest of the functions and the positive effects of using modern technology on improving the quality of the educational process and the positive and radical positive changes that it has achieved in the educational process. it has become necessary to identify the impact of its use on improving the quality of the educational process with recognition On the most important new strategies used in education, including blended learning.

Study Objectives

The main objective of this study is to know the impact of the use of modern technology in the education process and to improve the quality of its various elements on the one hand, and on the other hand to know the obstacles to using modern technology. as this can be achieved through the following sub-objectives:

- Identifying the most important requirements that must be met to complete the process of integrating modern technology into the educational process.
- Introducing the new strategy resulting from the process of integrating attendance education with e-learning.
- Knowing the obstacles to using blended learning and ways to overcome them.

The importance of studying

Proceeding from the importance of modern technology and the quality of the educational process. this study emerged. which will contribute to identifying the reality of using modern technology in blended education and identifying the obstacles that prevent its effective use in the educational process.

The Previous of studies

Abir Hanafi study's [1]: It focused on the applications of professors in the educational process in light of the use of modern technology. as it reached a positive impact through the adoption of modern technology; This is through the greatest transformation in pedagogical applications by changing communication models. as well as in collaborative and evaluative



applications. It also came to the conclusion that modern technology in education serves to produce a dynamic and structured pedagogy for students. although the introduction of technology in education requires cultural changes. and this is to counter the effects of resistance to change.

Marcelline Djeumeni Tchamabe study's [2]: It relied on the explanatory and comprehensive formula for the use of modern technology in the educational process in the presence of which the hall is a real network of exchanges between the professor, students and knowledge. To analyze the purpose of the study. a questionnaire consisting of 1000 professors, 1000 trainees and 18 interviews was divided into 6 with professors, 6 with officials and 6 with trainees with analysis of observations about the hall and files.

The study concluded that the pedagogical applications focus first on the techno pedagogical devices in the place, i.e. the presence. and that this presentable model is the most prevalent on the distance education model, although the infrastructure is the way to achieve this model more. with the need to pay attention to the most uses of the techno pedagogical environment related to the curricula. Pedagogy, organization and management.

The study of Muhammad al-Zabul and Saleh Ababneh [3]: aimed to analyze the five elements of the educational system: teacher, student, curriculum, leadership or administration and teaching process; In view of the expansion of the use of information technology in the educational system recently. its use has become necessary by both sides of the educational process to improve its quality as well as improve other elements of the educational system.

The study concluded that the teacher. the student, the teaching process, the curriculum and the administrative leadership will change for the better by using modern technology. and its use is not just introducing the physical components to the places of education. but rather investing in the school environment for the positives of modern technology. which helps to build human resources capable of owning Knowledge in use, development and creativity.

Focus the primary objective of the study Bousbia Nabila [4]: About the basic needs necessary for teachers with regard to the use of modern technology. and this is to allow them to model school knowledge under a structure of

pedagogical standards at an integrated multimedia level; In the sense of creating a good environment for the teacher to adapt to the students.

The study found the necessity of defining the basic functions of the professor in a full circle of teaching using technology with an initial study of the interactive environment that will allow modeling of terminology and production of contents while creating a new structure for education using technology.

So that the aim of using previous studies is to understand all the objectives of the study. as we found that the various previous studies dealt with the use of modern technology in the educational process from one side only; In the sense that it studies a single problem. whether related to the positive impact on the elements of the educational process or by studying the various obstacles that prevent this; This is either in the educational process as a whole or in the administration aspect only with the exception of the third study which depicted the educational process with all its elements but only theoretically which made the current study distinguished from the rest of the previous studies by expanding the impact study where we decided to study the process of integrating traditional education with e-learning. Which he called blended learning and its impact on each element of the educational process separately, with the study of the obstacles that prevent its effective use.

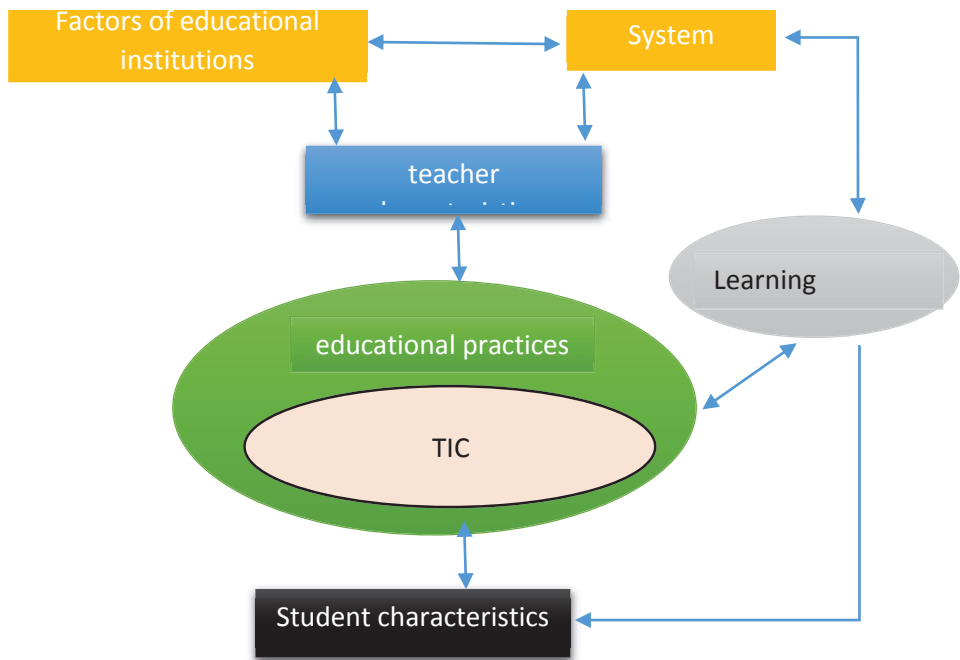
The first topic: the conceptual and scientific framework for integrating modern technology in education

The first requirement: the integration of modern technology into education and its objectives.

First: the integration of modern technology into education

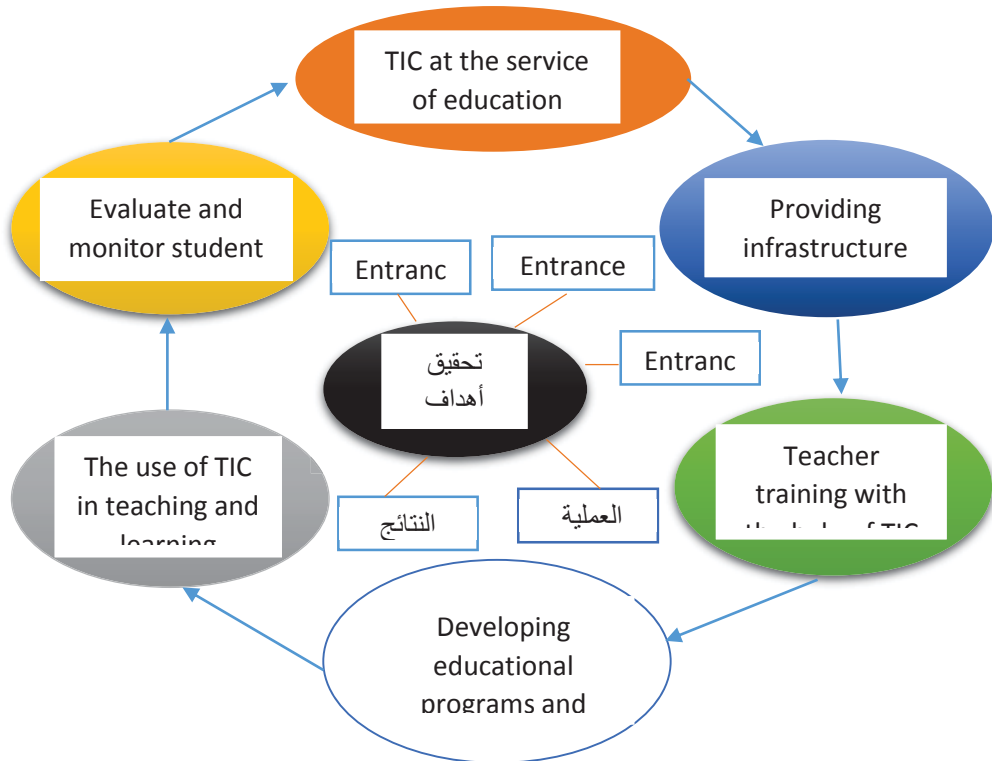
The integration of modern technology in education includes several variables that make its objectives positively achieved. The conceptual and practical framework of modern technology in education illustrates the following: [5]

figure 1-1 (Conceptual and scientific framework for integrating modern technology into education



As it becomes clear to us through the chart that integrating modern technology into education requires intensification of efforts and the availability of many factors including: factors of the system as a whole which educational institutions represent factors of educational institutions in which technology is integrated without neglecting the characteristics of both students and professors with close dealing with learning outcomes. The following figure shows the practical framework for integrating modern technology into education.

figure 1-2: The practical framework for integrating



According to the scheme, the use of modern technology in education has three entrances [6]:

The First: Defining the goal of the education policy.

The second: the requirements for using modern technology in order to achieve the objectives of the education policy which are: providing infrastructure training teachers developing educational programs and providing digital content.

The third: student evaluation and monitoring of results from various aspects of impact on the improvement of the educational process improvement in scientific research as well as community development.

Second: Objectives of integrating technology into education [7] :

- 1- Notify the learner that he is responsible for learning.
- 2- Providing the learner with the skills to learn modern technologies.



- 3- Enabling the learner to conduct research, criticism and scientific exploration.
- 4- The multiplicity and diversity of teaching methods in delivering information to the learner.
- 5- Introducing an atmosphere of activity and interaction in the educational environment.
- 6- Introducing the elements of diversity and suspense into the educational process.

The second requirement: the requirements and importance of integrating modern technology into education

First: The requirements for integrating modern technology into education

Effective technology integration leads to deepening and enhancing the learning process for students. There are several elements for the success of incorporating technology into the educational process [8]:

- 1- Enabling the teacher to use and manage technology with his students.
- 2- Students' knowledge of the technology used and their ability to interact with it, and the teacher's keenness to clarify everything that is difficult for them.
- 3- Providing the infrastructure of computer hardware, the Internet and the required software.

Second: The importance of integrating modern technology into education

The importance of integrating technology into education in general is as follows:

- 1- Improving the quality of education and increasing its effectiveness.
- 2- Solve the problems of overcrowded classrooms and lecture halls.
- 3- Taking into account the individual differences between students in different classes.
- 4- Helping to provide an opportunity for sensory experiences as close as possible to real experiences.
- 5- Using a set of means in the educational and learning situation, and employing them in an integrated manner.

The second topic: the pros and cons of integrating modern technology into education [9]

First: the advantages of integrating modern technology into education:

- The ability to follow the learner.
- Improving the learning environment.
- Easy access to student files.
- The ability to access the electronic library.
- The ability to teach at a distance.

Second: The disadvantages of integrating modern technology into education:

- Weakness in basic skills.
- Providing incorrect information.
- Reducing the role of the teacher.
- The impact of technology on health.
- Negatively affecting the student-teacher relationship.

The third topic: Patterns of using modern technology in the educational process

The first requirement: the use of modern technology in Attendees

One of the aspects of education using modern technology in educational institutions is physical education, or what is called technological integration in education in classrooms and classrooms ; The following is an explanation of the points related to it:

First: What is Attendees education?

Attendance education is the education that takes place in the same place where both the teacher and the student are. where conversation and communication is face to face between the parties to the educational process. It is also called follow-up education through the site. as this type of education is characterized by a great overlap of each student (trainee) with his teachers and peers. and the presence of strictness in times and places. [10]

Also the process of technological integration is the process by which faculty members integrate software and Internet tools such as hypermedia search engine blackboard and other tools into the educational process and its goal is to improve students' performance and achievements by placing them in new educational environments [11].

second: Conditions for using modern technology in public education



The following must be taken into account when teaching using modern technology so that education is purposeful and does not deviate from the educational framework specified for the educational process [12]

- Not to use technological means in isolation from a philosophical basis on which it is based, and this means that their use is based on an educational philosophy approved in the curriculum meaning that the philosophy adopted by the curriculum and its planning must be compatible with the computer technology on the other.
- The use of technology, the curriculum and educational activities should be integrated and not separate from them; Rather it must be an effective element in achieving educational and educational goals and the use of technological means should not be a luxury.
- Physical capabilities such as computer hardware and learning software should be available.
- That the student is psychologically prepared to deal with technological means and has a clear idea of its use as well as an acceptable level of use skills.
- The student's interaction with technological means should be more active than his interaction with other method and he should be serious in investigating the information contained in the software.
- The educational software should ensure that the student's thinking is directed towards solving problems and how to deal with them.
- That the computerized lesson permeates some situations in which a group discussion takes place in which all learners participate; In order to address the lack of technological means in the development of social skills.

Third: Axes of using modern technology in public education

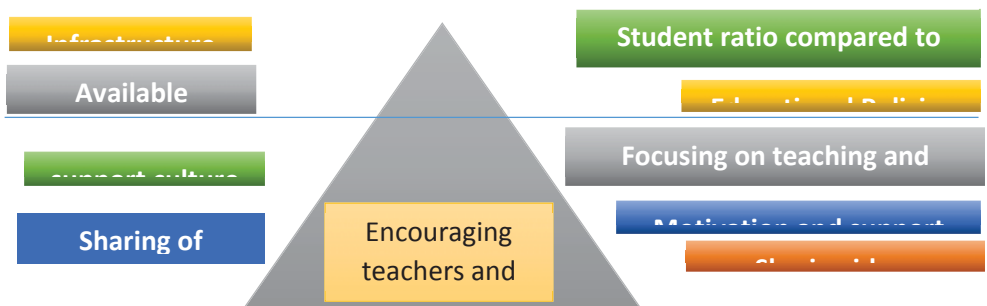
The variables or axes of the use of modern technology in the presence education are summarized in five main axes:

- 1- **The teacher:** The use of modern technology in education has caused a huge revolution in the teacher's work. The role of the teacher has shifted from the traditional teacher whose role is limited to the prompter, the dominant, the only source of knowledge and the transmitter of it to a teacher in the age of knowledge who performs the following roles [13]:

- The role of the explainer using technical means.
 - The role of encouraging interaction in the educational learning process.
 - The role of the promoter in generating knowledge and creativity.
- 2- **The student:** The use of modern technology as an educational tool attracts students and encourages them to be independent learners and helps them access information quickly from wide global sources as it achieves the following elements: [14] (Effective learning - student centralization - modeling of real life situations - resource-based learning)
- 3- **Teaching process:** It is necessary to define the goals of teaching accurately and then use the appropriate modern technology to achieve those goals. Among the teaching processes developed thanks to modern technology: [15]
- Blended learning or blended learning.
 - Programmed learning.
- 4- **Curriculum:** Reshaping educational curricula according to new technology; The textbook is no longer the only source of knowledge but the scientific material has appeared on CDs and the Internet has been used to access knowledge with the use of computer programs in presentations without neglecting the use of educational bags [16]

The necessary strategic plan elements can be represented by the iceberg below.

figure 1-3 The factors on which the change strategy aims to integrate modern technology into teaching depends



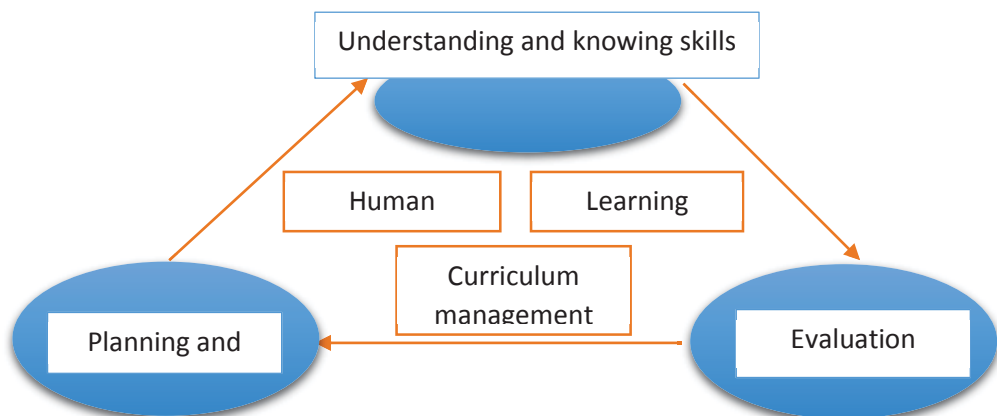
From the previous diagram, we note that the factors that make up the change strategy are divided into two parts [17]

Visible factors: it begins with the development of a new educational policy based on the integration of modern technology into teaching and work on providing the necessary infrastructure; So that the ratio between the number of students and computers is within the acceptable ratios and the provision of the necessary resources such as funding and training.

Hidden factors: These include encouraging professors to integrate this technology into education providing them with support and motivating students, considering modern technology the most important components of the teaching and learning processes within the spirit of collective sharing of ideas resources and culture prevailing in society. There must be a clear vision for change and it is developed through understanding, knowledge and skills and then reviewing evaluating and planning for change.

To apply this change management strategy to every type of change within the organization where the process continues in a cycle and the implementation of the change plan can be led as in the following figure:

Figure 1-4 A strategic change plan to integrate modern

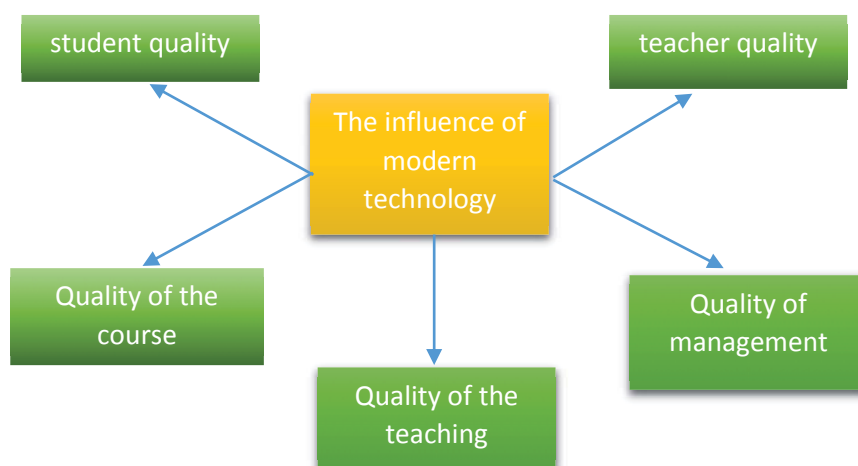


This changes the form and content of educational administration when this technology is integrated into the teaching-learning process to become [18]:

- Interested in building and managing databases and information to effectively contribute to good decision-making.

- Self-management, either centralized or decentralized, with open lines of communication between administrators, teacher and students.
- Interested in the overall quality of all components of the educational system.
- The professor's efficiency is measured by his ability and ability to train, develop his performance and use modern technology in his teaching and the validity of his professional license will not continue to practice lifelong education.

Ffigure (1-5) The effect of modern technology on improving the quality of the educational process elements



These points will not be confirmed for the impact of the use of modern technology in the educational process in attendance to improve the quality of its various elements (professor, student, course, teaching process and administration) according to the following figure:

The second requirement: blended education

Proceeding from the defects that appeared in e-learning and the presence of many advantages of the traditional method of teaching, and in order to avoid the defects of both methods and obtain their advantages. blended education appeared through a process of mixing and mixing between e-learning and education in the traditional way. This has been called by many



names namely blended education, blended education, blended education, blended education, and the following are the various points related to it.

First: the definition of blended education

Blended education is defined as an education that combines both traditional education in classrooms and e-learning in order to benefit from the advantages of both methods.

It is also defined as a type of education in which e-learning, with its elements and features, is integrated with traditional face-to-face education with its elements and features in one framework. so that e-learning tools. whether computer-based or internet-based are employed in learning activities for lectures, practical lessons, and training sessions in classes. Traditional and virtual classrooms 3 and therefore it is an integrated system that aims to help the learner during each stage of his learning based on the integration of traditional education and e-learning in its various forms in the classroom. [19]

Second, the advantages of blended education

Blended education has many advantages that can be summarized in the following points [20]

- Significantly reduce education expenses compared to e-learning alone.
- Strengthening the human aspects and social relations between the learners, among themselves and their teachers, and among the teachers themselves as well.
- One of the clear advantages of this type of education is that it provides teaching in the work or study environment, includes reinforcement and uses a minimum amount of effort and resources to gain the largest amount of results. It enables people to apply skills continuously to become a habit with practice.
- Blended education also has many advantages as it creates in the student a familiarity with the etiquette of dialogue and criticism and breaks the rigidity of the traditional teacher. It also allows the student the freedom to choose the appropriate time for the lesson and achievement while increasing the possibility of communication between students and between them and the students and the institution. [21]

Third: Strategies and requirements for blended learning

The strategies and dimensions of blended learning are explained below:

- **Blended Learning Strategies:**

- 1- The first strategy: in which lessons are divided between e-learning and classroom education, according to the nature of the lesson, and traditional or electronic assessment methods can be used.
- 2- The second strategy: in which the traditional classroom education and electronic education are used in one lecture or lesson. provided that the beginning of the classroom education and then electronically through the networks is carried out using one of the two methods.
- 3- The third strategy: It is similar to the second strategy. but the beginning is for e-learning.
- 4- Fourth strategy: There is an exchange between both traditional and electronic education many times within a single lesson or lecture.

- **Blended Learning Requirements**

There must be many requirements for the application of blended learning which are determined by a teacher a learner, curricula and techniques as follows:

First: blended learning techniques

It needs two parts of technologies a physical part and a software part. The requirements of the physical part are determined by computers and the presence of an internal network at the educational institution level. a multimedia display device or a smart board. As for the software section. it is determined by the educational material electronically such as multimedia software and e-books, the provision of an education management system. the provision of a content management system the presence of virtual classes next to the traditional classes so that they complement each other. [22]

Second: Professor in blended education

In blended education, the role of the professor must be the catalyst for the generation of knowledge and creativity. He urges students to use technical means and invent the educational programs they need and results in them controlling the subject matter by presenting their opinions and views. The role of the professor in blended education is represented in: [23]



- Facilitator of operations: it provides instructions and allows learners to discover learning materials on their own without interfering with their learning path.
- Simplified content: where the professor provides students with knowledge and facts, and the associated practical tasks, values and trends, and simplifies them, and then links them to reality.
- Researcher: where he conducts procedural research to solve the problems he encounters, and searches for what is new in his field of specialization or the disciplines related to his specialization.
- Technological: The role of the professor in hybrid education is to help learners navigate the ocean of information to choose the most appropriate and critical analysis.
- Designer of educational experiences: The professor has a key role in designing educational experiences and educational activities and supervising some of them in proportion to his experiences inclinations and interests.
- Director of the educational process: The teacher is a manager of the entire educational process where he determines the numbers of students enrolled in online courses. their dates methods of content presentation and methods of assessment.
- Adviser and advisor: one of his most important roles is to provide advice and advice to learners, and he must be of permanent, continuous and renewed connection with everything new in his field of specialization.

Third: the student in blended education

The student has shifted from being a recipient of information to being a participant in making content and the student has become an active and interactive element.

qualify them for this role 2 The student must have the skills of surfing the Internet in order to search for information and in order to communicate with the professor or with his peers through the use of the conversation program (chat) and to have a simple knowledge of the English language, because some of the learning platforms on which the educational material is uploaded such as The model or e-mail contains some words in the English language and

therefore the student's possession of the skills will take him out of the cycle of negativity that characterized his role in the traditional method of education to the circle of positivity in light of blended learning and thus this increases the effectiveness of the educational process.

Fourth: Obstacles to blended learning

The obstacles to blended learning are summarized in 1

- The low level of experience and skill of some students and professors in dealing seriously with educational technology computer devices and their attachments.
- The costs of computer hardware their efficiency their attachments and their development from one generation to another may sometimes stand as an obstacle to their acquisition by some students, teacher, and other parties.
- The low level of actual participation of curriculum specialists in the manufacture of integrated electronic courses.
- The low level of effectiveness of the system of control evaluation correction attendance and absence among students. Feedback and incentives and compensatory incentives may not be available sometimes.
- Focusing on the cognitive and skill aspects of the students more than the emotional aspects.

Conclusion

From the previous presentation, blended learning can be considered as a new strategy that aims to make the most of the applications of modern technology in the development of education, in terms of developing a set of ideas and principles necessary to design educational situations that mix teaching in the classroom and teaching via the Internet, provided that these situations address courses The study in a comprehensive and integrated manner proceeds towards achieving certain goals and defines the teaching methods. methods and technological means that help them achieve those goals, and then sets the appropriate evaluation methods to identify the extent of their success and achievement of the goals that were set before.

Hence, activating the use of the blended learning strategy can raise learners to exercise self-conscious ability in study, discussion and research and a self-



ability that does not touch the degree as the end. nor personal ambition that all other aspirations stand below and raises the level of the learner's will for himself and his surroundings and awareness of his ambitions. And the problems of his society which allow him to have the ability to analyze, crystallize and understand, not through the educational stages only, but also on a continuous basis, which are expected to be created and developed by the different educational stages.

Recommendations of Study

Based on the results of our current study we can offer some recommendations regarding the use of modern technology in teaching and learning in order to make the most of these technologies, including:

- 1- The need for educational systems to pay attention to educational technology and technological standards and to develop high-quality projects to bring about the transformation required to achieve quality.
- 2- Preparing teachers and empowering them with modern teaching practices and educational trends based on technological standards
- 3- Train teachers well to carry out their serious roles in light of the age of information and technological developments
- 4- The need to take advantage of educational technology standards.
- 5- Employing technological programs to integrate technology into public education curricula.
- 6- Paying attention to studies and following up on all that is new in the world of educational technology.
- 7- Work to reduce the obstacles that teachers face in using modern technology.
- 8- Activating the electronic archiving of the files of students and teachers in schools so that they can be referred to when needed easily and easily.

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