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CURRICULUM AND EDUCATIONAL STRATEGIES FOR EDUCATION TECHNOLOGY COMPETENCY

COMPARİSON STUDY BETWEEN THE IRAQ AND ROMANIA

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Contents

IRAQ

ROMANIA

Abstract

Despite intensive research on educational curricula and educational strategies dealing with the issue of the efficient availability and use of educational techniques in secondary schools, but we can only find vivid examples of these techniques and their efficiency in a very limited research papers providing that , to be applied and used as a model for other schools. This study was conducted in Romania and Iraq. Where we only focused on those educational techniques which we have chosen to strengthen and regulate the educational process in educational institutions, where parents are now more inclined to encourage the use the educational techniques in the education of students (their children), where they recently started to believe that such technologies promote learning for students, and students are also more inclined to use educational technologies in classrooms, and teachers also see that these educational techniques facilitate the process of education, as it reduces the extra effort on their shoulders and reduce the time wasted in the classrooms, so the related

authorities in the Ministry of Education started to adopt the point of view of intensifying the task of providing these educational technologies and physical facilities to end the current educational crisis in secondary schools, so that the teaching staffs will use them in an easily and flexible way, and all of the three parts of the educational process triangle parents, teachers and students must collaborate with each other facilitate the use of these techniques and keep them in order to achieve effective and more active education.

The aim of this study was to uncover the reality of the availability of educational techniques in secondary education in Romania and Iraq from the teachers' point of view, their actual use by teachers, and the impact of selected variables. The study also aimed to reveal the role of educational curricula and educational strategies that encourage the use of educational techniques, the study sample consisted of (340) teachers, (250) parents and (1010) students who were collected through questionnaires in Romania and Iraq.

The study reached a number of results, the most important of them are : First: The required number of educational techniques in the secondary stage is (10) technologies, and the degree of their availability from the point of view of teachers, varied between (medium, and low) in Romania, while it was very low in Iraq.

Second: the degree of use of educational techniques by secondary school teachers in general within the low level. .
Third: The medium level of the curriculum's content organization as well as its method of its presentation, organization and clarity of textbook's language. Fourth: The difficulties facing the use of educational techniques in secondary schools from their (the teachers') point of view, to a high degree.

As a result of this doctoral research, we found that the availability of educational techniques in school affects the school and the process of teaching and learning positively according to the answers of parents, students and teachers. All the answers agreed on the need for pedagogical techniques and the need to emphasize their use by teachers to strengthen the process of learning and

teaching in the educational process, and the elimination of traditional teaching, and to assure the cooperation between family, students and teachers which will lead to the success of the process .

CURRICULUM AND EDUCATIONAL STRATEGIES FOR EDUCATION TECHNOLOGY COMPETENCY. COMPARISON STUDY BETWEEN THE IRAQ AND ROMANIA

Introduction

Recently there has been a tendency to study the immense gap between the educationally students' needs and the professional teachers' capacity in order to maintain the rapid of cultural changes. There is an increasingly necessity need to recruit many of the tools and techniques of educational modern strategies, to achieve the development of students ' skills in thinking and research, criticism, listening and discipline, to the maximum extent possible. In order to accomplish the stage of studies; for teachers' skills ought to increase his knowledge in all areas of education, and trends related to evaluate the depth of study of the students and to see the finest ways to reach their minds and hearts. The educational process has become, in our time, a human long-term project that needs to increase the interest in science and research and internal creativity of the student, also to increase motivation and desire to achieve. However, the educational trend in many of the existing educational institutions, still depends on the means and methods of indoctrination characteristic to traditional education, which reduce the student's will and involvement, waiting for his turn always to participate, at a time determined by the teacher, and in accordance with what he sees. This may lead to the suppression of his talents, and turn off the creative flame that she/he has.

Educational technology is a symbol of the progress of science and technology of this age, which is invaded modern life and vast circle of the users. Education technology has become one of the most important methods that can effectively use for preparing and organizing the fundamental technical elements (studies and materials) of the study, it can be used to achieve the educational goals based on scientific and technical progress.

It has become a necessity to expand and diversify the educational strategies and the use of Education technologies in education, in order to achieve many of the educational goals.

Hence the aim of this research is to scientifically illuminate on some of the important skills in the teaching profession, instructional strategies, the use of information technology and the methods to use it as an educational tool for effective and efficient adjuvant for the student in thinking, learning and an aid for progress on all levels, intellectual and social.

Study's problem and its questions

One of the most important means which must be activated by the Ministry of Education in all states of the world is the technical activation in education in order to obtain the aim of the goals and to improve the educational process of learning, which will reflect positively on the educational outcomes, and from here this study will examine the degree of availability of teaching techniques and the degree of usage of teaching techniques the role of curriculum and educational strategies for the development of the use of Education technology in the educational process and making an appropriate recommendations in order to improve its use.

Study's questions

The study aims to examine the degree of availability of teaching techniques and the degree of usage of teaching techniques at secondary schools in Iraq and Romania and the role of curriculum and educational strategies in the development the use of some technologies for “Educational Technology” in the educational process, and making the appropriate recommendations to improve its use, by answering the following questions:

The first question: What is the degree of availability of teaching techniques at the secondary schools in Iraq and Romania?

Second question: What is the degree of usage of teaching techniques at secondary schools in Iraq and Romania?

Third question: What is the role of curricula in the development of efficient use of Educational technologies in education?

Fourth question: What is the role of educational strategies in the development of efficient use of Educational technologies in education?

Fifth question: Are there any significant differences regarding the teachers' use of information technology due to the variables of sex, experience and qualifications?

Sixth question: What are the obstructions faced by the use of educational technologies and study aids at secondary schools in Iraq and Romania?

Study's objectives

This study aims to examine the role of curriculum and instructional strategies for the development of the use of Educational technology technologies in the educational process, and the relationship with some variables such as sex, experience, and qualifications, according to the following objectives:

(1) Examine the role of curriculum in the development of an efficient use of information technology in education techniques.

(2) To find out the role of instructional strategies in the development of efficient use of information technology in education techniques.

(3) To find out the degree of availability of information technology in educational institutions.

Importance of the study

The study is consisting in the following:

(1) Explain the role of curriculum and instructional strategies in the development of efficient use of Educational technology and education techniques.

(2) Open the way for researchers to conduct empirical research by using of Educational technology in the education techniques.

(3) Make recommendations and proposals based on some results of this study, according to decision makers in the Ministry of Education and those in charge of curriculum development, enriching the reality of teaching in education.

(4) It is possible that this study might contribute to the knowledge about the reality of the use of Educational technology in education techniques.

Determinants and the limits of the study

The study will be limited into:

(1) Spatial and temporal boundaries: the study will be confined to the secondary schools in the Iraq and Romania of education Ministry in the second semester of the academic year (2017/2018).

(2) Human Frontier: The study is limited to teachers, Students and Parents in Iraq and Romania.

(3) Substantive boundaries: the study is confined to the specimen's proposal to examine the efficiencies of the "information and communication technologies" which needed for Iraqi and Romania teachers proposed to be developed using the tool prepared by the researcher, and its availability from grades validity and reliability.

Chapter I: Educational Curricula in the Schools. The Foundations

1. History of the Curriculum and Importance of the Curriculum

"With its importance in formal education, the curriculum has become a dynamic process due to the changes that occur in our society. Therefore, in its broadest sense, curriculum refers to the total learning experiences of individuals not only in school but society as well." (Bonifaz, 2010)

Barrett et al stated that "a good curriculum must satisfy three criteria: it must be effective in helping students learn more rapidly than they would on their own; what students learn should benefit both the individual and society as a whole; and it must employ positive rather than coercive or positive methods." Curriculum is contributed to develop "thinking skills and the acquisition" to relevant knowledge that students require to apply in their studies, daily life and careers. (Barrett et al,2001)

Due to the fast and progressive growth in all aspects of knowledge, there was a need to review and enhance curriculum, and due to this fact, students are most likely to lose a very important part of knowledge that is restored in curriculum.

The term "curriculum" comes from the latin word *currere*, which in English can be translated as "running" and it was first used in Scotland, in 1820, and a century later in the US. Over time, the initial term "currere" developed new meanings, such as school course or scholar itinerary.

After 1920, the curriculum-ul became a field of systematic preoccupation in pedagogy and the concept included all the experiences that the student has in school. (Kearney and Cook, 1960). The first entry of the term in The Oxford English Dictionary (OED), was describing the curriculum as „a compulsory study or training in a school or university" (Creţu, 1998, p.103).

Restrictively, until the first half of the 19th century, the concept of curriculum was overlapping with the one of learning content. Broadly, as a modern perspective, curriculum represents an integrative concept, approached globally and systemically, regarding its components and interactions.

At the middle of the 20th century, the concept included methodology, objectives and evaluation, besides content. The concept extended on the plan of relating to the forms of formal education (UNESCO), and on the plan of relating to the forms of informal education, who put a greater emphasis on practice, rather than the theoretical aspect.

From a historical perspective, the curriculum can be defined as a dynamic concept, which undertook various growth and constant enrichments. In 1950, the theory of curriculum started to develop more intensively. Nowadays, the theory of curriculum is a pedagogical discipline which studies the content of education and the methods employed for selecting its contents which must value all element of human knowledge from science, technique, art, morals, religion, sports, and others which are considered relevant for the training process of the student and for the development of the human personality. In essence, the curriculum is a project which has the value of and educational action (Potolea, 2002).

The European dimension emerged in the language of educational policies in the late 1980s and refers to mutual learning efforts, joint exchanges and projects carried out by educational establishments in EU countries. The European dimension is a final community of all educational systems in Europe, marked by human rights, pluralism and the rule of law (Potolea et al, 2008).

2. Curriculum: concept and development

The curriculum has two concepts:

2.1: The old curriculum concept

This method is known by this concept as having many different definitions, all of them converging to the following meaning:

(1) Group of study disciplines or various terms studied by the students.

(2) Group of courses or study disciplines where the student must pass or get good grades in the main field from the two main ones, like mathematics or the social disciplines

(3) The general and complete plan of the disciplines that should be studied by the student in the school for getting a study certificate (a diploma) that qualifies him to work in a certain profession or craft.
(4) Group of studies or services acquired by the student at the guidance of the school or of the college.

It should be noted also that these definitions have to meet the following points:

Main points:

(1) The attention paid to the discipline or to the study disciplines while the student is studying individually, without a teacher or while being taught in the classroom or by other means, without showing that the student has to be forced to study certain knowledge in order to succeed.

(2) The attention paid to the quantity of the knowledge, for the student to benefit from "a collection of materials and courses", whereas many disciplines are often crowded and disjoined, having no connection between each other.
(3) Considering that the examination is passed and obtaining the diploma according to the curricula, whereas the student has an interest for the classes and for their utilitarian value that benefits himself and the community.
(4) There is no interest in the physical aspects and psychological aspects of the pupil or for his skills, whereas the qualification for the work profession or for the craft is only related to the educational achievements.

The assumption of equality between pupils and expecting to reach the right level of the achievements, without taking into consideration the individual differences. The reason for all of this is the old perception of knowledge, it was the general belief that knowledge is the supreme good and that increasing the knowledge of the individual increases his virtues; because knowledge itself leads to a behavior change and generates the gain of different involuntary human skills. Many received the information according to their understanding, which was enough just for training

their minds and developing their intelligence, afterwards reaching a personal phrasing that is shown in the society (Shehata, 1998).

2.2. The new curriculum concept

The modern concept of the curriculum: the curriculum changed, at the same time with the development and progress of science and research, especially for those which emphasized the need to adapt the curriculum for learners instead of preexisting conditioning given to students. The curriculum has been defined by the modern concept also by the use of several definitions, including the following:

A set of regular activities: the content, the tools, the teaching aids, provided under the supervision of the school, preparing students for an effective learning and for a good life. A variety of experiences that are formed, which are created in order to allow the learner to pass.

The range of guided experiences adopted by the community leaders as they will be achieved, ending in benefitting the emerging growth and success of personal and social planning, under the supervision of the school (Hindi et al., 2008). All the experiences planned “inside and outside the school, in order to achieve the overall growth of the learner in all aspects of his personality, including the achievement of his objectives and building a proper behavior, as well as modifying the unwanted behavior so that he will be a good citizen.” (Al-Shibli, 2000).

Total diverse expertise offered by the school to students inside and outside the school, in order for them to achieve an integrated development in the building of human beings, according to specific educational goals and according to the scientific plans drawn, physically, mentally, psychologically, socially and religiously (Shehata ,1998).

The concept exceeds the knowledge taught and it deals with all the ingredients that work together to formulate an educational output and print a special character, achieving an involuntary personal decency which must be integrated, including the spiritual, mental, physical and social aspects. It features a modern concept of curriculum that:

Main point:

(1) Is not limited to the texts and information of the textbook content alone, but rather deal with it as a component of the curriculum components and a means for its implementation.

(2) The implementation of the curriculum is no longer restricted to the activity that is within the school, but also to all extra-curricular activities that take place outside the school.

(3) The main concern is not only forming the student's mind, but also seeking to achieve the overall growth of his personality, in all aspects.

(4) The care is focused on building a passive behavior of the learner rather than charging his mind and theory of knowledge, regardless of his values and instinct.

(5) There is comprehensive care granted to the planning of integrated educational experiences that help the learner to learn and to build a proper behavior.

(6) There is an interest in setting clearly the educational goals and the different levels and working the way up to achieve them.

(7) Care is given to the actual yield of the educational process of the individuals and of the community as a whole. (Al-Shibli, 2000).

3. The foundations of the curriculum

The foundations intended for the rules based on which the curriculum was created, served as the origins and roots where the entire tree started its branches. Also, the intended foundations of intellectual theories and theoretical beliefs owed by the elaborators of the curriculum involved setting the curriculum off, building it and implementing it. Thus, every human activity was made based upon the doctrine emerging from these roots and built upon them. The economic euphoria which emerged when factories and state owned companies were established, which were working together behind a particular economic theory, guided this destinations or the others, as well as the social, medical and political activity and other activities carried out by the State or by individuals. Thus, the theoretical

thinking, which could be behind any activity carried, includes all the elements and internal parties in that activity.

The approach is built on a group of foundations and by several specialists in the field of curriculum planning, classifying those foundations in four types:

- Basis of the knowledge.
- Philosophical foundations.
- Psychological foundations.
- Social foundations.

Cognitive foundations have been incorporated with the philosophy, as culture was individualized as a special dimension, with independent foundations (Ryan, 1999).

4. Factors Influencing the Construction of Educational Curricula

The evolution of human life and the knowledge of platforms in general, especially during this time, when the means of communication and the human evolution evolving negatively and becoming knowledge, increasing then the educational curricula affected by it for the nature of the curriculum to keep pace with the global and regional developments, whereas these factors are the following:

(1) The philosophical factor: philosophy does not mean human knowledge per se, as much as the use of the knowledge guided them to walk in one lifestyle without the other, and that each community philosophy is not written necessarily, being explained but existing as long as heritage exists. The usefulness of the philosophy considers that the ideas of that society, its culture and sources of education, as well as its places on the second place and with the actual application of the practical effort.

(2) The historical factor: it is the result of continuous interaction between elements of different cultures in multiple communities over long historical periods, and leave the date mark on education just as various elements of life and cultures are

within a community, whereas we can say that the existence of historical depth in the educational process helps the process of education in the knowledge upon:

a) What the nation inherited from the past and what I have prepared for the present, as well as how to plan the future.
b) What is encountered in various educational problems, in the light of the old problems addressed similarly;
c) The moving away from "what is not in favor of the nation and the search for what is useful" (Ibrahim, 1983, p. 35).

(3) The psychological factor: it is a scientific research in education and the results of psychological science and human knowledge, breathing the old theories and correcting errors in process of teaching and learning. Such a concept of relying on mental training, he discovered his mistake in the last moment, at the time to enlighten on the developments to the field of education. Psychological factors shall underlie education as the following:

a) Knowledge upon the nature of learning: learning theories, choosing the right theme for each of the learning topics.
b) Knowing the nature of the learner: in terms of needs, composition, abilities, inclinations and behavior.

(4) The social factor: the environment is that set by the man, used for the idea of the mind and for managing the work and legacy.

At the examination of the social factors, one must know the structural dimensions of communities in terms of physical construction and he must guide them towards the external influences of natural environment, such as climate and terrain and natural resources, as well as population structure, being also guided towards the sex of the population, its religion, origins, gender, age and composition. Also, the construction of the profession means that there are certain industries and professions, as well as the construction of the class, including the caste system in society and social levels.

There is also, the building of the prevailing administrative and institutional regulations of the profession, in the rural and urban areas and in the system of formal and informal schools.(Ibid., Page 28

(5) The political factor: since there was a system called a state or government system that became the policy of the organization, having an important role in the life of the community, and affected by that education (Ibrahim, 1983).

(6) The economical factor: the economic theory, going by the community, is determined by the conduct of that community and by its ways of life, thus rising generations, whether this economic system is based on agriculture or depends on commerce and industry.

The relationship between the economy and education is a close relationship, the higher the economic level and the increased national income, the development of education quality and quantity.

(7)The religious factor: religion is a belief, or ideas dominate the thinking of individuals and groups collecting and organizing their living styles and their interactions with each other, so that religion remains a way of life and an explanation of the phenomena, thus becoming an educational goal.

(8)The cultural factor: according to the word "culture" in that part of the environment that man has acquired and used for manufacturing, culture represents his ideas and ideals, knowledge, beliefs, skills and habits and other elements that fall under the theme of culture and the role of education, coming for the preservation of cultural heritage, so as to unite individuals and guide their behaviors and ideas (Ibrahim, 1983).

5. Components of the curriculum

5.1. Goals

Objectives vary depending on cognitive, emotional and skill related objectives and also depending on a variety of sources; it derives from the nature of the learner, the culture of the community, the environment, the goals of state, the academics, the specialists in the subject, and teachers' suggestions. Each of these parts must be involved in setting targets at the planning of the curriculum. The targets in general are guided towards the behavior events expected from the students after the completion of the content delivery in each specific class or at the end of the curriculum.

The definition of educational goals:

Intended educational general objectives: (goals) are

- Changes that are expected to happen in the curriculum of the pupils' personalities.
- In other considerations: the cognitive behavioral changes expected at the events caused by pupils' personalities, as a result passing from their interaction with the educational teaching experience position.
- In other words: "the cognitive, emotional and skill changes of the learner as a result of the passing-oriented educational experiences, and the reflection of these changes on his behavior and performance "(Atta, 1992, p.101-102).
- Or this is an exact description of the required forms of change set in the student's behavior, after passing a certain educational experience. In other words, this is: the delivery of what we mean by drafting the variables required by the learner, describing the formulation, showing what it would be like when the learner must have completed successfully the learning experience "It's a description of the pattern of behavior, or performance that we could estimate for the learner's statement."(Toema, 1981, p.63). The occurrence of the change due to attain useful information and developing skills of emotions.

Goals of the curriculum and Questions

The curriculum is the tool used in order to achieve educational goals, as it has been shown in the first section of the first chapter, whereas the concept is no longer limited to the knowledge-based content that empties the minds of learners through the material or the combination of materials, but becoming multiple items. What are those elements?

In 1949, the educational communication (Ralph Tyler) to ask a series of questions feeling that the answer determines the elements in the form of modern approach and its conception through these inquires:

(1) What are the educational goals should be the ones that the school is trying to achieve?

(2) What experiments should be saved and what goals can be achieved?

(3) In what way should such educational innovations could be comprised and submitted efficiently?

(4) How to judge, when these targets have already been achieved?

Basic Answers

Based on these questions and answers about the expected, the four elements of the curriculum identified are the following:

(1) Objectives that the school seeks to achieve and sources at (Taler) are: education, contemporary life, art experts, and the philosophy of community psychology.

(2) The content (experiences)

(3) Organizing the experiences.

(4) The calendar

This is limited to the cognitive aspect according to the traditional concept of curriculum. Content is defined definition of the most comprehensive that: the total educational experiences, facts, information, which please provide students with them, as well as the attitudes and values that are meant for them, and finally the motor skills that are meant to be acquired by them in order to achieve an integrated overall growth for them in the light of the planned curriculum goals (Toema, 1981). “The educational experience or education is intended to entrepreneur education that lays the vision of how to determine its contents, and much of its potential, educational materials or activities carried out by the students. Position may be in the classroom or outside it may be out of school” (Allagany and Ali, 1999, p.127).

Educational experiences to be teaching them to students in an educational position in accordance with the educational standards, and it must be relevant to students' lives, check the demands of growth, taking into account the needs of society and the conditions of the environment, and its expertise in the books and courses and direct experience (conduct live experiments) and various reference such as

newspapers, magazines, brochures, and all what helps to develop self-learning so that the textbook is not the only source of knowledge (Negreț, 2008).

Curriculum content is a central point where all the elements come together in a circular relationship it affects and is affected by each element. When building approach one must answer another two basic questions:

(1) What is the nature content embodied in the curriculum? In other words what a school offers to students?

(2) How is the content regulated? Which is the image that presents the content to the students?

6. Competency-based curriculum. Key competency in Romania and E.U.

"A curriculum that emphasizes the complex outcomes of a learning process (i.e. knowledge, skills and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally-defined subject content. In principle such a curriculum is learner-centered and adaptive to the changing needs of students, teachers and society. It implies that learning activities and environments are chosen so that learners can acquire and apply the knowledge, skills and attitudes to situations they encounter in everyday life. Competency-based curricula are usually designed around a set of key competences/competencies that can be cross-curricular and/or subject-bound." (Unicef, 2009)

The key competences have an explicit and implicit presence clearly specified in the National Education Law, which shows that their inclusion represents the maximum referential of the educational process finality.

Article 4 of the LEN states that: "The main purpose of education is the formation of competences to define as "a multifunctional and transferable set of knowledge, skills and attitudes that all individuals need for personal fulfilment and development, inclusion and developments." (Canado, 2013)

In art. 13 Underlines that lifelong learning is a guaranteed right; this key competence thus becomes a major educational target.

Article 31 (6) shows the role of the “non-formal or informal” component in the formation of competences in high school education.

Art. 68 - (1) “the national curriculum for primary and secondary education focuses on 8 key competencies that determine the student's training profile:

a) Romanians' Communicative competency and their native language, when it comes to the minorities.

National;

b) Communication skills in foreign languages;

c) Basic skills in mathematics, science and technology;

d) Digital competences for the use of information technology as a learning tool;

Knowledge;

e) Social and civic competences;

f) Entrepreneurial skills;

g) Awareness and cultural expression skills;

h) Competence to learn to learn.” (ESTONIA, 2008)

Article 68 (5) emphasizes the idea that education in high schools is central to develop and diversify the key competences and formation of specific competences which depends on a several elements (profile, specialization or qualification). Article 70 (2) specifies that the virtual school book store and the platform of its e-learning may include another program, examples of lessons, guides, examples of evidence, represent a key competency of the TSI. Article 72 specifies that the assessment is based on competencies. Article 328 (1, 2, 3) includes the definition of lifelong learning, and Article 329 emphasizes that "lifelong learning focuses on the formation and development of key competences and competencies specific to a field of activity or qualification." Key competencies have been present in all previous law versions, starting with the presidential commission (2008), the Education Code (2009), and the variants from the Chamber of Deputies and the Senate, until the last form completed by MECTS in 2010. Of course, there were shades in the formulation of these skills, from one variant to another.

Elements of key competencies: Learning outcomes and reference

In pedagogical literature, competences are interpreted as learning outcomes, in opposition to educational objectives (considered inputs). These competences are structured assemblies of knowledge, skills and values. It is appreciated that there can be no equivalence between competency formulations and different types of expression of objectives. They cannot be reduced or assimilated to each other. Competence is the student's ability to solve a particular situation based on previously acquired skills and knowledge. There is also the opinion that components of a particular competence (or "sub-competence") cannot be described, but some levels of achievement can be approximated.

There is an appreciation that skills can be transformed into "learning situations" (or "learning activities") that are associated with them rather than objectives, regardless of their degree of generality.

Discussion becomes more complex when it comes to verifying or evaluating competence.

The works that refer to the assessment of competences show a certain diversity of approaches and solutions, as well as the absence, for the time being, unitary.

It follows that future developments bring a new reference system.

From the definition of key competence and the analysis of their specifics, the following results are achieved:

• Skills are defined through a system of knowledge - skills / abilities - attitudes;

• have a transdisciplinary implicit character;

• Key competencies are somehow the educational endings of education compulsory;

• These must be the basis of permanent education

Table *1Comparative synthesis of skill options*

E.U.	SPAIN	FRANCE
(1)Native language communication	(1) Linguistic communication	(1) French language
(2) Foreign language communication	(2) Mathematical competency	(2) Foreign living languages
(3) Mathematical skills and basic competences in the science and technology	(3) interaction to the physical world competency	(3) Mathematics & science
(4) Digital competency /educational technology	(4)Digital competency& information process	(5) Information & communication techniques
(5)Social competency and civic competency	(5) Learning how to learn	-
(6) Learning to learn	(6)Social&citizenship competency	(6) Social & civic competences
(7) initiative & entrepreneurship	(7)Autonomy&personal initiative	(7) Autonomy&personal initiative
(8) Sensitive & cultural expressivity	(8)Cultural&artistic competence	(4) Humanist culture

Adapted from (DESECO, 2002).

In relation to the key competences system of the European Commission presented so far, there are different nuances in different countries. It is noteworthy that in these approaches mentioned above, new elements arise, especially regarding autonomy, personal initiative, life and career management, which would highlight an area with a specificity resulting from the valorization of the individual possibilities of personal development and development lifetime. The existence of an axiological competence emphasizes the building of value discernment in the appreciation of social activities, products and facts (Birzea, 2010)

7. The Objectives of General Curriculum; the Importance; the Types; the Classification of Educational Objectives of the Curriculum

The objectives, due to nature or due to extent of the time during which they are achieved, are divided into two sections:

7.1. Educational aims

These are the considerations describing the expected life of the byproducts on the values' scheme prior to its legal form of educational philosophy prevailing in

society. They are also characterized by great generality, but to a lesser degree of purposes because they represent the values believed in by some communities, for a specific educational program, although not directly linked to the school productions, or to classroom productions, a goal specifically achieved on the long term. Examples of these objectives:

a. “Educating young people on civic responsibility and social responsibility”.

b. “Educating young people to actively participate in the daily life” (Toema, 1981, p.48)

7.2. Educational purposes:

They represent the desired results in their investigations from an educational perspective and they are characterized by comprehensiveness and abstraction, because they are not built on advanced planning (Saada, 2005, p.47) given the dreams and hopes of the communities, related to purposes that can be achieved at different levels, which can be represented as follows:

a. Preparation of a good citizen and of a good man.

b. The provision of world peace and stability.

c. Human cooperation to serve humanity as a whole.

7.3. The general educational goals

They are the purposes used as means between educational goals and learning objectives (instructional objectives), they are the overall objectives of developing a curriculum at a certain stage, such as:

(1) The reflective thinking of the learner’s development.

(2) The development of the learner’s creativity.

(3) The understanding of the sciences and his numerous applications related to pupils.

(4) Providing professional competence for younger generations of teachers (Saada, 2005).

7.4. Educational goals (instructional objectives)

They are the objectives related to an article or a group of articles, directly related to school productions or classroom productions (Classroom outcomes), being easily observed and divided into the following:

(1) The near-term goals can be achieved after the lesson called tactical objectives.

(2) Long-term goals achieved at the end of the program or of the specific article called Strategies.

The importance of the objectives

Clear specific objectives represent sound grounds for all meaningful human activity, therefore activity of interest for educators who are employees in the field of curriculum, including its aspects, planning, drafting and the selection of its method, or of the ways and means of teaching, along with the content and the methods of evaluation.

Moreover, the clarity of the objectives facilitates the teaching and the learning process, because both the teacher and the learner know what it is expected from them and that expectations are not achieved. Derivation has intended sources, goals and assets that derive from their objectives of reference, namely:

(1) The needs and demands of individuals: They are inclinations and desires of individual students and their needs.

(2) The needs of the community: include all the needs of the community including the natural resources and the moral values prevailing in that environment.

(3) The nature of human knowledge: they include all human knowledge in the world, past and present, and all those sources associated with building the foundations of the curriculum, which passed mentioning.

The classification of educational objectives

The education goals, whether aimed at building values, or at social organization, or at determining social roles that must be exercised by learners at the end of the curriculum, and the classification of many rankings, whereas this is the most common Taxonomy of Bloom.

The first: Class Bloom and goals are divided into three major areas:

- The cognitive domain (cognitive or mental) includes objectives that relate to the knowledge and mental abilities and skills.
- The emotional sphere (emotional or emotional) and the development of feelings of the learner and development, and the development of its doctrines and methods to adapt with people, dealing with the objectives of things in this area related to the degree of acceptance of the individual or reject a particular thing, as describing the types of behavior characterized by a degree of stability as guidance and values orientation and appreciation.
- Kinesthetic area psychology, belong to the goals that relate to automated and manual skills such as speech, swimming, printing and painting ... of performance types that require neuropsychologist motor coordination (Allagany, 1995).

Second: the domain partition to levels similar to incorporate the learner to acquire information, values or skills as follows:

- The cognitive domain is divided into six levels arranged in ascending order:

  a. A reminder

  b. Understanding

  c. Application

  d. Analysis

  e. Installation

  f. Calendar

- The emotional sphere, and rating the learner to five levels also:

a. Attention to the value (reception)

b. Receptivity and responsiveness of value

c. Interest or value cherished

d. Formation of the direction with the gradual tendency towards the implementation.

e. Represents the value and believe in it (Formation of the system of values)

- Skill area (kinesthetic psychology) also rating the learner to the following levels:

a. Note skill performance.

b. The tradition of skill.

c. Exercising the skill of training without direct supervision.

d. Practice the skill of (Formation of habits)

e. Mastery and marks of the mechanism and ease of performance.

f. The skill of creativity in innovative additions to its performance.

These steps express many expressions such as: tradition - communion - Audit - Coordination - normalization - reflected movements - Basic movements - estimated sensorimotor (physical ability) - skilled movements - kinetic expression innovative (Rushdi, 1984).

When formulating objectives one must consider the following:

- Ensure comprehensiveness and coverage of these three areas in an acceptable balance.
- Ensure the comprehensiveness and coverage of the different levels of the field, in the balance, taking into account the level of the student.

It does not mean that previous classification of the areas that the levels take into account in a logical sequence, descending or ascending, The areas may interfere with, the important thing is to ensure availability, not arranged, there is no absolute link between them and the separation of absolute growth, which does not go on the road parallel; it may be the individual's side sentimental, such as love of Arabic as the

language of the Koran, does not have a side of a knowledge which might even available to him The emotional and skill in the Qur'an followed subtly without having his cognitive side.

8. Criteria for selection of content

There are several criteria for selecting curriculum content is divided by some researchers to the basic standards and other complementary, which is a relative issue where views differ, what he considers some of them may be deemed complementary to some other fundamental, and the most prominent of these criteria are:

C.1. Objectivity: and realized that the content is linked to the objectives that have been identified before.

C.2. Honesty is the true content when you have a realistic and authentic and scientifically correct, in line with objectives. Some educators and divides honesty to the type's values:

a. Scientific honesty: checks and the fact that the concepts and theories that it contains is correct and current content, and essential for the same substance, and is applicable to a wide variety of areas and parking.
b. Gratified representation: and intended to include the content on the broad themes in multiple areas: facts, events, and personalities ... etc. covering different aspects of objectives.
c. Psychological truth: the sense that the content is appropriate for learners.
d. Social honesty: the sense that the content is expressed needs of the community.

C.3. The importance and significance: The content of importance when what is of value in the life of a student with a cover different aspects of the fields of knowledge, and values are interested in mentally development skills and methods of the organization of knowledge and make it available to the learner, and the development trends it. The significance relates to two things:

a. The importance of content for the field of knowledge: Information and concepts that have wide applications and helps to organize the facts, diagnose problems, interpret, and predict and resolve them in a scientific way.
b. The importance of content and value for the learner and the community.

C.4. the ability to learn: to observe and be mental capacity, and individual differences, with a commitment to the principles of - tendencies and interests: The content should be consistent with the interests of students and their orientation (Iucu, 2008).

C.5. Gradient in the presentation of educational material.

C.6. Global: content is good at what includes patterns of learning does not recognize geographical boundaries between humans, it is estimated that reflects the content in local version of the community should be the student connects the world around him.

C.7. Social relevance and compatibility

C.8. Take into account the student's age and ability level and the level of material.

C.9. that the experience be directly whenever possible.

C.10. Integrated experiences.

C.11. The experiences are preparing the learner for life, and adapt their behavior to be more socially desirable for the present and the future.

C.12. Focus on the positive, which means that experiences be an optimistic, not a pessimistic character, interesting not boring, not sad joyful, easy to understand is not difficult, in a constructive not destructive.

C.13. Experience that connects theory and practice, science work.

C.14. the varied experience in order to achieve the broad general culture necessary for a modern person (Potolea, 2006).

C.15. Provide an opportunity for the learner to participate in the learning experience (Toema, Ibid., p.66).

9. Organizing the content: Trends, Standards

There are two trends are used by experts to regulate the content of the curriculum are:

(1) Horizontal organization: It is intended to provide the order of content in the light of the article itself, so that the logical sequence of information into account regardless of the extent to which the some of the learning or the suitability of the capabilities of the students and their orientation, grammatical Topics once taught in a logical sequence: Wholesale nominal and its details, the actual sentence and its details, without heed to its importance for students, history is also arranged in chronological order: pre-Islamic era to modern times. The principles of the gradient from the simple to the complex has been taken into account, it is easy to difficult, but without prejudice to the order (Negreț –Dobridor, 2008).

(2) Psychological regulation: It is intended to provide content in the light of the needs of learners and their own circumstances, not in light of the nature of the material and logical ordering; it provides the actual sentence if the educational situation requires it, what the student wants to learn to satisfy the need is determined by what offers.

Regarding the standards of content regulation, curriculum is based on three criteria proposed by (Ralph Tyler), namely:

Standard

(1) Continuity: means a vertical relationship; so that they are following the experience supportive of previous experience, concept debutante news addresses again and again in the decisions as during the years of the study, at one stage or in different stages, and be in every show adding new ones. Continuing to ensure the learner paper and breadth of its information department, increasing its depth, and earn the required values and trends,

provided that the presentation of the material at a time different from the last time (Cucoș, 2014).

(2) Relay: It means building on previous and subsequent experiences, taking into account the increase in depth.

(3) Integration: It means the horizontal relationship between educational experiences or between the elements of the curriculum; In one article integrated elements: pronunciation is inseparable from teaching listening, teaching as inseparable from teaching texts and rhetoric ... Thus, the substances are integrated, and the elements are also well, this integration helps the pupil to achieve a uniform look consistent, and comprehensive educational experience of linking to each other, provide effort and time, other than as if he studied each item separate and isolated manner (Khatabbia,1997).

Dr. Saleh Al-Hindi also adds his three other complementary criteria to the above, namely:

(1) Accumulation: It is intended to organize educational experiences that are mutually reinforcing in order to occur Tjmaaa or cumulative effect leads to profound changes in the learner.

(2) Balance: It means the balance between the logical organization of the material and psychological organization of learning so that does not depend on one and neglect the other.

(3) Concentration: It is intended to be a center or axis or fulcrum stationed around content and educational experience (Hindi et. al, 2008).

It is noted that the accumulation and balance can be integrated in the concept of integration. There are several ways and methods can be used when selecting curriculum content of which is:

Way and Methods for selection

(1) Guided by other approaches in the same field, taking into account the different environment and conditions of the programs. (Cucoș, 2014)

(2) The use of the opinions of experts in the field.

(3) Carry out surveys about the characteristics of students and their affiliations and beliefs, needs and aptitudes, and then choose what suits them. (Iucu, 2008)

(4) Analysis: any analysis of the positions that are expected to pass by the student, and appreciation of the content that suits them.

10. The Evaluation; the Importance; the Functions and the Types of the Evaluation

Popham defines that “evaluation is concerned with gathering data on the dynamics, effectiveness, acceptability, and efficiency of a program to facilitate decision making.” (Richards & Lockhart, 1991)The most important target of the assessment process is to find out if the programs of the curriculum are followed in the same way as they were designed to be in the first place. These objectives can be used as a basis for developing more specific descriptions of the intended outcomes of the program.

After establishing the goals, there is a need to determine “how to evaluate the degree of success of each stage of implementation. Evaluation is the determination of the worth of a program, product, procedure or objective, or the potential utility of alternative approaches designed to attain specified objectives.” (Warschauer & Matuchniak, 2010)

J. D. Brown defines “evaluation as the systematic collection and analysis of all relevant information necessary to promote the improvement necessary to promote the improvement of the curriculum, and assess its effectiveness and efficiency, as well as the participants' attitudes within the context of the particular institutions involved.” (Graves, 1996) There are however, many types of evaluation, the three main ones being formative, summative and diagnostic evaluation “he advantages of formative evaluations, according to Rea-Dickins were clear in that such a process intended to improve the curriculum [and] gather-information from different people over a period of time, as opposed to merely passing an evaluative judgment on the end product of a teaching program (summative evaluation), formative evaluation is designed to provide information that may be used as the basis for future planning and action,” (Rea-Dickins and Germaine 1992), while goal-free evaluation, which “attempts to observe

and define at what is actually happening in the classroom. In this type of evaluation, goals will be apparent in class if they are relevant...the value of a program resides in the extent to which a program's effects are congruent with the perceived needs of the students." (Unicef, 2009)

However, there is a "place for both types of evaluation in the curriculum renewal process, in the context of this paper the concern is raised by the value of the way in which they are implemented and by their purpose in the first place. Evaluating a curriculum, according to, means being able to determine if the objectives initially assumed, were attained." (Potolea & M, 2006)When evaluating a curriculum, the following aspects must be taken into consideration: the acceptance or rejection of the teachers; the adequacy to the expectancies of the beneficiaries (students, parents, and teachers) and costs.

Scholar lack of successes is something that must take however various factors into consideration. E. Vrăsmas and T. Vrăşmaş (2008) identify three forms of school failure:

- Staying behind - a temporary failure (eg, lower grades than the student's possibilities, the risk of staying up) which consists in showing minor difficulties, adaptation to school requirements that may occur in the life of any student (in this case psycho-pedagogical intervention is recommended);

- Specific failure (specific) - by reference to a certain discipline of study (it is manifested by small notes or coregency); psycho-pedagogical intervention must, in this case, be more complex;

- Generalized failure - repetitive situations of repetition and / or repetition (generated by past phases and by major difficulties, overall and lasting in school adaptation); psycho-pedagogical intervention is very difficult and involves the action of several factors (Vrășmaș et al, 2008).

Importance of the evaluation of schools curriculum

According to Frank Coffield, evaluation refers to generating and collecting evidence regarding the acquisition of students, and the appreciation of the evidence according to the defined standards. By focusing upon the greater aspects of learning, a

person can become an expert in a specified occupational area and can function as an active member of the economy.

Traditionally, the development of competences was not so important within the evaluation of the curriculum, and since it become an important part of the curriculum development, with constant renewal, it should also become an important part of the evaluation. Therefore, curriculum evaluation is used to determine the value of curriculum and to determine whether the curriculum is appropriate. Its importance to take into consideration of the group of students for which it will be used, the selected objects and the recommended materials for instructional purpose.

The purpose of evaluation illustrates its importance for individual progress, for the teacher and especially for the student. The most important purpose of the evaluation can be considered the formal grade system, which represents the evaluation of learning according to national standards of professional competences validated by local committees and which are monitored by the National Institutes that regulate education. The evaluation of the curriculum mainly involves projecting the context of learning and evaluating the projected curriculum (Negreț-Dobridor, 2008).

Functions of the evaluation

Evaluation is the only way to measure the effectiveness of any educational system, which is permitted for those involved in knowing the strengths to be strengthened, and shortcomings to be addressed (Iucu, 2008). Evaluation has many functions in the educational procedure, and since we now came to have a new modern approach, considering that teaching should bring about more than just academic outcomes, it is a much questioned matter these days. Teachers expect that their teaching should also promote critical thinking, better methods of working, a growth in aspects of personality such as social skills, interests, specific competences, etc

Over the past years, much experimentation has been done with curriculum new approaches, teaching methods and materials, so their functions might have also developed. The main functions of Curriculum evaluation used to be the following:

- To set and determine the program's outcomes.

- It helps the program's designer to decide in making his final decision of accepting or rejecting it.
- Bringing out the necessity of the revising process.
- Helping in developing the material in the curriculum assuring its improvement.
- And off course to enhance the teaching methods . (Iucu, 2008).

Evaluation leads many functions, notably:

(1) Assist in judging the value of educational goals; the objectives when formulating serve as hypotheses need to evaluate the process of showing whether they are true or mistake.

(2) Know the extent to which educational goals unwanted.

(3) Diagnosis strengthens and weaknesses in the curriculum or in the collection of the students, so in order to enhance the strengths and weaknesses of the treatment.

(4) Help improve the educational process by determining the level of the progress of students toward educational goals established, and take the necessary decisions to enable them to collect those goals required level.

(5) Enable teachers to discover the effectiveness of educational efforts in bringing about the desired learning outcomes.

(6) Enable learners to see their progress and identify strengths and weaknesses in their performance.

(7) Definition of parents of pupils' extent of their children's progress.

(8) Classification of pupils and promotions in different educational levels and stages.

(9) Facilitate the school administration tasks availability of adequate and accurate information about educational processes / learning of both: quantitative and qualitative.

(10) Predict educational problems and search for solutions.

(11) Curricula and teaching methods evaluation and development.

(12) Gives opportunities for feedback to the student and the teacher, and both contribute to the educational process.

(13) Can the decision makers to take appropriate on general educational development, and curriculum development in particular through providing them with information on the current level of performance and the conditions and facilities for the school's decisions.

The most important function that evaluation has nowadays, in the context of curriculum development, I think is the fact that evaluation can help in bringing changes in the curriculum.

Types of evaluation: models and description and principles

As mentioned earlier, evaluation is the only way to measure the effectiveness of any educational system, but there are many types of evaluation. Assessment and evaluation studies may take place at the subject, department, or Institutional level, and range in size and scope and it includes a colorful range of technical methods. *Formative evaluation*

Formative evaluation is occurred during curriculum development course and it's designed to contribute to improve the educational program. This type of evaluation occurs during the educational process with the intent or improving performance, often referred to as "feedback." Therefore, "Formative assessment implies that the results will be used in the formation and revision process of an educational effort. Formative assessments are used in the improvement of educational programs." (C, 2008). The means of realization, the formative evaluation can be made through oral examination, as well as self-evaluation tests.

- ***Summative Evaluation***

In summative evaluation is the final effects of a curriculum evaluation in base of the objectives, "this takes place after the curriculum has been fully developed and put into operation. This type of evaluation occurs at the conclusion of an educational activity with the intent of documenting achievement or competence. Summative assessment is used for the purpose of documenting outcomes and judging value. It is

used for providing feedback to instructors about the quality of a subject or program." (C, 2008)

The means of realization vary, the summative evaluation consists in written, oral or practical exams, portfolio or project.

Scriven (1967) was the first who saw "the need to distinguish the formative and summative roles of curriculum evaluation: formative evaluation was intended to foster development and improvement within an ongoing activity (or person, product, program, etc., while summative evaluation, in contrast, was used to assess whether the results of the object being evaluated (program, intervention, person, etc.) met the stated goals." (M, 1967) He preferred the latter type of evaluation, however, to acknowledge Cronbach's merits who sustained that formative evaluation is a device of curriculum development process to be used to improving this course while it was still fluid.

Donald Kirkpatrick proposed an evaluation methodology for judging learning processes, called *Four Level Evaluation Model*, first published in 1994. The model has since been used for other learning processes as well, "such as for the Human Resource Development (HRD) profession, concerned with not only helping to develop formal learning, such as training, but other forms, such as informal learning, development, and education." (Nadler, 1984) The four level evaluation model consists in what Kirkpatrick called "the four steps" (Craig, 1996):

- "Step 1: Reaction - How well did the learners like the learning process?
- Step 2: Learning - What did they learn? (the extent to which the learners gain knowledge and skills)
- Step 3: Behavior - (What changes in job performance resulted from the learning process? (capability to perform the newly learned skills while on the job)
- Step 4: Results - What are the tangible results of the learning process in terms of reduced cost, improved quality, increased production, efficiency?" (Kirkpatrick, 1994)

Since the new technology advanced, Kirkpatrick's model has also been improved:

- "Result - What impact (outcome or result) will improve our business?
- Performance - What do the employees have to perform in order to create the desired impact?
- Learning - What knowledge, skills, and resources do they need in order to perform? (courses or classrooms are the LAST answer, see Selecting the Instructional Setting)
- Motivation - What do they need to perceive in order to learn and perform? (Do they see a need for the desired performance?)" (Gilbert, 1998)

There is also a third type of evaluation which targets students and is "directed to the placement of students and to discover the deviancies in student learning in a particular field of study." This type of evaluation process is occurred sometime "after an educational activity, with the intent of determining whether the learner has applied the knowledge/skill in practice." From the curriculum development perspective, the principles of curriculum evaluation based on competences are:

a. To focus on the learning process, rather than the teaching process

b. To define what students need in terms of knowledge, abilities, and competences.

c. To define competences or results of the learning that must be attained in terms of performance criteria, expressed in a clear manner that would help the evaluation of students.

d. Take into consideration the common principles of UE for continuous learning.

Evaluation is also divided in terms of functions and objectives aimed at achieving to:

- Diagnostic Evaluation: aims to detect the problems and difficulties and highlight and identify its causes to help treat them.
- Eclectic calendar: It aims to pick and choose the best inputs, processes education system, and then get better outputs and outcomes of that system.
- Formative assessment (builders) and aims to provide feedback on all elements of education at all stages and steps system, and the statement of strength and vulnerability indicators in each of them, and modify what may exist shortcomings aphid, and builders are overlapped.

- Congregational calendar or final: It aims to issue a final judgment on the outcomes and outputs of the educational process and the extent of quality, such as tracing the graduates of university education in a particular area to see how they benefit from their studies in the process of life, and the appropriateness of the composition of the labor market, and the extent of their success in their jobs. Also benefit this calendar to see how useful a row students study in a substance in the rest of the subjects in a single program, or take advantage of an earlier stage of education in the next stage to them, and this tracking is useful in linking stages of the educational process to each other, and learning educational life linking.
- Therapeutic Evaluation (remedial or corrective) and aims to take the decisions and actions of reform and therapeutic deficiencies or weaknesses or problems and obstacles that might hinder the education system or any of its elements. And treatment essential function for any calendar in the field of education process.

The evaluation can be written, oral or assisted online. If the "evaluation is computer-assisted the principles on which the evaluation process is based are the same: Instruments of assessment; the principles of evaluation; the process of evaluation." (Potolea, 2006).

From the specific context of curriculum evaluation "the earliest curriculum evaluation models, which continue to influence many assessment projects, was that proposed by Ralph Tyler in 1950, in his monograph *Basic Principles of Curriculum and Instruction.* According to Tyler's approach, there are several steps that need to be taken in order to appropriately evaluate the curriculum."(Glatthorn, 1987):

"Step 1: Begin with the behavioral objectives that have been previously determined. Those objectives should specify both the content of learning and the student behavior expected."

"Step 2. Identify the situations that will give the student the opportunity to express the behaviour embodied in the objective and that evoke or encourage this behavior."

"Step 3. Select, modify, or construct suitable evaluation instruments, and check the instruments for objectivity, reliability, and validity."

"Step 4. Use the instruments to obtain summarized or appraised results."

"Step 5. Compare the results obtained from several instruments before and after given periods in order to estimate the amount of change taking place."

"Step 6. Analyze the results in order to determine strengths and weaknesses of the curriculum and to identify possible explanations about the reason for this particular pattern of strengths and weaknesses."

"Step 7. Use the results to make the necessary modifications in the curriculum." (Wang & Bryan, 2014)

The Tyler model is systematic and easy to understand and apply. In 1975, Robert "Stake also made a major contribution to curriculum evaluation in his development of the responsive model. According to his approach, an educational evaluation is a responsive evaluation if it orients more directly to program activities than to program intents; responds to audience requirements for information; and if the different value perspectives present are referred to in reporting the success and failure of the program." (Glatthorn, 1987)

Elliot Eisner developed in 1979 his connoisseurship model of evaluation is "built on two *connoisseurship* and criticism. In Eisner's terms, it is important to recognize and appreciate through perceptual memory, drawing from experience to appreciate what is significant. It is the ability both to perceive the particulars of educational life and to understand how those particulars form part of a classroom structure. Criticism, to Eisner, is the art of disclosing qualities of an entity that connoisseurship perceives." (Glatthorn, Curriculum Renewal, 1987)

The main purpose of "curriculum is effective in promoting improved quality of student learning. Student assessment therefore connotes assessment of student learning. Assessment of student learning has always been a powerful influence on how and what teachers teach and is thus an important source of feedback on the appropriateness implementation of curriculum content." (ESTONIA, 2008)

The action regarding the uncommon practices of evaluation are more important for this type of evaluation. Also, this type of evaluation should not be made without someone chosen to be in charge that would help develop abilities for the students and teachers.

11.Conclusions

To conclude, the curriculum, as a concept, has a wider coverage, designating the meticulous preparation of educational actions, of an entire educational program, with interrelationships between the objectives and modalities of its evaluation. The term curriculum is complex, bringing together many aspects and interactions of teaching components, it can be defined as learning perspective, as desiderative program that prioritizes objectives which must be achieved, from which derives the specific content suited to the method, means, forces, conditions, factors etc. In consequences, a modern curriculum should respect the following:

- Is not limited to the texts and information of the textbook content alone, but rather deal with it as a component of the curriculum components and a means for its implementation.
- The implementation of the curriculum is no longer restricted to the activity that is within the school, but also to all extra-curricular activities that take place outside the school.
- The main concern is not only forming the student's mind, but also seeking to achieve the overall growth of his personality, in all aspects.
- The care is focused on building a passive behavior of the learner rather than charging his mind and theory of knowledge, regardless of his values and instinct.
- There is comprehensive care granted to the planning of integrated educational experiences that help the learner to learn and to build a proper behavior.
- There is an interest in setting clearly the educational goals and the different levels and working the way up to achieve them.
- Care is given to the actual yield of the educational process of the individuals and of the community as a whole (Al-Shibli, 2000).

As educational objectives, content of education, as an aggregate processing information, skills, attitudes, affective feelings, which are derived from the ideal of

education and the specific tasks that must be performed by education in order to insert individual in this social present but , especially, to prepare him (for himself, but also for the community). Accordingly, the functions of evaluation are:

- Assist in judging the value of educational goals; the objectives when formulating serve as hypotheses need to evaluate the process of showing whether they are true or mistake.
- Know the extent to which educational goals unwanted.
- Diagnosis and deciding the curriculum's strong and weak points, so in order to enhance the strengths and weaknesses of the treatment.
- Help improve the educational process by determining the level of the progress of students toward educational goals established, and take the necessary decisions to enable them to collect those goals required level.
- Enable teachers to discover the effectiveness of educational efforts in bringing about the desired learning outcomes.
- Enable learners to see their progress and identify strengths and weaknesses in their performance.

The aims of the evaluation are:

- Diagnostic Evaluation: aims to detect the problems and difficulties and highlight and identify its causes to help treat them.
- Eclectic calendar: It aims to pick and choose the best inputs, processes education system, and then get better outputs and outcomes of that system.
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- Congregational evaluation or final: It aims to issue a final judgment on the outcomes and outputs of the educational process and the extent of quality, such as tracing the graduates of university education in a particular area to see how they benefit from their studies in the process of life, and the appropriateness of the composition of the labor market, and the extent of their

success in their jobs. Also another benefit of the evaluation to see how useful a row students study in a substance in the rest of the subjects in a single program, or take advantage of an earlier stage of education in the next stage to them, and this tracking is useful in linking stages of the educational process to each other, and learning educational life linking.

- Therapeutic Evaluation (remedial or corrective) and aims to take the decisions and actions of reform and therapeutic deficiencies or weaknesses or problems and obstacles that might hinder the education system or any of its elements. And treatment essential function for any calendar in the domain of education process.

CHAPTER II: EDUCATIONAL TEACHING, LEARNING STRATEGIES AND THE ROLE “OF E-LEARNING

Chapter Two aims to find a suitable definition for teaching as a concept, as well as describing the most important teaching methods, strategies, and models, while taking into consideration the traditional concepts and the modern ones.

Nowadays, the organization of scholar teaching not only refers to contents, but also to methods and manners of delivering information. It matters more how we learn, than what we learn, which is why in this chapter I will try to enquire if the modern methods of teaching have drastically changed in comparison to the traditional ones.

Society nowadays relies very much on technology so, what we expect is both of teachers and learners will have the needed set of skills in order to successfully manage their tasks on a daily basis. It should be expected that the teaching aids have also changed and evolved.

1. The concept of teaching

"DEFINITION OF TEACHING: 1. the act, practice, or profession of a teacher; 2. something taught; especially: doctrine <the teachings of Confucius>" [The Merriam-Webster dictionary].

Learning is found not only in humans, but also in animal behavior and in the entire living forms of live, being strictly related to the concept of adaptation. Some researchers even define learning as the process of adaptation of the living organism to the environment. The main science that started defining and became preoccupied with the concept of teaching, however, it was not biology, but psychology, and more specific Herman Ebbinghaus, Edward Thordike and John B. Watson. Since psychology has many approaches, it is fair to have many approaches to the concept and definitions of teaching as well.

In the narrow sense, learning is synonymous with school learning, which are specific and specific

to which we will continue to refer. Learning can be approached from a triple perspective: as a process, depending on various factors and product (Neacsu, 2015).

Teaching is also strictly related the one of learning. Widely, the concept of learning can be understood as the mental function trough which a person can attain new information, skills, values, meanings, knowledge and references by using their capacity of perceiving information. The process of learning is a long term process and it develops throughout one's entire life, being emphasized by the modification produced in the behavior of the individual.

Most definitions given by psychologists put a great emphasis on the behavior of the person, when it comes to defining the teaching process as well. The psychologist Clausse A. (1967) defined learning as "a modification in behavior, realized by finding a solution to a problem that puts the individual in relation to the environment". One of the first definitions of psychology was made by the Russian psychologist Leontiev, and it differs, as expected, being defined as" the assimilation of the experience of the species, the sociocultural experience of humanity". Gange R. (1975) defined teaching as "a modification of the disposition or of the human capacity which can be maintained and cannot be attributed to the growth process".

The psychologists and theoreticians who perceive the teaching concept as a change in behavior underline the fact that the changes produced in the behavior are not always a direct result of learning, but a consequence of the individual experience. Also that change in behavior must be able to be sustained in time, since learning is perceived by the same researchers as a systematic activity, directed in an organized environment, oriented in assimilating knowledge and creating psychical structures and personality structures. The subject of education psychology and objectives of this discipline are represented within the system of the science of education, the theoretical and practical importance of education psychology consisting of aspects of initial and continuing teacher education (Neacsu, 2015).

The learning that is developed in an institution is called scholar learning. Nowadays, the organization of scholar teaching not only refers to contents, but also to methods and manners of delivering information. It matters more how we learn, than what we learn. Teaching mus not lead to simple cumuls of information, but to a capacity of orientation, thinking and creativity. It must lead to a flexibility of cognitive structures and allow an optimal adaptation to the quick changes in our daily life.

Linhart classifies learning such as direct, intentional and indirect. According to content criteria, the following types of learning have been identified:

• Habituation or learning trough habit, which manifests within the sensorial adaptation as attenuation of the initial effect of a stimulus, as consequence of prolonging the action in tme or increasing the frequency

• Learning trough classic conditioning (pavlovian), which is realized in the plan of the first semnalization system (temporary connection with the fizical stimuli), or in the plan of the second semnalization system (the connection with the physical and concrete stimuli and their verbal nominations, as it happens in the forming of concepts (Salavastru, 2004)

• Learning trough instrumental conditioning (Skinnerian learning), which consists in establishing an adaptive connection between the behavioral sequences and the elements of the external situation (reward or punishment);

• Perceptive learning, which has a very high cognitive importance. It is responsible for learning signs, simbols and shapes used in different siences and it has a huge importance in behavior since it can identify and interpret stimulus and figure codes.;

- Motric learning, which is reflected in articulating simple movements , in functional unitary integrated systems or with fubak instrumental value, subordinated to solving work tasks, as in sport and ballet ; (Salavastru, 2004)

• Verbal learning, which, on one hand, facilitates growth and enriches the internal vocabulary, on the other hand, it ensures the disclosure and fixation of semantic links between words and syntax (Salavastru, 2004).

Taking as a starting point the variability of learning conditions, Robert Gange has also identified still as many forms or learning types, which are invoked in a hierarchical order.

A superior type of learning, which is situated within a higher percentage is usually placed within the levels of learning and Gagne has identified eight types which I will present below.

(1) Signals learning, which envisages classic Pavlov's conditioned reflex. An important feature is that the individual learns to give a general answer, diffusely, triggered by a specific signal. This is an involuntary learning example, directly related to the primary emotions and vital needs. Learning the signals takes place in each of our lives. We learn to respond to the red light, we have a reaction to the alarm clock, to the ringing bell at school etc. learning signals is sometimes used by the teacher to create a state of attention to students. A teacher can use deliberately clap, for example, as a signal to make them attentive students. (Gagne, 1975).

(2) Stimulus-response learning, corresponding to Skinner's operant conditioning. It differs from the previous form by the fact that the subject is able to discern and give a specific response to a determined stimulus. Instead of having a general emotional reaction, the individual may achieve a precisely defined action. Holding a pencil to correct a toddler is one example of learning revealed S-R. Initially, the pen can be placed in a correct position in his child by a teacher or parent. This process is repeated two or three times. After a number of repetitions strengthened, the correct answer is becoming increasingly likely.

(3) Chaining is also a form of simple learning, it is formally called "Learning Sequences" and involves learning a series of SR knots chained in determined order. Some of the examples Gange offers are learning to swim, riding on a bicycle, typing. (Gange, 1975).

(4) Learning of verbal associations implies series of connections of verbal type. The formation of verbal chains are formed when learning new words from a language and using them in sentences. This form of learning uses the memory very much. The German psychologist Hermann Ebbighause showed that you can learn very much trough verbal associations.

(5) Learning by discrimination, in which the subject learns to respond differently to those features of objects that serve to distinguish them: shapes, sizes, colors. Acquiring discrimination is an activity of great importance in training school. The student learns to differentiate printed letters, numbers, colors, phonemes, and then learns the distinguishing features of classes of objects in the environment he lives in (birds, flowers, and cars).

(6) Learning concepts, means that the subject can categorize objects based on common properties. Training is very important in learning concepts from small classes, then throughout the school period, due to the fact that the student is required to classify objects and events. An essential role to the process is played by concepts. Once the concepts are learned, the individual is prepared to assimilate a large body of knowledge.

(7) Learning rules is based on learning concepts. In the simplest terms, a rule is a chain of two or more concepts. Gange defines the rule as "an internal capacity which offers the individual the opportunity to respond to a class of situations stimulus with a class performance, the latter being predictably linked to the first one by class relations. Much of the school learning process is about learning rules.

(8) Problem Solving is a type of learning which requires internal efforts commonly called thinking. It can be seen as a process by which the previously learned rules are combined with the aim of finding a solution to a problematic situation. Solving problems is not just an application of rules previously learned, but a process that generates new learning, learning new ideas that multiplies the applicability of the rules previously learned. (Gange, 1975)

Gange considered that learning hierarchy provides a basis for finding a way of teaching that would be adequate for each student. For this, the most important thing is to find out what the student knows at that time in order to start training from that point.

All learning types must be taken into consideration when it comes to teaching, making a lesson plan, creating a curricula and in all processes that involve the organization of teaching, which is why I considered it would be of great importance to reveal and describe the main types of learning.

I will further discuss the concept of the traditional teaching concept and the modern teaching concept.

2. Traditional teaching and modern teaching concepts

The concept of teaching has changed throughout the years, as society changed and evolved, new teaching tools emerged and technology advanced. There is now a debate between which type of teaching is more effective, but in reality teaching is now using elements from both the traditional method and the modern one.

Actually, traditional education is found as the long-established customs as in schools which traditionally considered appropriate. The first characteristic of traditional teaching refers to the number of students, so in a traditional classroom environment, there are usually twenty to thirty children and one teacher. In the traditional teaching model, the concept of teaching is based on the frontal triad, which is the study of the manual, or curricula, and the evaluation.

This concept implies a passive learning model, since the teacher has the responsibility to deliver the information through a passive receptor, who must memorize and reproduce the information. Another key element that "traditional teaching implies is the classroom, in the sense that a number of students, in the traditional case twenty to thirty, must be present and the lesson is being taught face-to face." (Kotkin, 1998)

The traditional classroom environment has many benefits, as has also disadvantages. One of the major advantages would be that it supports efficient learning, in comparison to the increasingly popular virtual classrooms and online learning platforms, "where in a year or two, students can earn a diploma without even knowing their teachers or colleagues. Most students consider the traditional classroom environment beneficial for learning also because they can interact with the teacher and their classmates," (Kotkin, 1998) they can ask questions in real time, discuss homework, address questions when there is a misunderstanding, work in teams and groups. Students who prefer this old concept are those who need feedback and reinsurance that what they do is correct, so that they need to ask and receive immediate answers.

Also there are people who do not adapt to the new technological environment, and there still are students who did not have access to technological devices, or did not know how to use them. These people are more accustomed to the traditional teaching methods and concept, when the teachers is sharing his knowledge with the students and the students passively take notes, ask questions and assimilate the

information. Also for students who have specializations that do not imply and are not related to the use of technology, books, printed courses, notes, traditional educational aids are enough to create an effective learning process (Kotkin, 1998).

In terms of organization, the traditional teaching methods imply a fixed schedule. Adults tend to have a busy life nowadays, so it depends on each individual. For younger students fixed schedules seem to be more motivating, whereas for adults and older individuals, who already have a family or a demanding job, an e-learning platform or a modern concept of teaching would seem more appropriate.

Generally speaking, these would be the main differences between the two concepts of teaching.

Although there is also a paradigm shift from the traditional teaching concept to the new one, and this shift consists in the fact that the modern learning and teaching method is more interactive, not passive like in the traditional one and is more oriented towards the students, their learning types and habits and it involves a higher level of cooperation, collaboration and discussions between the teachers and students regarding the delivery methods of knowledge and information.

The modern concept of teaching does not focus that much on achieving the curriculum goals and objectives, but more on how to best achieve the curriculum goals and objectives in a manner that is most appropriate for the students, for further facilitate the learning process and increase motivation and interest. It also implies not only passively learning new information, but also developing new skills that would prove useful in the work market.

Arguments related to the educational policies in the world mention that school today is opened in a flexible and positive manner towards all children. Today, education is extened to everyone, given their particularities and ages. It is all about a new vision regarding the expectations of the school and methods of education (Vrășmaș și Vrășmaș, 2008)

Globalization, technological advances, demographic shifts and individual's habits demand a change in education systems, this is how the modern education concept developed. In the current context, education is a lifelong learning process and e necessity, people need to constantly update their skills in order to respond to the socio-economic context and shift. Adapting to these changes in society, there have also been changes in the curriculum concept, and the concept of new curriculum emerged as well. The modern concept of the curriculum underlines that the

curriculum changed, at the same time with the development and progress of science and research, especially for those which emphasized the need to adapt the curriculum for learners instead of preexisting conditioning given to students. The curriculum has been defined by the modern concept also by the use of several definitions, including the following:

A set of regular activities: the content, the tools, the teaching aids, provided under the supervision of the school, in order to prepare students for an effective learning and for a good life. A variety of experiences that are formed, which are created in order to allow the learner to pass.

The range of guided experiences adopted by the community leaders as they will be achieved, ending in benefitting the emerging growth and success of personal and social planning, under the supervision of the school (Hindi et al., 2008). All the experiences planned inside and outside the school, in order to achieve the overall growth of the learner in all aspects of his personality, including the achievement of his objectives and building a proper behavior, as well as modifying the unwanted behavior so that he will be a good citizen (Al-Shibli , 2000).

Total diverse expertise offered by the school to students inside and outside the school, in order for them to achieve an integrated development in the building of human beings, according to specific educational goals and according to the scientific plans drawn, physically, mentally, psychologically, socially and religiously (Shehata ,1998).

The concept exceeds the knowledge taught and it deals with all the ingredients that work together to formulate an educational output and print a special character, achieving an involuntary personal decency which must be integrated, including the spiritual, mental, physical and social aspects. It features a modern concept of curriculum that:

a) Is not limited to the texts and information of the textbook content alone, but rather deal with it as a component of the curriculum components and a means for its implementation.
b) The implementation of the curriculum is no longer restricted to the activity that is within the school, but also to all extra-curricular activities that take place outside the school.
c) The main concern is not only forming the student’s mind, but also seeking to achieve the overall growth of his personality, in all aspects.

d) The care is focused on building a passive behavior of the learner rather than charging his mind and theory of knowledge, regardless of his values and instinct.
e) There is comprehensive care granted to the planning of integrated educational experiences that help the learner to learn and to build a proper behavior.
f) There is an interest in setting clearly the educational goals and the different levels and working the way up to achieve them.
g) Care is given to the actual yield of the educational process of the individuals and of the community as a whole. '(Al-Shibli, 2000).

So, the difference between the traditional and modern concept of teaching is being perceived at the level of curriculum as well, which further in this chapter will be shown to identify changes in the teaching strategies and methods as well.

3. Teaching strategies and methods

It seems "There are different types of teaching methods which can be categorized into three broad types, these are teacher-centered methods, learner-centered methods, content-focused methods and interactive/participative methods." (Raj, 2014) All teaching methods have functions, and I will try to describe all of them below.

The functions of teaching methods are:

- Communicative – it implies the transmission of new knowledge, abilities, skills and attitudes
- Cognitive – it implies attaining new information
- Normative- it involves organization, direction and constant correction of the teaching process
- Motivational – it must maintain and trigger the interest of the students, their curiosity
- Instrumental and operational- the teachers has the role of a mediator since it mediates access to knowledge, it choses methods, strategies, models (Kochhar, 2004).

I will further try to include and describe each type of teaching methods, focusing also on their definition and differences with strategies and models, taking into account the traditional or basic teaching models and the new modern ones derived from the modern concept of teaching.

3.1. Teaching strategies

A teaching strategy represents the fundamental role and methods of teaching which may vary achieve the grade level, the type of subject being taught and the educational environment, or whether the teaching methods are traditional or modern, or if it is a distance-based learning or an in-class face-to face type of education. It mainly represents the way a teacher chooses to deliver information, facilitate learning and on the tools he or she chooses as teaching aids.

Generally speaking, there are two main types of teaching strategies: active learning, which directly involves students to analyze course materials, such as manuals, books, notes, it implies giving a lecture, homework, group discussions, team projects and is characterized by independent studies and interactive methods of teaching., whereas the other type of teaching strategy is called inclusive instruction.

Inclusive instruction means that the teachers can use their strategy base onto learning types of their students, is based on a student-oriented approach. It differs from the active learning strategy because it does not involve using only one method for all the students, but several methods since each student has different learning strategies. The goal of this strategy is therefore to adapt to learning styles, so it is more experimental.

The most widely used “teaching strategies are:

- direct instruction,
- indirect instruction,
- interactive instruction,
- independent study and
- experimental learning.” (Rowe et al, 1998).

3.2. Basic teaching methods

The basic teaching methods involve methods such as explanations, narrative exposure, description, and lecture and they all refer to methods of oral communication. The written communication in education and teaching is often realized through books, teaching materials, presentation, manuals and so on. The oral teaching methods can be expositive, conservative, methods of direct explorations of reality, methods of indirect exploration of reality, and methods of simulated action. I will further try to give more details about each type.

a) Expositive methods include:

- Explanation – which is used to offer and reveal information, situations, laws, rules, hypothesis and they all require argumentation and analysis as processes.
- Narrative exposure- mean exposing the content of the lesson as if it were a story, using an emotional basis and a plastic one.
- Description – is the analytical presentation of the properties of objects and phenomena.
- Lecture – is the systematic exposure of a high volume of information and knowledge and is one of the most common method, especially in higher education.

b) Conservative methods include:

- Conversation- which is a didactical dialog realized through a succession of questions and answers. Usually the students asks question and the teacher answers, or during an evaluation the teachers is the one to interrogate the student in order to test their level of knowledge or acquired knowledge on a particular or various subjects (Kochhar, 2004).

The types of conversation can be introductive, ritualizing, fixing, checking, heuristic, etc. The questions as well can be reproductive, simulative, applicative, evaluative, and inversed or returned.

c) The methods of direct exploration of reality

These methods usually follow the systematic recording of the data on objects and phenomena with the purpose of deepening the students' knowledge. They have various forms, since they can be directed, independent, spontaneous, of short-term.

In subjects such as physics, chemistry and biology these methods can also be experimental, by intentionally creating a phenomena with the purpose of studying it. These methods are also called laboratory methods.

d) Methods of indirect exploration of reality

These methods include:

- The demonstration- presentation of the objects and real phenomena or substitues of those, based on a material aid – natural, figurative, symbolic.
- Modelling- which means using models in order to represents in an essential, simplified manner the characteristics of objects and phenomena, which are difficult to explore directly or which are unavailable to explore directly.

e) Simulated methods of exploring reality

These methods involve the use of fictive or simulated action upon reality, such as:

- Didactical game which combines the instructive and formative elements with the distractive ones and be used in teaching different learning disciplines. The games can be sensorial, mathematical, orientative, creative, practical, motric.
- Simulated learning- involves the use of artificial technical methods build by analogy to the original ones (Ionescu, 2000).

These are all basic methods of teaching and usually they are used in combination, according to teacher's preferences and to the student's needs, in order to better acquire the educational goals of the lesson being taught.

4. Modern teaching methods

The transition to modernity, from the pedagogical perspective is a change of strategies, optics an educational practices, which is already in development. (Peacock, 2002). The science of education is also in the constructivist era and constructivism elicits a shift of paradigm as well, like it was the case for the curriculum – it is a shift from a normative model to an interpretative one.

Applied in the educational sciences, the constructivist concept involves „the shift of educational paradigm, from the behaviorist transmission of knowledge to the approach based on communication and cooperation, in which not only the teacher, but the student as well has an active role (Păcurari, et al, 2003).

The focus is shifted from the object of study to the student, to his needs, to the students' interests and aspirations, to his subjectivity, and it aims to deliver the most adequate teaching plan that would be efficient in order for the student to develop new skills and understand the transmitted information, and also be able to use it, not only to pass an evaluation or an examination (Al-Dulaimi et al, 2017).

The most important elements in modern teaching have the following applicative principles:

- "Moving the focus from the teaching object to the teaching centered on the student's needs rhythm and abilities;
- Reconsidering the role of the teacher as main and sole organizer of the teaching process and involving the students as well;
- Take into consideration the students when it comes to the necessity of their involvement to their own training ;
- Encouraging and stimulating active participation of the students in the planification of their of scholar curriculum, such as choosing what languages to learn, extra activities etc;
- Differentiating the teaching methods according to the students' different styles of learning." (Ionescu, 2000)

Thus the teaching methods become instruments which can be valorized by the teacher in order to ensure the efficiency of the learning process. The main characteristics of the interactive teaching methods are:

(1) "Group strategies – these involve the collaboration of the students" which can be divided into various groups or teams with the purpose of finding solutions to a problem, or creating a project, or completing a given task (Oprea, 2006);

(2) Creating programs that correspond to the differentiated answers to the students' reactions (Oprea, 2006);

(3) Sustaining active learning and encouraging it, "meaning that the students learns and takes action on the information in order to develop the ability to transform it in a personal one." (Oprea, 2006);

(4) Stimulating the participation of the students to action, socializing and developing their complex cognitive processes and their capacity of understanding, self-evaluating and self-organizing by using active methods of teaching (Oprea, 2006, 28).

These interactive teaching methods promote an active learning processes and the teachers place a higher emphasis no longer on on the informational but on his or her role as organizer, mediator of the learning/ teaching activities. This way, the teachers offers to his or her students the occasion to get involved in their own training and freely express their ideas, opinions, allowing them to develop the metacognitive competences.

Friedrich Wilheim August Froebel was a German educator and the first one to create a new respect for the individuality of the child, by means of initiative, co-operation and collaboration in the educational process. He was also the first one who believed in building the curriculum around the children's interests, considering that their interest is a symptom of their potentialities, which is the basis of modern approaches in the psychology of education nowadays.

The educational environment is also adapting and integrating the use of technology, so this shift promoted the use of new materials and teaching aids as well. Teachers have found that many teaching problems can be easily solved by the proper use of these aids.

1. Teaching models/ E-learning/ E-learning strategies

A teaching model is a frame from the application of an approach, strategy, methods, and techniques of teaching and it involves a series of strategies, methods, and techniques in a single unified whole. Therefore, the teaching model is basically a form of teaching which is reflected from start to finish and is typically presented and chosen by the teacher or the educational institution.

The relationship between the strategy, the manner, and the method

This section is dedicated to underlying the relationship between three important concepts in teaching: the strategy, the manner or model and the method. I will begin by differentiating them and characterizing each concept.

The teaching method refers to the path which will be followed in the common activity of teachers and students, in order to achieve and attain the goals of instruction. The teaching manner is a component of the method, a more limited action technique. It can be considered more like a support aid or a concrete manner of giving value to the method. The report between the method and teaching manner therefore is a complementary one.

5.1. E-learning

Online learning platforms, or e-learning, is created to sustain the individual learning process and allow users and students to access a series of informational resources on online environments, allowing them to engage in a series of debates on various themes “E-learning is not created in order to replace the traditional educational systems, but to act as an aid in the learning / teaching process. It has been adopted by the educational institutions as an alternative to the traditional educational strategies, being complementary to the school activity.” (Rosenberg, 2001)This type of platform is designed for active learning, it involves the use of an internet connection and of a computer. For teachers it can be a useful teaching aid and it can help stimulate students to use their spare time more usefully, creating activities specific to each subject or discipline.

E-learning has many benefits, and disadvantages as well. The first benefit is that it can engage a wider audience, since a virtual classroom is not limited to a number of students, the physical limitations being overcome.

E-learning can be fully operational, or as I described earlier can function as an aid in the traditional education system. Bates and Poole describe the functions of E-learning graphically as it is shown in the figure below. (Figure, 1)

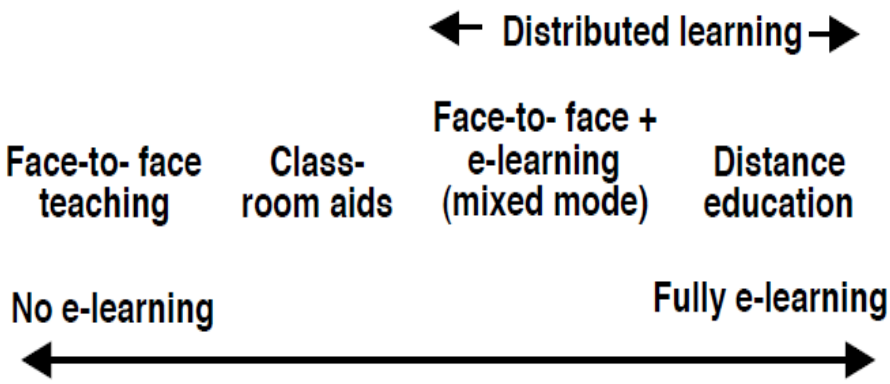

Figure 1. The continuum of e-learning, by Bates and Poole (2003)

This type of learning is suited for adults who have a hig-demanding job, or have a very busy life, since it allows a more flexible type of learning in terms of schedule. According to a recent survey in 2002 "over 1.6 million students in degree-granting higher education institutions in the USA took at least one online course in the fall semester of 2002 (11% of all U.S. higher education students), and over 500,000 took all their courses online. Also, The Open University of Catalonia in Spain and Athabasca University in Canada, have over 20,000 students each, and most of the courses from these three institutions are fully online." (Allen and Seaman, 2003)

E-learning can "offer effective instructional methods, such as practicing with associated feedback, combining collaboration activities with individual study, personalizing learning paths based on learners' needs and using simulation." Other advantages include the fact that e-learning engages various teaching methods, most of them audio-visual methods. According to recent research, visual materials enhance the learning process.

According to Mohanty "the use of visual aids in teaching learning process has multifarious values" (Mohanty, 2001), since visual aids "give chance to speakers to

make a more professional and consistent performance. By visual aids in teaching is one mode to enhance lesson plans and give students additional ways to process subject information." (Kunari, 2006) As I also mentioned earlier, the use of audio-visual materials if very effective in language teaching lessons, "since the audio-visual resources can help solve certain language barrier problem as they provide accurate visual image and make learning easier for the student." (Chacko, 1981)

5. 2. E-learning strategies

E-learning has two main approaches, it can be based on individual study or it can be facilitated by a teacher. Individual study is, of course completely independent so the strategies are fully chosen by the student, according to his or her preferences.

E-learning courses facilitated by a teacher will guide his students as their guide and not as their instructor, creating the highest collaboration and using a very interactive approach. Often, e-learning courses combine both approaches. In terms of educational methods and policies, currently e-learning platforms have them under development.(Figure, 2)

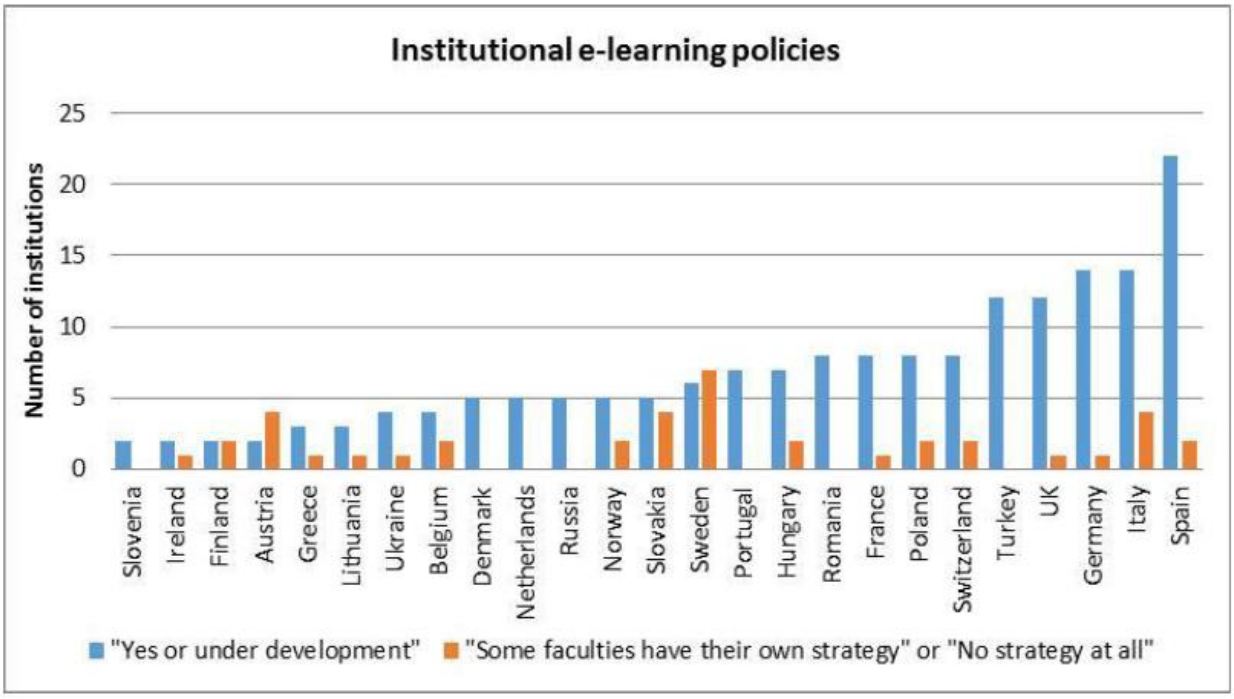

Figure 2. Development of e-learning policies (Rosenberg, 2001).

Even though the e-learning policies are under development, ADDIE model is one of the most popular models and it can be explained as follows. (Figure 3)

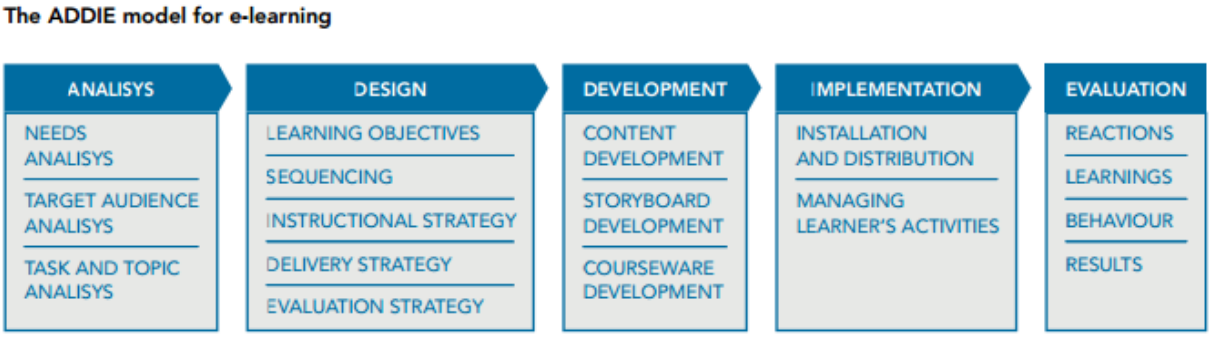

Figure 3. The Addie model for e-learning. (http://www.tonybates.ca/ - online learning resources),

The main activities which can be performed within an e-learning platform are:

- accessing e-courses – reading, taking notes, listening to audio resources or watching video resources
- deadline based assignments
- chat or forum for debates or discussions
- Web conference (Al-Dulaimi si Vrăsmaș, 2017).

Advanced eLearning – AEL is used in most schools in Romania. AEL is a complete integrated platform and it offers support for teaching and learning, testing and evaluation, having a curricular concept.

In AEL, the content can be structured and adapted accorning to the student's needs. The access rights for each user or group of users can be applied to each segment of the database of online library. The search is usually based on key words.

The e-learning platform Moodle offers communication and socializing environment, it has evaluation systems, coruses and it give students the possibility of virtually working togethers. The main educational resource is represented by the e-course, which consists of lessons or weekly activities, assingments and homework. Ath the end of a course module, the evaluation module is activated. The evaluation system is flexible and allows the trainer to establish more evaluation modialities. Teachers can post activities and students can post the assignments for feedback, grade or can make commentaries and debates.

The Moodle infrastructure supports many types of plugins, such as:

- -activities (game words, puzzles)
- resource types (multiple answers, trugh or false)
- -graphic themes
- authentification methods with usernames and passowrds
- content filters.

Wikispaces is another well-known learning platform which is particularly interesting since users can load notes for classwork or creat interesting multimedia projects. Wikispaces can be used as simple websites, as project groups, in order to manage school documents, for debates or collaboration with other students or teachers, nationally and internationally. It was designed in order to be easy to use and fun, for teachers and students to be able to focus on what they want to achieve, so that the design is the most user-friendly in comparison to the other platforms.

iTeach is a 2.0 platform which allows teachers to collaborate in a highly advanced virtual environment.

Blackboard – offers the technical support required for the e-courses which are created according to the formative learning continutului based on a precise teaching strategy.

The projection of teaching in e-learning is called instructional design, and it is a systematic process, based on analysis and projection. It usually has four components: students, objectives, methods and evaluation and it consists in identifying the instruction needs in order to generate the e-learning strategy. The e-learning strategy is usually produced by a team consisting in experts on the taught discipline, in programming, copyright law, content writers etc. (Bullen, 2007)

According to Bates and Poole (2003), e-learning emerged just at the appropriate timeframe when constructivist approaches to teaching were very popular and for constructivists, it is only through discussion students will come to control their timing and gain the needed one step ahead, the thing which will allow their teacher to encourage their reflection, this will bring us to the importance of the online forms which will highlight the importance of the space and time given to students' discussion during the online sessions.

"For distance education aimed at the masses, and in particular those excluded from traditional forms of education, e-learning education are likely to remain

important for many years to come" since the educational e-learning platforms offer studying opportunities for those with a busy schedule, they act as a teaching aid, and they promote active learning and are very accessible. One of the major advantages are that they stimulate interactivity and collaboration, the mobility and geographic independence, the fact that they can engage a higher audience and the individualization of the learning process which is a great benefit for the individual who can learn at his or her own pace and receive feedback (Al-Dulaimi și Vrășmaș, 2017).

2. E-learning competencies

Broadly speaking, e-learning means the totality of educational situations in which the means of Information and Communication Technology (ICT) are used significantly. The term, taken from the Anglo-Saxon literature, has been extended from the primary etymological sense of electronic learning, now covering the area of intersection of educational actions with modern computer resources. In the modern concept, the resource-based learning process uses both classical models with known media (physical models) and virtual models of multimedia technology. e-learning is a component of a technology-based model (Harper, 2008).

A characterization of e-learning can be based on the following:

- The learning process is oriented towards the trained and is done in a virtual location

- Educational resources are accessible on the Web and distributed through the use, integration, access to electronic libraries and multimedia materials, training of specialists in subjects' discussions

- Trainings benefit from the guidance of a tutor (instructor, moderator) who schedules the activity of the group of participants, subjects them to the topics in the course, asynchronous conferences (discussion forums, blogs), or synchronous (chat, virtual class) auxiliary resources, comments on themes, requires directions.

- through interaction and collaboration, the group of participants forms, during the course (often and after), a virtual community; they can be characterized by the so-

called "fluidity of roles", through the continuous balance of the instructor-trained role in the learning group ("symmetric knowledge advancement" - Scardamalia, 1995), through the continuous restructuring of the learning teams according to interests or objectives

- The course material has a static component, the one prepared by the tutor together with a specialized team, and a dynamic one, resulting from the interaction of the participants, suggestions, comments, resources

- Most e-learning environments allow participants to monitor activity, and some and simulations, group work, audio, video interaction .

Currently, the term e-learning has practically replaced all the terms that have meant a new way of integrating ICT in the training process. The National Academic Evaluation and Accreditation Council (CNEAA) has established a set of "Standards for the use of e-learning platforms in distance learning". These refer to:

- services offered to students

- specific learning resources

- services provided to the teaching staff

- accessibility to the services provided by the e-learning platform

- quality management of platform services

- documents submitted by the institution

Competency Training specializes in the development of e-Learning solutions so e-Learning courses incorporate multimedia elements to make them engaging for students, and assessments to ensure that learning outcomes are robust. Teaching and learning with ICT requires specific competencies for teachers and lectures. Too much attention was given to the technological aspects. Teachers learned to work with hard- and software. A typical example is the European Computer Driving License (ECDL) (Beaudoin et al, 2018).

A lot of people attend courses on text processing, spreadsheets, but using a Virtual Learning Environment like e.g. Blackboard or Moodle demands more didactical than technical skills. Especially e-learning and blended learning is too demanding to let

teachers learn to use these tools only by experimenting. More and more is generally accepted that the e-learning competencies for teachers require a longer course (Cristobal et al, 2009).

According to Kellie McRobert, the five maine e-learning competencies are:

- e-Awareness – awareness of ICTs and their relevance in society, including digital citizenship
- Digital literacy – using technology for information and knowledge (students locate, organise, create, adapt, and share information)
- Media literacy – understanding the manipulation and the way that digital media crosses over with mainstream media
- Informational literacy – understanding and interpreting information from different sources
- Technological literacy – confident and critical operation of ICTs.

We think of e-awareness as the most conceptual and strategic of digital skills. It can be defined as the ability to understand the real impact of the changes brought by the Information Society in one's context. At another level, e-Awareness would also imply foreseeing and anticipating such changes, either to avoid or smooth their impact, or to benefit from them by adapting one's behavior.

Digital literacy is an individual's ability to access both information and methods of communication through a technologic tools including, but not limited to, smartphones, tablets, laptops, and traditional desktop PCs.

Media literacy typically lends itself to a deeper meaning and analysis of the work, not necessarily just a direct understanding of fact represented in the work. Media literacy also concerns the ability to identify when there is a problem that impacts democracy thus allowing the public to generate its own opinion, which can influence society.

According to Al-Dulaimi,"information literacy is related to information technology skills, but has broader implications for the individual, the educational system, and for society. Information technology skills enable an individual to use computers, software applications, databases, and other technologies to achieve a wide variety of academic, work-related, and personal goals. Information literate individuals necessarily develop

some technology skills" (AL-Dulaimi, 2017). Information literacy can only be eliminated with the use of technological skills.

3. The role of educational strategies in using educational technology

Educational technology is a symbol of the progress of science and technology defines the modern life has become the most important way we can use to organize and prepare a studies and materials for the study, since it can be used to achieve the educational goals based on scientific and technical progress.

Educational technology can be perceived differently according to the author's perception due to the diversity of its field, since it implies knowledge from pedagogy and didactics, computer science and information, psychology and sociology. The nature of this discipline is multidisciplinary and it requires an interdisciplinary approach.

Nowadays the limited use of computers at schools unfortunately and technology is not yet integrated in the educational technology, therefore it is not exploited at its full potential and students do not benefit from an early training that would provide a more authentic, efficient and interactive learning experience with the help of which they could enhance their communication skills, their analytical and problem-solving skills, their creativity and their own motivation. It has been prior mentioned that some critics consider that technology could have a bad impact on children but it has been proved by many studies that this idea is not sustained by considerable proofs.

Although we live in a modern digital age where the our methods of teaching are still outdated. The reasons for this are various, one of them is that some of the instructors lack the necessary training in order to use technology efficiently and creatively in order for the students to benefit the most of what this new digital era provides, this is why schools should also invest in training the teachers in educational technology. Another reason might be that some schools cannot afford the equipment and some of the school leaders do not have sufficient qualification to access and implement national and international funds.

It has become a necessity to expand and diversify the educational strategies and the use of Education technologies in education, in order to achieve many of the educational goals.

The modern technologies added a lot of development to our daily life, it is only normal that many aspects have also changed in the student's life and their habits as well, therefore it should and does have an impact on education and this impact consists in the fact that technology should become part of the education program (Culp et al., 2003; Johnson, 2000). According to Bonifaz and Zucker (2004), integrating technology and educational technology in the curriculum would increase the engagement of students, would make it easier for them achieve the educational goals by creating a more active learning environment and would better fit their educational needs and skills.

Educational technology does not imply the fact that students must use individual computers only (Means, 2000). , it can involve networking – videoconference, digital television- and other applications that allow students to interact with programs, such as includes digital cameras and electronic whiteboards (Marshall 2004).

Researchers have suggested that technology can enhance learning, since technology can improve some skills of the students, such as communication skills, by using word processing programs and communicating via e-mail, or organizational skills and the capacity to better understand science concepts by using modeling software (such as Matlab), database programs, animations, graphs, spreadsheet programs or by using the modern technologies to design many helpful softwares, editing software for digital images and videos (Honey et al., 2005; Johnston, 2000; Means, 2000).

According to recent literature, students are deeply impacted by the use of technological devices and softwares in academic results (Guleck et al., 2005). Stratham and Torell (1999) came to the conclusion that if technological aspects are used in the right way within the education program resulted into an interactive relationship based on feedback between the teachers and students and showed enhanced skills of problem solving and inquiry, therefore higher engagement of the students in the educational program, which led to lower dropout rates.

After the implementation of Microsoft played a good role by supplying and donating many free laptops to many schools around the world which impacted their progress and added to their interest at school (Gulek and Demirtas, 2005). Apple also had a similar program, the first of this kind, called Apple Classrooms of Tomorrow (ACOT) through which they provided a full access to computers to many students and teachers, from 1985 to 1998 and their evaluations after the implementation of the technology also revealed that students had better communication skills, enhanced problem-solving skills and the students were able to learn independently (Means, 2000; Weston et al., 2010).

However, studies also indicate that students are not the only ones who might be making a full use of technology in teaching methods, since teachers might also benefit from the ability to create course materials and deliver lessons in a more authentic way, providing additional sources of information and delivering the information in a more interactive way (Healey, 2001; Waddoups, 2004).

Research indicates teacher's ability to use technology inside the classroom and teaching strategies is very important (Valdez, 2005; Jackson 2004), therefore determining teachers' lavel of computer skills before designing professional development (Bonifaz & Zucker, 2004). According to Cooley (2001) it is very important to prepare teachers to implement the program of educational technology, since the technology itself cannot do much for the student.

In the past few years, deciding what should be used and how to use technology in education have been questioned (Culp et al., 2003), but studies suggest that the types of technology that should be used and the ways to used that technology should be fit and suitable for learners' usage and for the school’s teaching methods and goals, adapting to the curricula in order to help achieving the expected results (Sivin and Bialo, 2000).

According to Honey et al. (2005), detailed planning is the main factor for the implementation of technology programs and that those in charge of the organizational parte should find the best fit for the school’s primary goals, and according to those goals to find ways in which the technology will be helpful, functioning as and aid that can be integrated in educational plans. It is also important that the students and

teachers as wells receive professional training facilitating the integrating of technologies in teaching methods (Gahala, 2001).

The US and Finland were the first countries to implement Educational technology in the compulsory education program in 1988 and 1991. The educational programs created for the discipline were based on the identification of the elements specific to the informational systems, the transmission and management of the information in a digital format, developing informational applications that stimulate the creativity of students and enhance their analytical skills.

The implementation of the digital competences within the other disciplines takes into account the stimulation of communication as well on all levels, promoting feedback and collaboration between the students and teachers, community and society and the educational and non-educational environment. The technological competences can be developed through activities based on new technologies during the course. UNESCO recommends a series of activities, such as using basic software packages like text editing, graphic designing programs, software for making presentations or video editing software, using the educational software for interactive learning, simulations, graphs and animation for science contents and online communication via email, forums, video conferences, blogs, instant messages etc. (Vasilescu, 2010).

It is also recommended to use the Internet for research. The educational strategies and methods hould be built in such way that would allow approaching the content and competence development based on new technologies and make it possible for the teachers to organize activities with the help of the new educational software (Vasilescu, 2010).

Using technology as an important learning part experience implies providing the teachers with the opportunity to design new efficient, interactive and authentic learning experiences, and it is not actually a very difficult or pretentious change. Learners as well as instructors daily life, the changes would impact more the educational strategies and the curriculum since the teacher’s task would be making the full use of the technological tools in order to deliver the content to the students. It is not enough to integrate modern technologies at schools (Cuban, 2003), here is where the role of the curricula comes in play.

According to the cognitive load theory the learning materials must be designed by teachers in a way that would minimizing our memory of work inorder to create a pattern (Sweller, 1988). Using digital learning resources, students would be able to exclude information which are not directly related to schema, they would be able to focus instead on information which does relate directly to it and identify the complexity and meaning of the materials in a more organized way. Teachers can design materials by using digital resources as part of the course or lecture, as a way to present a topic, or as a stimulus for the group (Mayer, 2008).

As mentioned earlier, in the past few years, question of how to use technologies and what pat=rt of it is the most important (Culp et al., 2003) and studies suggest that technology should be fit and suitable for students' usage and for the school's teaching methods and goals, adapting to the curricula in order to help achieving the expected results (Sivin and Bialo, 2000) and another important factor is to offer professional training to teachers and students (Gahala, 2001) in order to avoid making technology available in schools where teachers cannot make use of it, or cannot use it effectively (Cuban, 2003). One of the main task of school leaders in this regard would be to evaluate the effective use of technology and the main task of teachers would be to find meaningful ways to use technology in teaching (Sivin and Bialo, 2000).

Between the traditional lectures and lectures delivered with the use of technology, comparison studies conclude that they are both effective, as long as the ways they are used are effective (Gahala, 2001). The research also suggests that educational technology must be integrated in the curricula since education is faced with the decision regarding the implementation of technology in their daily life and in work as well, and most of the studies have shown that they are two categories of teachers: one category is willing to implement technology in their teaching methods and the other one is not. The reason appears to be that those from the first category have a better understanding of technology and of the ways they can apply it (Becker, 2000; Wang et al., 2004).

Technologies' usage within the educational framework environment has become very popular, but the Office of Technology Assessment came to the conclusion that teachers are still using modern technologies very little in the teaching process, although the technological resources were available (Mishra and Cavanaugh, 2008).

4. Integrating technology and educational technology into the curriculum

The curriculum for the educational technology and technology of information and communication is considered a normative act which is compulsory for the educational processes of this field this discipline. As a school discipline, the technology of the usage of modern technological skills which has the purpose the development of competences regarding the managing of information represented in images, texts, graphic files, audio files, video files and online files as well as online platforms and can be best based on:

- combining the process of teaching and learning of the theoretical knowledge with the practical activities using the technological devices
- adapting the taught information to the students' age
- promoting interdisciplinary
- balancing the informational load and the continuity by structuring the material according to the student's age and to the performance of the technological devices
- differentiating and individualizing the teaching methods and learning experiences
- establishing a compulsory level of training

The technological framework encourages the students' team work blogs and extend their creative skills, or be able to solve problems in discussion boards, have debates participate in other activities in cooperative ways that help the learning process become more appealing, interesting and efficient.

Students' teamwork will encourage the development of new ideas, share thoughts and write together, developing their capacity to transform acquired information into action, creating new personally interpreted information (Warschauer and Matuchniak, 2010).

The studies of educational strategies are based on strategic teaching, which is a way of making decision about how to deliver a course or even a curriculum. The decision making strategy is based on the key variables given by educational context, usually this main key variables are the learning goals, the individual interests of the students and the educational strategies preferred by the teachers.

According to these variables, there are several organizational steps taken in order to deliver a strategy. The first step after analyzing and establishing the key variables is to write informed documents about the content of the curriculum or study discipline, or even a simple course. This involves a selection of different works, manuals, bibliography and implies making decisions about what topics to include and which to leave out, based on the national curricula according to the principle of being compatible with the European Educational Standards, with the educational paradigms promoted at a European level and according to the other general principles of the educational programs or curriculum.

After the course content has been decided, the next step is to realize a structure by taking into account various factors, such as the rhythm of learning of the students, their educational interests, the available time to assimilate the information and other time resources available, the learning goals and task, the knowledge, abilities, capacities and competences of the students implied by the learning task, the methodology of teaching-learning, and the educational materiales.

The preferences of the teacher regarding the way of information delivery and teaching preferences, also called technique of delivery, is an important factor as well since it defines the process or manner by which a course or an educational module will be delivered to students. The technique of delivery may include lectures, conferences, demonstrations, discussions, assignments, experiments etc. In this step, according to the technical competencies of the teacher, decisions can be made regarding which appropriate materials and technology to employ in the classroom which is why it became a necessity to ingrate the modern technologies within the curriculum and provide technological equipment, since it could facilitate the learning environment and to develop the teachers' as well as learners' educational skills.

Students have been deeply impacted by the modern technologies academic results (Guleck et al., 2005) and according to Stratham and Torell’s studies (1999)

when integrated appropriately, the introduction of technology in the education program results into an interactive relationship based on feedback between the teachers and students, showing enhanced skills of problem solving and inquiry, therefore higher engagement of the students in the educational program. Apple's program "Apple Classrooms of Tomorrow (ACOT)", the evaluations reported that students were able to helps in creating and developing such programs program (Gulek and Demirtas, 2005; Means, 2000; Weston et al., 2010)..

Most recent studies have concluded that technology can enhance learning, improve the communication skills of the students by using word processing programs and communicating via e-mail, or their organizational skills and the capacity to better understand science concepts by using modeling software (such as Matlab), database programs, animations, graphs, spreadsheet programs or by using modern technologies such as digital images and videos (Honey et al., 2005; Johnston, 2000; Means, 2000).

Society nowadays relies very much on technological skills in order to successfully manage their tasks on a daily basis by using the tools technology delivers, tools meant to help us solve different problems in most of the levels of society. So improving learning outcomes, preparing students to be an active society members and maintaining a strong connection between the educational environment and society are some of the most important reasons why technology and educational skills must be involved during the operation of reforming the curriculum strategies.

The last step in planning a course is to decide upon the methods of assessment and evaluation and how to get feedback from the students. The process of planning an educational strategy or a curriculum is not an easy one and curriculum studies have been central to teacher's work, so the theory of curricula includes a third component which regards principles that refer to the teaching activity. The third component of the theory of curricula includes the following principles which act as guidelines for the education strategies:

- teachers must create diversity in the learning context and the learning situations must be adequate to the educational aims;
- they must stimulate and sustain continuously the motivation of the students, discover and develop their skills and respond to their educational interests and needs;

- the teaching activity must facilitate not only the knowledge transmission, but also the development of competences and professional skills
- teachers must provide the students with the possibility to share their knowledge and competences in an interdisciplinary way
- the teaching activity must sustain a strong relationship with the daily life and society

  helping the learners to develop their own technological skills educational technology during their study, affecting their personality and carrier path later in life and provides equity of opportunity, respecting the main principles of an educational program and we stated earlier, technology's access to the use of is not a negative factor for the children's development.

Technology is the most important aid in teaching and learning, but it is not enough to use technology to transmit information, students must learn how to apply technology, so educational technology should also has an important role in classroom, and it would be time to consider technology not just an tool used to support the learning process, but an important aspect within the educational framework, as it is an integral part of our daily lives.

5. Conclusions

Nowadays, the organization of scholar teaching not only refers to contents, but also to methods and manners of delivering information. It matters more how we learn, than what we learn. Teaching mus not lead to simple cumuls of information, but to a capacity of orientation, thinking and creativity. It must lead to a flexibility of cognitive structures and allow an optimal adaptation to the quick changes in our daily life.

Society nowadays relies very much on technology so learners and instructors must have the skills in order to successfully manage their tasks on a daily basis by using the tools technology delivers, tools meant to help us solve different problems in most of the levels of society.

So improving learning outcomes, preparing learners to participate in society and maintaining a strong connection between the educational environment and society are some of the most important reasons why learning strategies are changing, and this shift appeared in the education system, promoting collaboration, interactive learning and the use of new technological teaching aids.

The technological framework helps in motivating students to extend their creative skills, or be able to solve problems in discussion boards, have debates participate in other activities in cooperative ways that help the learning process become more appealing, interesting and efficient.

Team work inside the classroom or the e-classroom, is encouraged to develop new ideas, share thoughts and write together, developing their capacity to transform acquired information into action, creating new personally interpreted information's.

CHAPTER III. EDUCATIONAL TECHNOLOGY AND IT'S COMPETENCE IN EDUCATION

The emergence of new technologies has helped shape the new ways in which people are communicating, and forming social constructs and according to recent research that these technologies are shaping the way we think, work and learn, especially for the youngest generations. (Green & Hannon, 2007).

This "transformation" has various implications on education. Although most institutes have integrated educational technology as a tool in their work, educational institutions have been reluctant to embrace these new technologies, since traditionally education must pay a very close attention on the potential dangers of networking technologies. However, it is important to underline the fact the advances in cyber security have made new technologies quite safe.

Also the costs might be a bit raised, which also constitutes an impediment to the integration of technology. The benefits however are numerous, since digital networking platforms show to increase opportunities for learning, can increase collaboration and improve communication, so it is a problem that should be considered.

This chapter will put a higher emphasis on the role of educational technology in the development of education. Educational technology is a systematic and organized process of applying modern technology with the purpose of improving the quality of education and functioning as an aid to the educational process, such as learning and teaching, developing modern educational teaching techniques. (Green & Hannon, 2007).

Educational technology can include instructional materials and methods, which will all be discussed in this chapter.

1. Evolution of educational tools and techniques

Technology has always been used in education, starting from carving figures on rock walls to technological devices, such as laptops, mobile phones, electronic blackboards, e-books and many others. The importance of technology in education has remained constant in spite of the changes of the materials and the evolution of technology, so it would be interesting to understand how the educational tools and techniques have evolved.

A history of educational tools and techniques.

In 1870, technology started to advance, developing the Magic Lantern- a primitive version of a slide projector that projected images printed on glass plates, and the overhead projector, a more modern version, appeared in 1930.

Around 1890 the chalkboard emerged, followed by the pencil in 1900 and the ballpoint pen in 1940. In the 1920s the radio emerged, and on-air classes became a much known trend, followed by videotapes in 1951, creating a new method of instruction. The photocopier and the handheld calculator entered the educational environment in 1959, respectively 1972, allowing quick mathematical calculation.

Although the first computers were developed in 1930, they entered the educational environment in the ‘80s. The number of students in college in 1930 was around 1 million, but by 2012 had grown to a record 21.6 million, therefore teachers needed and developed new methods of instruction and testing, and students were looking for new ways to communicate, study, and learn.

In 1990, the Hyper Text Markup Language, or HTML, was developed and the National Science Foundation (NSF) removed restrictions on the commercial use of the Internet in 1993. This was a very important development, since it represents the foundations of distance learning and online learning platforms.

The first Personal Digital Assistants (PDAs) was released by Apple Computer in 1993, and in 2009, in the US, 97% of classrooms had one or more computers, and 93% of classroom computers had Internet access (http://elearninginfographics.com). Instructors stated that 40% of students used computers often in their educational methods, in addition to interactive whiteboards and digital cameras (http://elearninginfographics.com).

2. The concept and classification of teaching aids

The term "teaching aid" was first used by Van der Stoep et al. (1973) to summarize instructional and learning aids, and they represent materials or tools that the teacher uses in presenting a lesson, or which they generally use in different lessons in order to deliver the information to the students: chalkboard, PowerPoint presentation, syllabus, etc.

The “learning aids” are the materials or tools used by students, in order to assimilate and understand information: notebooks, manuals, books, laptops, internet, etc.

In terms of classification, the most known teaching aids are:

- Audio-visual aids and media
- Technology
- Activity sheets
- Flip charts
- Felt pens and markers
- Chalk boards or black boards
- Manuals and books
- Maps
- Slide projectors

- Diagrams
- Overhead projectors
- Calculators
- E-books
- Smart rows

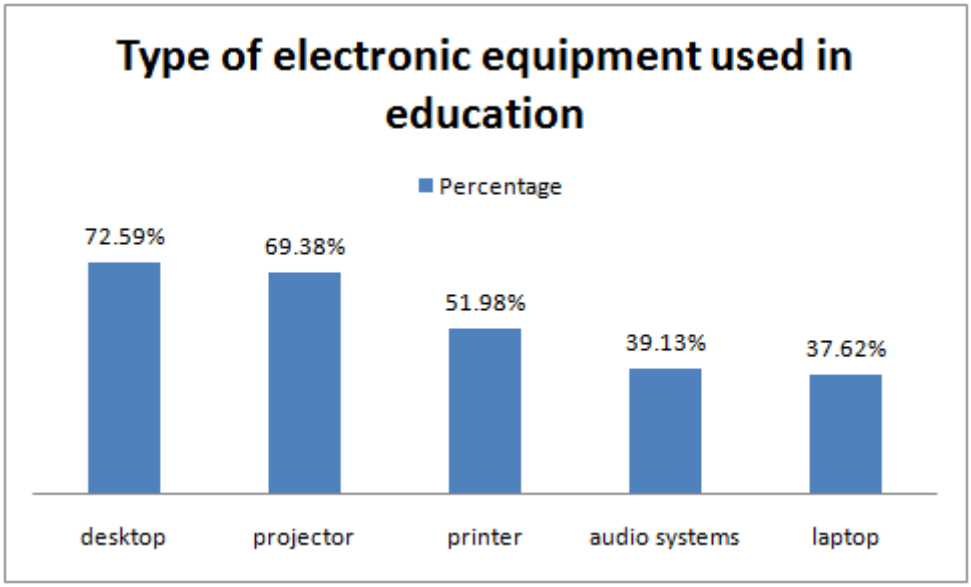

Figure 4. Type of electronic equipment used in education in Romania ("The role of electronic equipment in the educational process" by Epson, 3 to 8 June 2015).

The (figure.4) above shows the results of the study "The role of electronic equipment in the educational process" by Epson. According to their conclusions 40% of urban schools in Romania do not use electronic equipment in classroom teaching; teachers in Romania are reluctant to use electronic equipment in the educational process and approximately 90% of parents believe that the use of such devices in the classroom is necessary.

Regarding the types of electronic equipment to exposed children in the family, the results showed:

- television (87.19%),
- tablet (71.53%),
- computer desktop (70.94%),
- laptop (69.75%),
- the printer (52 19%),

- audio (46.26%),
- DVD player (38,55%),
- video (5.46%) (Epson, 2015).

Finally, the type of electronic equipment used in education resulted as follows

- computer desktop (the 72.59%),
- video (69.38%),
- the printer (51.98%),
- audio (39,13%),
- laptop (37.62%). (Epson, 2015).

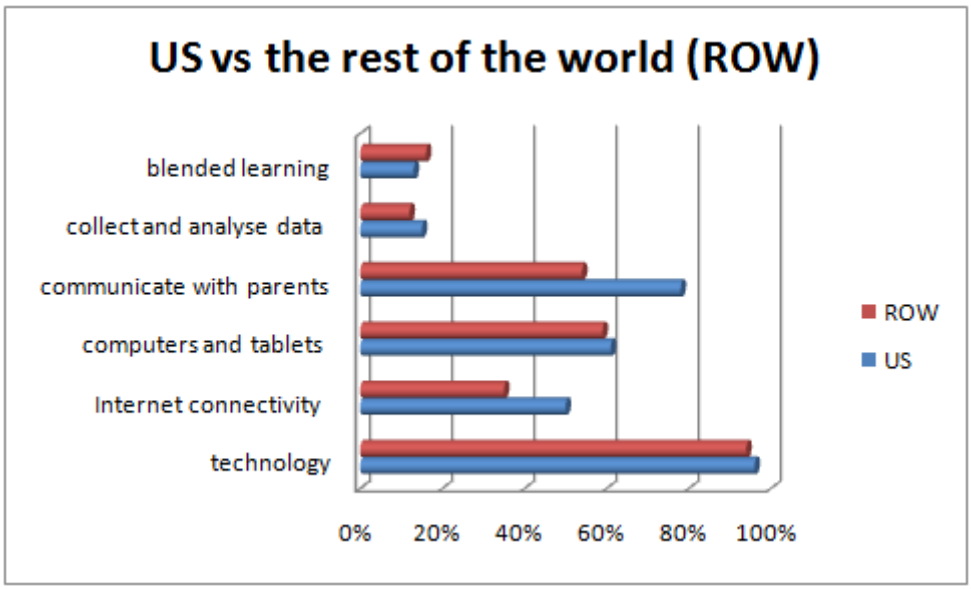

Figure 5. Use of technology in the US vs the rest of the worlds (TES global, 2015).

In the study "The Impact of Technology in US Classrooms" conducted by TES Global, the results of their survey conducted on teachers from 26 countries showed the following global impact of classroom technology:

- 96% of teachers in the US think technology plays a significant role in the classroom versus 94% in the rest of the world (ROW).
- Internet connectivity is a bigger challenge for classrooms outside the US; 50% say this is a barrier to tech compared to 35% in the US. Insufficient access to computers and tablets is seen as the biggest barrier in all regions (61% US vs 59% ROW).

- Teachers in the US are more likely to use technology to communicate with parents (78% US vs 54% ROW) and collect and analyse data (15% US vs 12% ROW); however, other countries are more likely to use technology to facilitate blended learning (13% US vs 16% ROW) (AUSTIN, TX, March 10, 2015 - http://www.tesglobal.com/).

All teaching aids have the purpose to make lessons easier to learn, more interesting. They are usually chosen by the teacher, in terms being useful to the context of the lesson. The teaching aids also have as objectives to enhance teacher's ability to make the process of teaching-learning more effective, to develop easy and understandable material, to create interest in the taught subject, to increase the attention of students and to communicate better.

The use of audio-visual aids

These aids are directed at the auditory and/or visual senses, according to the following (figure.6). (Hinst, 1971).

Figure 6. Audiovisual aids (Hinst, 1971).

The Audio-visual aids are particularly suited for language learning, media studies, music studies, video studies, history studies etc. Of course, this type of teaching aids has advantages and disadvantages as well. Some of the advantages of using audiovisual aids are:

- They help grabbing the attention of students
- It provides a realistic approach to the students
- It helps to make the learning process more effective since it represents information and it makes it more conceptual
- Some of the disadvantages might be caused by technical problems, by lack of space or can be time consuming.

Media is often regarded as an audio-visual aid. Some authors such as De Cecco use the term "media" as a synonym for "audio-visual aids" while De Corte et al., do not. In this paper they are regarded as synonyms. According to recent research, visual

materials enhance the learning process. According to Mohanty, the use of visual aids in teaching learning process has multifarious values (Mohanty, 2001), since visual aids give chance to speakers to make a more professional and consistent performance. By visual aids in teaching is one mode to enhance lesson plans and give students additional ways to process subject information (Kunari, 2006). As I also mentioned earlier, the use of audio-visual materials if very effective in language teaching lessons, since the audio-visual resources can help solve certain language barrier problem as they provide accurate visual image and make learning easier for the student (Chacko, 1981).

A study was made in 2015, by Ghulam Shabiralyani et al, published in Journal of Education and Practice, on the impact of visual aids in enhancing the learning process. The results showed high impact, according to the statistics that I will also provide below. The targeted population for their research was the staffs and students of the Ghazi University Campus Dera Ghazi Khan, Indus International Institute Dera Ghazi Khan, Government Degree College Dera Ghazi Khan, Government High School No.1 (Center of Excellence) for boys and girls. The authors used closed ended questionnaires used to measure various parameters which showed the impact of visual aids in enhancing the learning process of the students, and the data was analyzed through the SPSS software using regression and correlation analysis.

Their results in the analysis showed that 70% of the students and teachers agreed that the visual aids help in motivation and only 30% of students and teachers disagreed. (Figure. 7. 8. 9).

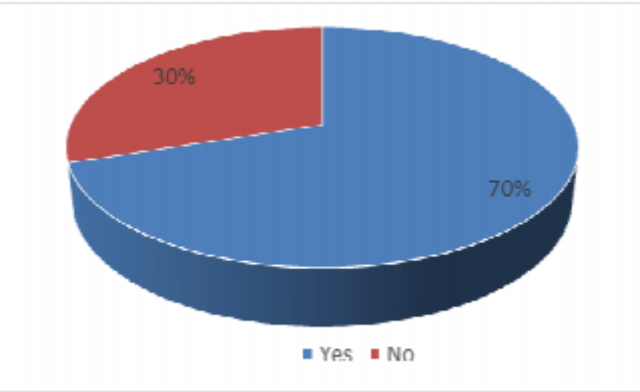

Figure 7. Visual aids help in motivation (Shabiralyani et al, 2015).

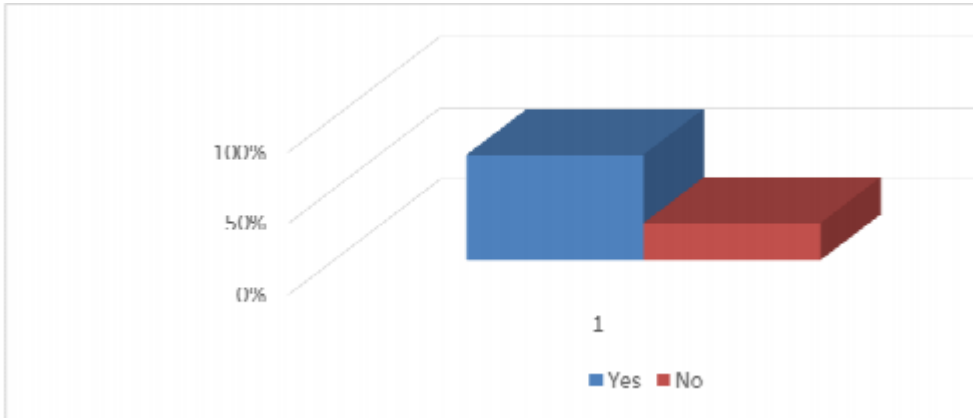

Figure 8. Increased vocabulary due to visual aids (Shabiralyani et al, 2015).

According to their collected data 68% of the students and teacher agreed that visual aids increase the vocabulary.

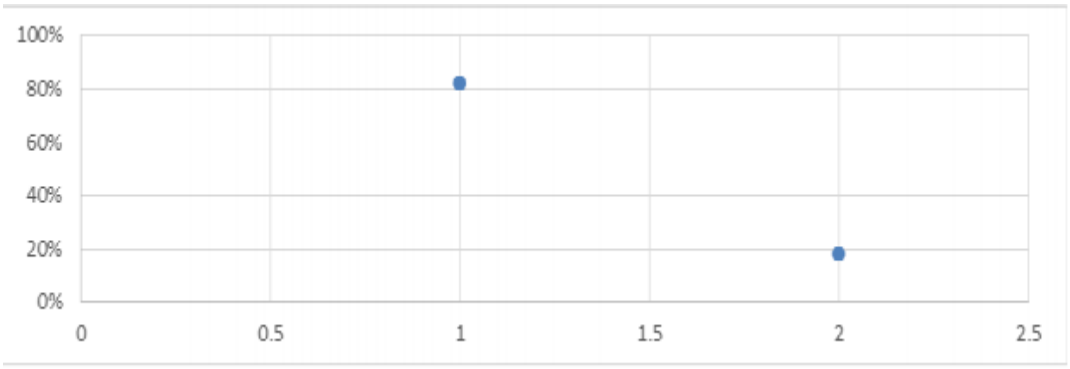

Figure 9. Saved time due to visual aids (Shabiralyani et al, 2015).

Their study also showed that the visual aids help in the saving of teachers and students time in preparing of lessons.

The last benefit was avoiding dullness and direct experience, and according to the results of their study, t 71% of the teachers and students agree that visual aids avoid the dullness but 29% disagreed with this statement. Regarding the direct experience, 92% of the teachers and students agreed that through visual aids the direct experience increased to observe the things while 18% disagreed with this statement.(Figure.10. 11).

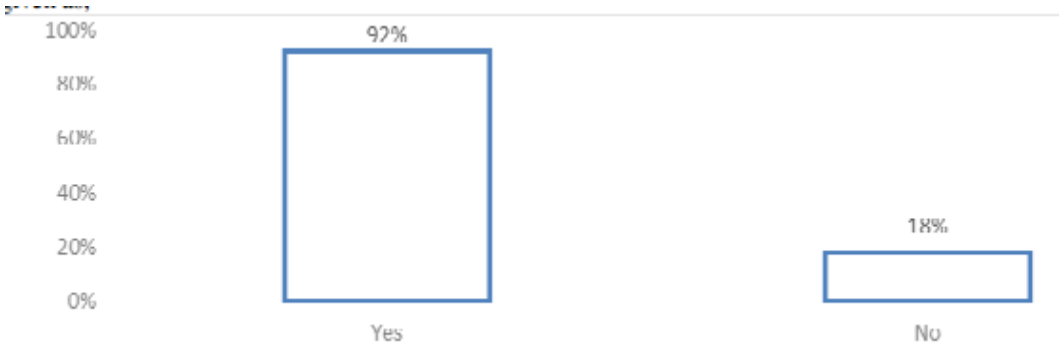

Figure 10 . Direct experience due to visual aids (Shabiralyani et al, 2015).

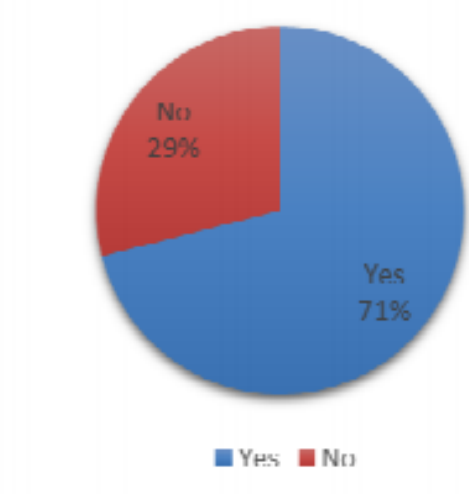

Figure 11. Avoid dullness due to visual aids.

The use of technological teaching aids

Technological teaching aids are those materials and tools used by teachers in order to deliver a lesson which imply the use of technology, such as computers (for powerpoint presentations), interactive white boards, projectors, online learning platforms and resources, distance learning resources, etc.

An interactive whiteboard (IWB) is a large interactive display in the form factor of a whiteboard. It can either be a standalone touchscreen computer used independently to perform tasks and operations, or a connectable apparatus used as a touchpad to control computers from a projector. The Interactive Whiteboard can be used by teachers in order to present material and receive feedback from students, to direct instruction more effectively or else to carry out formal assessments. For example, a student may both solve a puzzle involving math concepts on the

interactive whiteboard and later demonstrate his or her knowledge on a test delivered via the classroom response system Computers have a very large spectrum of use, and they will be covered later in the project. As teaching aids, **PowerPoint** presentations are the most common, since they are good for large rooms and audiences, can include audio-visual materials, charts, diagrams, maps, and other resources.

Smart Boards are also a modern technological teaching aid which is integrated tools in the classrooms and enhancing the whiteboards to be used to conjunct with several projectors and laptops, offering facility to transmit the data from computer-based, multi-media content and so on to the main board at the class in front of all the students.

"Podcasts are a series of digital media files, usually digital, audio, or video, which is made available for download via web." (Czerkawski, 2011)They are useful as teaching aids because via **internet** it allows instant access to resourceful materials and it can even make lessens available online for the students, making the learning process easier since the students can re-listens to important information that they make have skipped or not understood during the class. It is also a useful tool for making projects, since it offers students access to a controlled database of materials and academic resources.

3. E-Books

"An eBook is a form of publishing in a digital medium and since reading is the basic component of most educational activities, it is necessary to reach all students, especially special need students and distance learning classes." (webopedia.com) It is considered the biggest change in the editing field, since Gutenberg, and it was introduced on the market as a digital document accessible on a computer in 1998.

Digital or electronic material display is the option such as any other material to Speech that can provide learners further modalities information, such as allowing readers to interact with the text by moving the details to be interacted and associated with dictionaries. By using e-books as tools, accessibility can expand and easily used both for instructors and their students.

Many "E-books" are electronic modes of the previous books. Often, they can be read via a free software, such as Adobe Reader, from a desktop computer, a laptop, tablet, phone, e-book reader or Personal Digital Assistant (PDA).

The most used formats used by the “e-book providers are Microsoft Reader, Adobe eBook and Palm Doc,” all of them including restricted access and DRM – digital rights management. The new technologies used by Microsoft Reader and Adobe can be used only on a specific hardware on which there is a Microsoft Windows installed. This is also valid for Gemstar or hiebook.

In 1999 there was an initiative created in order to make anormal format for the e-book readers. This initiative was created by eBook Open Forum called "Open eBook publication specification" (OEBPS). The Open eBook is based on XML (eXtensible Markup Language).

In education, e-Books can have various impacts. First of all they can be used as learning aids by the students or as teaching aids by the teachers, for example electronic Manuals. There are many advantages of the digital books, the most important one being the fact that the delivery is instant and they’re always available, so they constitute an important resource that can sustain for a long and at any time the learning process.

The content of the digital book is enriched with several and wide multimedia elements, such as sound, video, animations, and in manuals this is an important aspect because all these elements can help the student better understand the content. They can also contain interactive tests, questionnaires, and simulations.

Of course, the e-books are an alternative to the traditional book, but they can also be used as complementary aids in modern teaching strategies and techniques. I will further present the advantages and disadvantages of e-books (Al-Dulaimi, 2017).

The advantages of eBooks are:

- They can be read on various supports, such as laptops, tablets, phones, pda’s, so they are more accessible and available to the readers at any time. The reader does not depend on the schedule of a library or a book store.

- The content is enriched with multimedia elements which can benefit the students since the form of delivery of information is more complex and easier to understand.

- Ebooks can contain bookmarks, dictionaries, links to relevant websites or extensions and notes with relevant information required to understand a specific part, a concept, a word, or a reference.

- They can be personalized for students with disabilities by using text to voice options. •

- They have reduced costs since there is no need to pay for the print, the paper, cover and so on.

- They have the possibility to include tests, evaluation instruments and tasks for the students

- They can gather the curriculum to discuss with a platforms or groups and combine the curriculum with technology

- Ebooks can assist the process of learning more visual and active for the students and offer immediate access to information and knowledge, whyle saving ours of Internet surfing, library research and book acquisition.

- Digital books can let the students work from distance when are unable to participate physically in the class

- They improve the lecture experience in comparison to the notes taken on paper
- Students can store they tasks collections as an electronic book, by saving physical space and increasing portability.
- The commentaries of the lecturers is easily understanding for the students to diagnose the weak and strong points of their work

The disadvantages of the Ebooks are that even though the multimedia capabilities are not essential for adult readers, in e-learning or distance learning it is important to insert videos, animations or even simulations when complex concepts must be explained and unfortunately at the moment the multimedia functions are

limited. Another disadvantage would be the fact that online reading is not as comfortable as the printed book

For the future, teachers could learn how to produce their own teaching materials in electronic format and use them in the classroom, or assigning tasks to the students, creating an interactive environment which would save time both for the students and themselves, since they would not require that much time for printing, making copies of subjects for test papers, and it would provide a more rich experience for the learning-teaching process. Unfortunately, at the moment there are not so many schools and teachers who create their teaching materials in electronic format.

4. Usage of computer teaching software aids

Lately, necessity to evaluate technology and emergence of the new technologies, there have been several discussions on whether schools should integrate technology as teaching aids and what the role of technology in education is.

The reality is that technology has become a very important part of our lives and it represents a very important tool in the life of students from the new generation

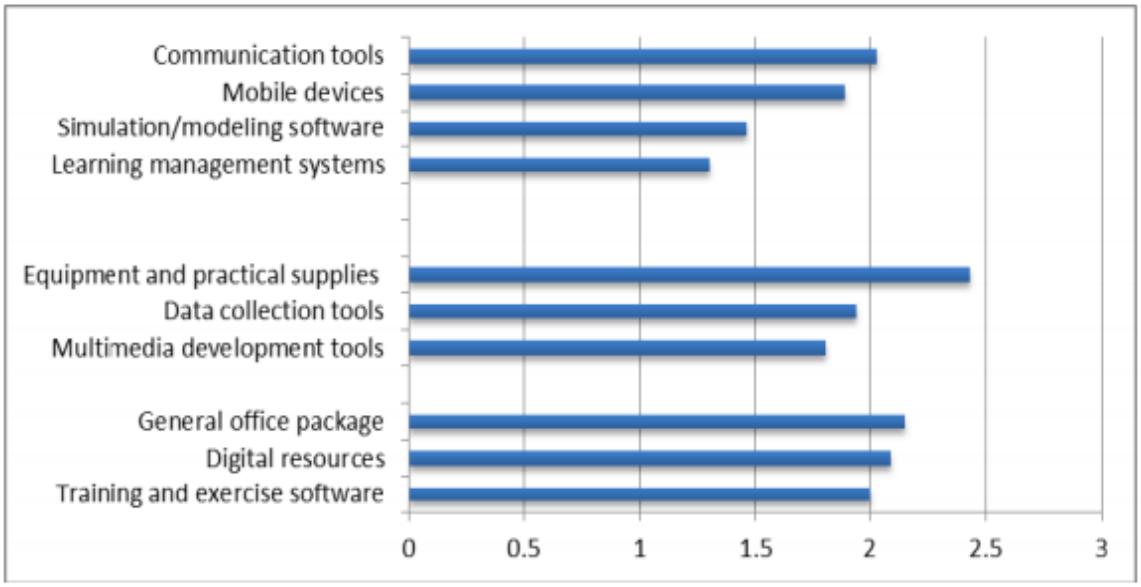

Figure 12. Statistical analysis of usage of computer teaching aids (Findings from the IEA SITES 2006 Study).

since their habits are technology-based and the way they think, understand, learn vary depended upon materials such as laptops, ipads, ebook-readers and other types of new technology. I will statistically analysis some on usage of the computerization teaching aids. (Figure 12. 13. 14).

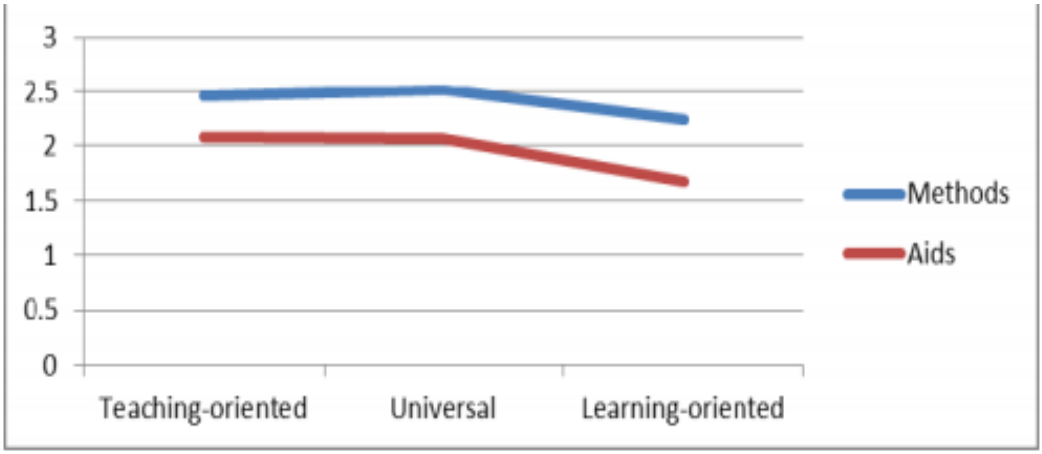

Figure 13. Statistical analysis of usage of groups of teaching aids and methods (Findings from the IEA SITES 2006 Study).

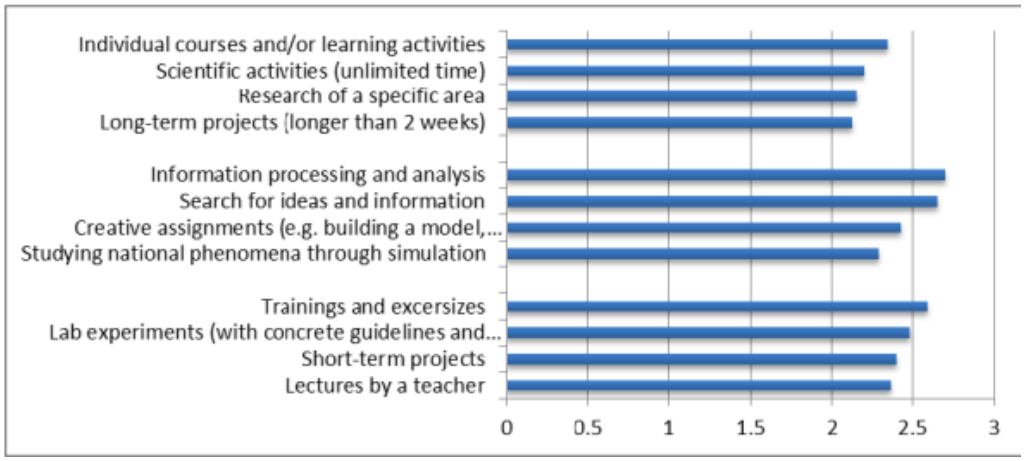

Figure 14. Statistical analysis of educational method (Findings from the IEA SITES 2006 Study).

"Even if digital curriculum and assessment seem to be mostly applicable in countries at more advanced stages of ICT development, various digital materials are increasingly available for use, and adaptation within developing countries**."** (Czerkawski, 2011)

5. Advantages of using modern technological aids in education and the solving obstacles

Since the huge impact of technologies in the field

of education and has shaped a new model of teaching. In this new model, there are a series of dimensions of the educational process which can be synthetized as follows:

a. The educational process has become more interactive and adaptable, flexible, student-oriented. Online education and distance learning offer useful competencies for young adults and the development teaching aids have a positive impact on increasing the efficiency on both the learning and teaching process. The interactive learning and teaching model creates a better communication, a more collaborative learning environment. "Technology in the classroom enables the use of more interactive educational tools, which allows for a dynamic learning experience that directly benefits students." (Wang & Bryan, 2014)

b. The new systems of virtual educations are based on the development of specialized competences according the approached topic. The development of critical thinking is an essential tools for a new technologies. The user has various means of exposure and presentation of information. Also using multimedia systems indicated a social tendency to develop a new interactive approach to the educational environment regarding means of accessing information and generating content.

c. As opposed to the traditional learning system which had a linear paradigm, the new modern approach is oriented towards the student, is more collaborative and how the information is delivered and what the priorities and interests of the student are become central for the teachers, whose position also changes and he/ she will require for learning process. The information is no longer transmitted unidirectional, the contemporary learning environment is directed in both.

Technology in education is manifested through the use of computers. Schools have a necessity for a digital resources, such as "electronic grade books, digital

portfolios, learning games, and real-time feedback on teacher and student performance, are a few ways that technology can be utilized." (Bidita, 2016)

The advantages of using technology in the educational environment are multiple and I will present them in this section, but there are also many obstacles and barriers in the use of these modern teaching and educational aids. Therefore I will first discuss the barriers and obstacles, and finally the advantages. (Figure, 15).

Obstacles to using technology in education

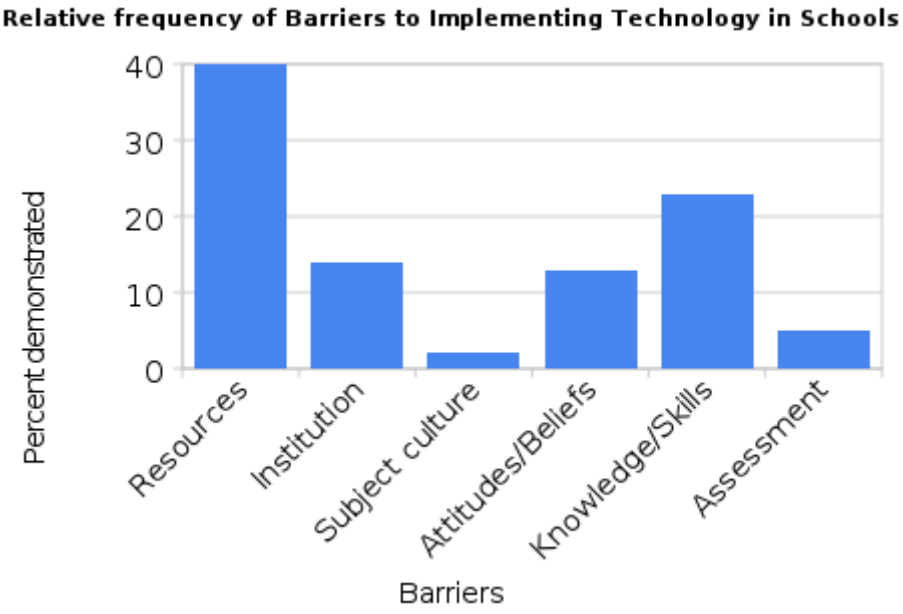

Figure 15. Barriers in using technology in education

(The International Society for Technology in Education, 2002a).

As I mentioned in a previous section, however, technology will not happen overnight, it is a long process that must be sustained. Teacher training in ICT and use of technologies is very important since they are the ones who must troubleshoot if problems or technical issues emerge, also they are the ones who must further pass their knowledge to the students so a first obstacle in this regard would be the fact that teachers must have a time to learn about software and the hardware technology, by which is time consuming and also inefficient and dangerous, since malfunctioning technology can also cause incidents and accidents if not offered rapid maintenance (Cuban et al, 2001).

As I mentioned earlier, if a teacher looks for special technology to overwhelm his/her flightiness from modern technology and “I stress that once more since the training of teachers should be considered a priority in the plan of integrating technology, as do researchers who have found that technology implementation is directly determined by the educational philosophies and pedagogy of the classroom teacher.” (Grant et al, 2004.)

Some extra hours would be required for planning and discussing with other teachers in order to establish goals and develop strategies and methods of evaluation of the use of these new aids. “Depending on the geography and the physical coordinates of the learning environment, some countries, cities do not have local training options available so more time is added to attend training.” (Harwood and Asal, 2007)

Also, in some countries, the schools might not have enough funds to buy technological aids, computers and so on, and “without computers in the classroom and appropriate software to support the curriculum, integration cannot take place,” so as obstacles lack of funding or lack of good leadership is very important. “When principals are unsupportive or uninformed about technology usage in the classroom, students are less likely to utilize any type of digital tools, and so are the teachers.” (Markiseme, 2016) Leaders are perhaps not found uninteresting in technology so integration does not receive the proper support, which is why the administration must also be informed and updated with the benefits of using technology sine they are the ones that must make sustained efforts to create educational projects, raise funds and invest in technology.

Another obstacle, which was identified by Zhao, Pugh, Sheldon, and Byers that “is the fact that although schools often have computer labs, teachers might not have easy access to them if they needed to compete with other teachers for laboratory time and even in the library there is limited access, so a good management is also required to overcome the availability barrier. When schools do not take time to create comprehensive technology plans, teachers, students and other school members are confused about how and when to appropriately use technology.” (Wise & Hauser, 2007)

One barrier which more than often is ignored is change. The integration of technology is a major paradigm shift, since it changes the educational system and shifts the focus from the objectives of curriculum to the adaption of them to the student's needs and the teacher becomes a facilitator. Also, the traditional teaching tools do not require training, so there are easier to use. Learning how to use new teaching tools can create resistance, because usually change does create resistance. In my opinion, it is very important for teachers to keep an open mind have the interests of their students as priority, being determined to invest in their own professional evolution, in continuous learning and for the old generations of teachers to maintain the interest alive and adapt to new changes.

Rogers' "diffusion of innovation theory" from 1995 that could be explained the process of adapting innovations in the educational environment, such as the use of technology. He is clearly defined the diffusion as "the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas," although Rogers also outlines the "five constituent elements of diffusion: relative advantage, observability, compatibility, complexity, and trialability." (Rogers, 1995). The relative advantage questions whether what the innovation replaces was better, why it was or not, if the change is or not worth it and it implies a risk management situation.

The second element is observability and consequences are observed of the innovation process, and if the results are positive, then they will be more likely to adopt the technology according to Rogers. The following element is compatibility and it refers to whether the innovation is consisted with the needs of the potential adopters, with their values.

Complexity refers to whether the innovation is easy to maintain, use and understand, also if the techniques for anticipating potential problems are easy or complicated. "The last element is trialability and it refers to whether the innovation can be tried on a limited basis or not. If teachers are to adopt technology, they must recognize and understand the five elements of diffusion according to Rogers." (Rogers, 1995).

The development and implementation of new technologies generates a paradigm shift in regard to the function of the teachers who becomes a moderator or a facilitator of the learning process, a coordinator of the teaching and learning of those whom he addresses to. The learning paradigm also shifts for the students because he or she is no longer a passive spectator, or a passive receptor who assimilates information and gives no feed-back and the only testing method is the evaluation. The learner finally has something to say about his or her learning process and make his or her own decisions.

Meige notes that in reality, the multimedia and new technologies is generally highly used The contemporary education systems develop the task of a continuous training and the development of specialized competences is an actual problem since the educational curricula directs the teaching process in order to create quality education and training which would result in well-prepared individuals who will be able to adapt in a society with digital characteristics. Recent studies show that teachers actually have the tendency to crave for more access, at least in the US, according to a study conducted in 2015, by TES Global, called The Impact of Technology in US Classrooms. (Figure, 16)

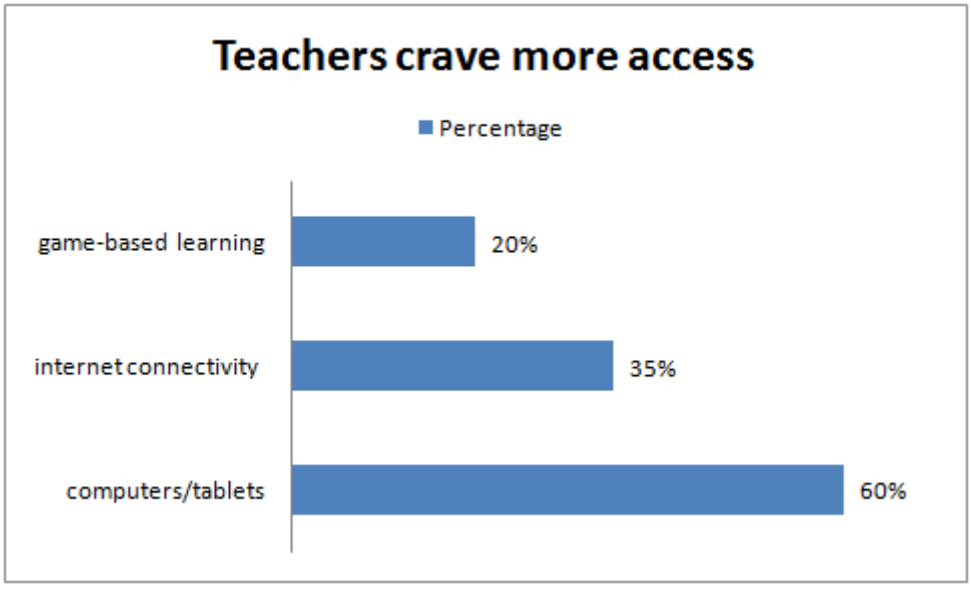

Figure 16. Teachers crave more access to technology (The Impact of Technology in US Classrooms, by TES Global 2015).

According to their results, "the survey showed that the biggest complaint from teachers is that they do not have enough hardware. More than 60% say they do not

have enough computers/tablets, and affirm that tablets are the most wanted technology in their classroom. WiFi is also a concern; 35% claim that internet connectivity is a barrier to successful use of technology in the classroom. On the software side, teachers were enthusiastic about game-based learning. 20% would like to see more in their classroom, above all other new technology." (Miege, 2003) Some elemental barriers to be used in the classroom depend on technology that is still remain a concerning matter, despite the advantages and benefits which I will further discuss in the section below.

Advantages of using technology in education

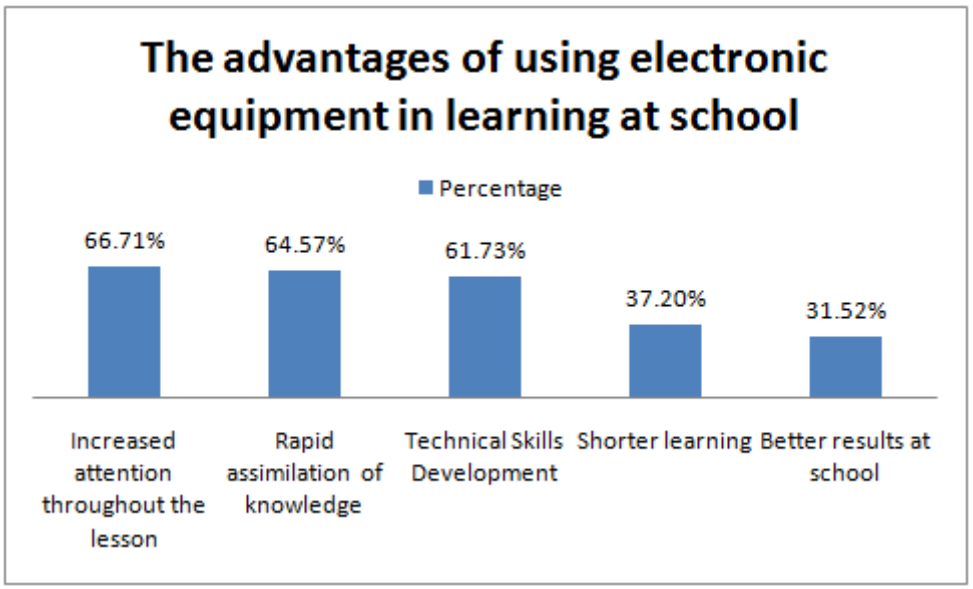

Figure 17. The advantages of using technology in schools. (The role of electronic equipment in the educational process" by Epson, 3 to 8 June 2015).

According to the survey results of the study conducted by Epson in 2015, see Figure,17 . "The role of electronic equipment in the educational process, their results showed:

- Increased attention throughout the lesson (66.71%)
- Rapid assimilation of knowledge (64.57%)
- Develop technical skills (61.73%)
- Shorter learning (37.2%)
- Better results at school (31.52%)."

The contemporary education systems have suffered various modifications, by adapting to the requirements of the society with informational character. A large

number of young people have enrolled in higher education, policies of human resources have developed based on efficiency and assimilation there have been various fluctuations in the work market and in this context the digital competences have pushed for the emergence of e-learning.

A new type of communication has been developed in the educational area, which started from a basic online medium and presents a series of advantages, such as:

a. *Accessibility and interactive utility of information*

Interactive learning presents some advantages in comparison to the classic education, in the sense that multitasking and interdisciplinary guides us to using more efficiently the information, through the use of databases, search engines, websites, forums, virtual communities and others. The interactive utility, which is multitasking presents the advantage of a diverse learning by using more specialized tasks.

b. Specialized learning of the tasks

The programs and informational applications present a major impact due to the specialized use according to the specific tasks and the opportunity of the user to work with information from different relevant fields is a challenge characteristic to our society and a current practice for the students.

c. Social modelling trough interactive communication

"Interactive communication is the trademark of our society and its forms include basic dialogue and nonverbal communication, interactive fiction and storytelling, hypertext, interactive television and movies, photo and video manipulation, video sharing, video games, social media, user-generated content, interactive marketing and public relations, augmented reality, ambient intelligence, and virtual reality," (CARDOSO, 2008) e-books and others and through interactive communication, pupils and students can opt for distance learning option and either by choosing an online university program or by interacting with participants and visiting various online systems: dedicated forum, virtual networks, specific communities.

d. Increase of the speed of accessing information

Given the fact that the traditional model of education is analyzed experimentally, there are big differences to the new digital systems, so when it comes to online learning it is a new model of knowledge assimilation. The emergence of new educational systems generate a specialized request on the market of this new type of technology. The purpose of the new educational tools is based on developing abilities and specialized competences.

The diverse educational software, which have been previously discussed, ensure the required means for a competitive education, which is characteristic to an informational society. From his perspective, in the e-learning systems students can earn interactively, through this educational modality, complementary to the traditional. The diversity of the programs and applications are very useful in the learning process.

The support activities for the training of teachers are also very useful, the PowerPoint presentations and other types of applications are helpful innovations, like the text processor and the electronic information systems.

Some of the most important benefits of using technologies in the educational environment:

- A More Interactive Experience
- Unlimited Source of Resources
- Necessary Skills and competences for the Future
- Saves Precious Resources
- Instantly Updated Information
- The awareness of the fact the acquired knowledge will find their utility
- The increase of the yield of learning by appreciating the immediate response of teh students
- A higher motivation for the learning process
- Stimulation of imagination and critical thinking
- Introducing a cognitive, efficient style and promoting individual learning and work
- Promoting competitively and self-development
- Mobilization of the psychomotor functions in using the computer

- Developing a visual culture
- Creating practical and useful digital skills
- Permanent feedback
- Fast management of data, calculus, showing results, creating graphs, simulations, table and others
- Ensuring the use of adequate strategies in order to solve various tasks
- Developing critical thinking and promoting individual research
- Promoting permanent learning
- Determining a positive attitude of the students for the use of technology which is in benefit of the society
- Help students with disabilities integrate in the educational process and into the society
- Instant access to required information in order to complete a task
- Learning at the student's own pace
- Ability to learn even though unable to be present in a classroom trough e-learning
- Time saving, through the use of modern teaching tools, offering the teachers more time for explanations.
- The ability to make simulations to otherwise unlikely to reproduce phenomena.

6. Technological tools for teachers

The decision on whether to choose technological tools or classical teaching aids in the classroom belongs entirely to the teachers. So a very important aspect in this regard is teachers' training in technological education and technology, since their knowledge on this matter is highly impacting their preferences and the way they would find meaningful ways of applying technology in their educational plan, lessons, and using it as a teaching aid.

Not all of the teachers are trained to integrate technology. In order for schools to begin to implement their instructional technology, there are four questions that must be answered, and those are what is integrating a technology means, in what

context can it be located, “what the barriers to technology integration are and what the stages of technology integration” are.

Morton sustains “that technology integration does not imply just considering the computer as a ‘tool’ due to the fact that educational planners understand, by implying that computer technology is like any other tool, that there is no need for a special training.” (Morton, 1996)

Morton also sustains that “computer as tool” helps the developers of every curriculum to create strategies and methods. Integration does not mean simply using the computer or other technological instruments from time to time, occasionally, it is an entire process that comes in stages and is completed when it is used in a manner that supports and enables the development of curriculum objectives. So technology is integrated when it becomes a vital part in the teaching/learning process.

Jonassen shows that “the educational environment has seven aspects that make learning meaningful and this environment is where the integration of technology takes place.” (Jonassen, 1995) So it is more of a construct than a real physical place. These seven aspects identified by Jonassen can also be considered seven aspects of technology applicability in the learning process.

- The educational environment is active, therefore technology can be used as a cognitive tool.
- Constructivism – cognitive tool
- Contextualization – technology can help create simulations
- Intentionality – technology can help with the organization which would help both teachers and students better achieve their goals
- Communicative (conversational) and collaborative – technology can develop a better communication system via internet (e-mails, forums, video-conferences, online learning platforms) and can help enlarge the educational community, extending it virtually from the classroom
- Reflective – cognitive tool for self- evaluation.

The integration of the informational technology in the process of teaching-learning and evaluation has become lately a priority of the educational policies all over the world, so this is generating a new horizon and a new way of looking at how to practice education. The use of technology facilitates the processes of information

presentation and delivery to the student. Multimedia technologies are the most common tools for teachers since they combine image, sound, and voice over, video, animation and simulation, and Hypermedia Technologies, which combine multimedia with hypertext, incorporating all type of data. The types of teaching aids will be further discussed in another section of this chapter. The important consequence of using this new type of teaching aids is that the role of the teacher changes and evolves from the traditional one, the teachers is no longer a transmitter of information, he/she becomes a facilitator of learning by creating an educational environment which allow the student to develop and build his/her own knowledge with the help of technology.

In this regard, technology needs to become an integrated part of this environment, which means it has to be used on a daily basis, it must become part of the learning processes of the student and part of the teaching process of the teacher. It is not sufficient for technology to be complementary, in order to make a real difference it has to become a way of teaching and a way of learning, with its own integrated methods and strategies.

Integration of technology is a long process, it is not something that happens overnight, so it requires sustained efforts, resources and training. According to Sandholtz (1997), "technology integration includes five stages with their own patterns of change and requirements: *entry, adoption, adaptation, appropriation, and invention*."

According to Dr. Ruben Puentedura (2012) "technology in the classroom can be incorporated in any range of ways that suit an educator's comfort level. That spectrum was developed in 2012 by him and is summarized with the letters SAMR, which stand for *Substitution, Augmentation, Modification, and Redefinition*, representing four different degrees of technological integration into learning, from slightly supplementing instruction to completely redefining what it means to teach." I will further present the stages of integration, as described by Puentedura and Sandholtz as well.

6.1. The importance of using technologies as teaching aids.

Recently there has been a tendency to study shows a gap between students' needs and teachers' capacities "There is an increasing need to recruit many of the tools and techniques of modern educational strategies, to achieve the development of students ' skills in thinking and research, criticism, listening and discipline, to the maximum extent possible."

Which helps a lot in getting the teacher to has his own competency, and trends related to evaluate the depth of study of the students and to see the finest ways to reach their minds and hearts. The educational process has become, in our time, a human long-term project that needs to increase the interest in science and research and internal creativity of the student, also to increase motivation and desire to achieve.

However, the educational trend in many of the existing educational institutions, still depends on the means and methods of indoctrination characteristic to traditional education, which reduce the student's will and involvement, waiting for his turn always to participate, at a time determined by the teacher, and in accordance with what he sees. This may lead to the suppression of his talents, and turn off the creative flame that she/he has.

Researchers have suggested that technology can enhance learning, since technology can improve some skills of the students, such as communication skills, by using word processing programs and communicating via e-mail, or organizational skills and the capacity to better understand science concepts by using modeling software (such as Matlab), "database programs, animations, graphs, spreadsheet programs or by using design and multimedia tools such as presentation software, editing software for digital images and videos." (Honey et al., 2005; Johnston, 2000; Means, 2000).

According to recent literature, "the use of technology has a positive impact on students' academic results concluded that, when integrated appropriately, the introduction of technology in the education program resulted into an interactive relationship based on feedback between the teachers and students" (Guleck et al.,

2005). Stratham and Torell (1999) and showed enhanced skills of problem solving and inquiry, therefore higher engagement of the students in the educational program, which led to lower dropout rates.

After the implementation of "Microsoft Corporation's Anytime Anywhere Learning Project, a program that provided students and teachers at 800 schools with laptops for use at school and at home, the evaluations reported that after implementing the technology in the educational program, students were able to direct their own learning and were more involved in the learning program." (Gulek and Demirtas, 2005) Apple also had a similar program, the first of this kind, called Apple Classrooms of Tomorrow (ACOT) through which "they provided one-to-one computer access to students and teachers, from 1985 to 1998 and their evaluations after the implementation of the technology also revealed that students had better communication skills, enhanced problem-solving skills and the students were able to learn independently." (Means, 2000; Weston et al., 2010)

However, studies also indicate that students are not the only ones who might "benefit from the introduction of technology into the teaching methods," since teachers might also benefit from the ability to create course materials and deliver lessons in a more authentic way, providing additional sources of information and delivering the information in a more interactive way (Healey, 2001; Waddoups, 2004). Research indicates the ability of the teacher to integrate technology into the curriculum is very important (Valdez, 2005; Jackson 2004), therefore "each teacher's current level of technological skills should be determined before designing professional development According to Cooley (2001) it is very important to prepare teachers to implement the program of educational technology, since the technology itself cannot do much for the student." (Bonifaz & Zucker, 2004)

6.2. Computer education and its applications

I have previously discusses throughout the entire chapter about the use of technology in education. The use of technology in education would not be possible without the use of computers. ICT is the discipline that studies all technological aspects and the use of computers. So I have already mentioned two applications of the

computer applications, of course I will not extend upon these two aspects in this section.

There are more applications of computer education in all of the disciplines. For example, in mathematics and physics, chemistry and other sciences computers offer a great environment and tool for calculus, for simulations of complex phenomena, for statistics and animations that can help teachers develop and conduct not only teaching materials, but also their own research, which would otherwise take a much longer time to complete in the absence of this tool.

In arts, such as literature, photography, movie directing the computer has also very important applications in video editing, content editing, online libraries, book editing software, photo editing software and others, online publishing platforms for authors, online libraries and eBooks with instant access to information and great works in literature.

Computers are also important in marketing, journalism and advertising, offering access to the interent and providing marketing tools, social media, and blogs. The programming and informatics areas are obvious fields which benefit the most of the use of computers. Our society is an informational one and individuals are required to have digital competences in almost every field.

In the case of education, computers have created the context of emergence a developed environments, which is the concretization of their application: virtual learning platforms, blended learning, e-learning and distance learning.

Virtual learning platforms have been previously discussed, they include forums, virtual learning communities, and other educational tools. Blended learning and e-learning is the main topic of the following part below.

7. Blended learning

According to Garisson, the blended learning concept is “a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path or pace.” (Garisson, 2004). Blended learning is a “combination of learning at a distance and the

traditional classroom." The "blended learning" term has begun to be used at the end of the 20th century and one of the older references appears in a press release in 1999 at Interactive Learning Centers and in 2006 the first manual of blended learning appears, written by C.J. Bonk and C.R. Graham who defined the blended learning systems as those systems which „combine the direct interaction between teachers and students with the teaching assisted by computer.

Blended Learning is a modern teaching concept, very flexible, developed with the purpose of offering each student an advanced level of technical knowledge. The system is based on new concepts and teaching methods, being stuent-centered. It promotes both the study assisted by trainer and the individual online study.

In blended learning "students have a fixed schedule where they will have to attend a part of the classes at the educational institution and for the rest, they can make their own schedule, attend the rest of the classes and do their coursework and assignments online." (Pop, 2017)The (table nr.2) below illustrates the strategies, tools and resources for blended learning.

Table 2. Strategies, tools and resources for blended learning.

Strategies, tools and resources			
Goal	**Classroom Learning**	**Blended Learning**	**E-Learning**
Communication between teacher and students	• Full group lessons • Small group lessons or tutorials • Individual conferences • Marked assignments and rubrics	• Full group lessons • Small group lessons or tutorials • Individual conferences • Marked assignments and rubrics • Digital course materials • Online discussions	• Digital course materials • Online discussions • E-mail • Instant messages • News announcements • Online calendar • Dropboxes • Online grade tool

		• E-mail • Instant messages • News announcements • Online calendar • Dropboxes • Online grade tool • Rubrics	• Rubrics • Web conferences
Collaboration among students	• Learning centres or other room arrangements • Class discussions • Face-to-face group work	• Learning centres or other room arrangements • Class discussions • Face-to-face group work • Online group work • Online discussions • E-mail • Instant messages • Blogs • Electronic portfolios	• Online group work • Online discussions • Chat sessions • E-mail • Instant messages • Blogs • Electronic portfolios • Web conferences
Demonstration of learning	• Paper-and-pencil tests and assignments submitted in person • Live presentations, labs, performance	• Paper-and-pencil tests and assignments submitted in person • Live presentations, labs, performances, or exhibits of	• Blogs • Electronic portfolios • Online discussions • Online surveys and quizzes • Assignments,

	s, or exhibits of skill • Models, works of art, posters, and other physical artifacts submitted in person	skill • Models, works of art, posters, and other physical artifacts submitted in person • Blogs • Electronic portfolios • Online discussions • Online surveys and quizzes • Assignments, such as essays, worksheets, slide shows, photographs, and videos submitted to electronic dropboxes	such as essays, worksheets, slide shows, photographs, and videos submitted to electronic dropboxes • Web confere

In order to transform a classic course in Blended Learning format, it is required for the content to be based on the specificity of each discipline and on the already existing digital materials. In order to create a Blended Learning course Web and Course Authoring instruments are usually used.

An efficient Blended Learning course must be:

- Student centered
- Logically and attractively structured with graphs, tables, schemes, animations, simulations, hyperlinks
- Interactive- it must contain multimedia and auto-evaluation means which can offer feedback regarding the progress of the students and the degree of understanding of the content.

The Course Authoring instruments offer several tools for the creation of content of the courses (HTML, XML, PDF etc.) and allow the integration of multimedia files, such as images, audio and video files, animations, simulations, based on predefined templates and on the possibility of file conversion from various formats (Word, Power Point, Excell, PDF etc.).

The course must be organized in modules and chapters, contain tests and provide feedback with the purpose of visualizing the progress of the students in the learning process, in order to grade the student and generate the reports.

The Web Authoring Instruments offer the next important facilities for the creating and editing of the pages or websites trough predefined templates and styles, HTML pages management, creating page linkages, standardizing the layout of the pages, colors in order to ensure a unitary aspect of the entire website and offering dynamic and interactive pages for students.

Below, I will describe the steps required for the creation of an interactive course, according to Petrescu (2011):

(1) Identification of the objectives of the course

(2) Identification of the number of activities required for achieving the objectives

(3) Establishing of the required time for each activity

(4) Creating the first course, by taking into account the following aspects:

a. Adding interactive resources to the content

i. Adding video resources

ii. Adding slide-shows

iii. Adding feedback resources

iv. Adding questionnaires

b. Adding traditional resources

c. Adding external resources

(5) Creating weekly resources

a. Creating a stream of the lesson which would allow the teacher to control the interaction with the other available resources. Its purpose is to help with organization.

b. Adding a feedback form for each lesson.

(6) Evaluation of the students:

a. By means of a multiple-choice test. Blended Learning Platform enables loading the questions and options for a multiple choice test and also real-time assessment. The teacher must only choose the questions and the rest of the process is automated.

b. By means of a dynamic test. The teacher can ask uploading the solutions for tasks on a platform.

c. By means of the classical test. The teacher can publish dynamic subjects and even receive resolutions, but the correction will be done manually.

d. The publication notes will be made through the catalog.

e. Clarification of the results is via a chat or a forum thread.

(7) Consultations offered by teachers can be made through sessions or through private chat forums.

When properly implemented, “blended learning can result in improved student success, satisfaction, and retention. Data analytics can also identify students who need early intervention, thus increasing retention and the available online tools can also significantly enhance student engagement, ensuring that all students participate in course discussions and benefit from collaborative learning.” (Pop, 2017)

8. Education and distance learning

In the last decades, the electronic communication in the educational environment has become a constant of the last decades. The communication model has created an alternative learning support which marks a transfer of competences from an unidirectional, exclusivist learning model to a multidirectional model of educational communication, in the context of which the teachers has become the facilitator of the learning process for the students and the students has become more involved, no longer being just a passive observer.

The new technologies have put a greater emphasis on the needs and choices of the individual benefiting from the education, it has changed the entire educational system, the teaching methods, the tools, offering greater opportunities for students and for teachers as well to develop professionally, to acquire new competences which have a great importance in our contemporary informational society.

A new educational system in contemporary teaching is represented by e-learning, an educational system which has become more and more present in the universities and pre-university environments. The fundamental component of the e-learning systems is represent by specialized applications of teaching and evaluation. Online learning has a diverse spectrum of activities. There are many advantages that e-learning brings to the educational practice:

• Allows remote learning system, interactive;

• Generates and enables specific online assessments;

• Learning focuses on specific tasks according to the interest of the student or student's training allows a high degree of adaptability to the requirements of contemporary education systems;

• This type of education develops organizational skills and self-discipline learning time;

• Develops individualized learning practice, according to contemporary educational requirements;

Internet-based education and new media builds an educational model suitable to the needs of the young generation and offers an alternative to traditional education, especially for adults with busy schedules who have a full time job. Interest analysis developed in this study is directed at understanding the relationship existing between the traditional and the modern education.

Depth analysis of issues arising from new media used in education leads us to conclude that the online user has a more diversified leeway when accessing such systems. Compared to a traditional education system, new media has two fundamental characteristics. The first one is interactivity. The user accesses multiple online component, which gives various opportunities in this environment.

Secondly, is the concept of ubiquity. In simplest terms this concept is reduced to the idea of unlimited communication in the digital system. There is a relationship between the education system enforceability traditional and the contemporary type. The two systems complement each other to the benefit of general and specialized, offering a dynamic conclusive postmodern education and training systems.

Online learning platforms, or e-learning, is created to sustain the individual learning process and allow users and students to access a series of informational resources on online environments, allowing them to engage in a series of debates on various themes

"E-learning is not created in order to replace the traditional educational systems, but to act as an aid in the learning / teaching process. It has been adopted by the educational institutions as an alternative to the traditional educational strategies, being complementary to the school activity." (Rosenberg, 2001) This type of platform is designed for active learning, it involves the use of an internet connection and of a computer. For teachers it can be a useful teaching aid and it can help stimulate students to use their spare time more usefully, creating activities specific to each subject or discipline.

E-learning has many benefits, and disadvantages as well. The first benefit is that it can engage a wider audience, since a virtual classroom is not limited to a number of students, the physical limitations being overcome.

"For distance education aimed at the masses, and in particular those excluded from traditional forms of education, e-learning education are likely to remain important for many years to come." (Rosenberg, 2001) since the educational e-learning platforms offer studying opportunities for those with a busy schedule, they act as a teaching aid, and they promote active learning and are very accessible. One of the major advantages are that they stimulate interactivity and collaboration, the mobility and geographic independence, the fact that they can engage a higher audience and the individualization of the learning process which is a great benefit for the individual who can learn at his or her own pace and receive feedback.

9. Educational technology competency

The key-competences have a more integral, general character than the other curricular arias, however they target permanent education. At the moment there are various discussions related to the content of the curriculum. Education based on competences means emphasizing the methodological side of gaining various knowledge, with a more defined pragmatic aspect than simple education, based on a traditional vector. Competencies have been introduced in Romania during 2001 and 2010. The documents of the European commission are synthetizing the actual stat of the general issue of competences, in an integrating holistic approach. Competences is a term coined by N. Chomsky, with origins in psycholinguistics and psychology, later applied to professional qualifications (especially in the U.K.). The construction of various competences and abilities is approach in teaching by Piaget and D'Hainaut. J. Piaget (1998) connects the development of a competency with an action scheme. Ph. Perrenoud (1998) considers the competency a genetic potentiality of the human spirit ("capacity to act efficiently in a specific situation"), covering the "procedural knowledge" (as "savoire - faire"), by opposition (and complementarity) with the "actual "ones; the author develops an appreciation which underlines the paradigm of implementation of competencies using competencies as targets for education is a very generous fact but it implies very important changes in programs, in the methods of teaching, in the training of the teachers.

Learners in the 21st century live in a technological framework touches every corner of their worlds, and the educational arena is no exception. Educators use technology to facilitate and assess learning, stimulate thinking, expose learners to diverse perspectives on issues, and create community between and among learners and teachers. Technology is a tool that can fascinate teachers and learners alike; however, health professions educators must always keep in mind that it is a means to an end, and not an end in and of itself. Since educational technology – which runs the gamut from a traditional textbook to robotics – can create a spark that stimulates innovation in educators, competencies in the creative and proper usage of technologies to facilitate learning and professional identity formation, as well as to assess learning, are desirable.

The digital competence is based on the fundamental abilities using computers in order to obtain, copy, evaluate, store, produce, present and send information.. By its nature, the digital competency is interdisciplinary and transdisciplinary, offering possibilities of concretization of all scholar areas. It represents a methodologic model for the all areas of the curriculum and also for very wide areas of the social practice. Digital competence also constitutes a part of the permanent learning competency and an obvious methodological dimension of the curriculum in its frame. (Table 2).

Table 3. Digital competences

Knowledge	Skills	Competences
Understanding the role and purpose of the use of technology in our daily lives	To search, collect and process information	critical attitude and reflexive to available information
Main functions of a computer	To use information in a critical manner, systemic, appreciating its relevance and differentiating the real information from the virtual one by identifying the connections within them	Responsible use of interactive means
Opportunities and potential risks of the internet and communication via electronic media	Use of techniques such as the production, presentation and understanding of a complex information	interest in involvement in communities and in networks with cultural, social and / or professional goals

Understanding how technology can promote innovation and sustain creativity	To access, explore, and use services online	
Ability to understand the need of information validation and reliability	To use digital competences and skills in order to sustain critical thinking, creativity and innovation	

Teacher Educator Technology Competencies (TETCs) - synthesis

"The Teacher Educator Technology Competencies (TETCs) were developed to support the redesign of teaching in teacher education programs so that ALL teacher educators are prepared to model and integrate technology in their teaching. Teacher candidates who receive consistent and appropriate experiences with technology throughout their teacher education programs will be more prepared to integrate technology into their own classrooms." (Talbert-Johnson & Oberlander, 2004)

Certainly, teacher educators need a certain instruction that may utilize content-specific technologies to increase teaching and learning process. Therefore, "Curriculum, as well as teacher educators' use of technology for teaching and learning, impacts preservice teachers' use of technology in their practice. Yet, there is no cohesive set of technology competencies to guide teacher educators in teacher preparation programs. This commentary advocates for the need to develop a common set of technology competencies for teacher educators to help guide their work in helping preservice students develop their ability to teach with technology." (Foulger, 2016)

CHAPTER IV: THE EMPIRICAL RESEARCH METHODALOGY, ANALYSIS OF DATA AND RESULTS IN ROMANIA AND IRAQ

1. Research Context

This chapter presents the results of the research aimed at identifying the educational curricula and strategies for the efficiency of teaching technology and the treatment of students:

2. The Objectives Of the Research

1. To make a comparison between the Iraqi and Romanian educational systems, The comparison was intended to investigate differences, given that the cultures are very different.
2. To explore other perspectives which might open new opportunities for the improvement of the Iraqi learning system in future, especially in implementing e-learning and educational technology.
3. It aims to know the degree of availability of teaching techniques at secondary schools, to know the degree of usage of teaching techniques at secondary schools, level of satisfaction, with the degree of availability of teaching techniques at their secondary schools .
4. It will help in the process of identifying the students', and teachers' level of acceptance regarding the usage of modern teaching devices and techniques at secondary schools and to find out the difficulties facing the use of educational techniques at secondary schools.
5. It aims to know the factors facilitating the usage of educational techniques at secondary schools and to know the level of organization and clarity of the textbook's language, and the curriculum's method of presentation in it .
6. It aims to know the role of the curriculum in the use of educational techniques and to establish a general database for the availability and usage of modern

technologies in education, and to develop the educational teaching through it at secondary schools.

Hypotheses And Research Questions and Sub-Questions

- Are there many important variations regarding the teachers and their use of modern technology information based on the sex variables, qualifications and experience?
- The relationship between degree of availability of teaching techniques at secondary schools and degree of usage of teaching techniques at secondary schools.

Main Questions are:

(1). What is the degree of availability of teaching techniques at secondary schools in Iraq and Romania?

(2). What do you like as a modern teaching devices and techniques to be used at secondary schools?

(3). What is the degree of usage of teaching techniques at secondary schools in Iraq and Romania and What are the factors which help in the use of educational techniques at secondary schools?

(4). What difficulties are facing the educational techniques' usage at secondary schools?

(5). To what extent the curriculum's content is organized and What is the level of organization and clarity in the textbook's language, and the method of presentation of the curriculum in it and What is the extent of organization of the curriculum?

(6). What is the curriculum's function in the educational techniques usage?

3. Features of the Respondents

The contextual characteristics of the this study's samples. Each of the characteristics was demonstrated via tables and charts for the number and percentage of the participants.

First: the distribution of the student sample according to personal characteristics.

the sample consisted of (410) Students in Romanian, (600)Students in Iraq . The following table describe the sample distribution based on some variables of a demographic importance.

Table 4. Student sample distribution according to demographic variables

		Romanian		**Iraq**	
		Frequency	**Percent**	**Frequency**	**Percent**
Gender	Female	202	49.3	240	40.0
	Male	208	50.7	360	60.0
	Total	410	100.0	600	100.0
Age	Age 15	105	25.6	200	33.3
	Age 16	175	42.7	200	33.3
	Age 17	130	31.7	200	33.3
	Total	410	100.0	600	100.0
Grade at school	Grade 9	105	25.6	200	33.3
	Grade 10	175	42.7	200	33.3
	Grade 11	130	31.7	200	33.3
	Total	410	100.0	600	100.0

Table (4) and figure 18 show that:

Romanian: with the participation rate of 49.3 % for females and 50.7 % for males.

Iraq: with the participation rate of 40.0 % for females and 60.0 % for male.

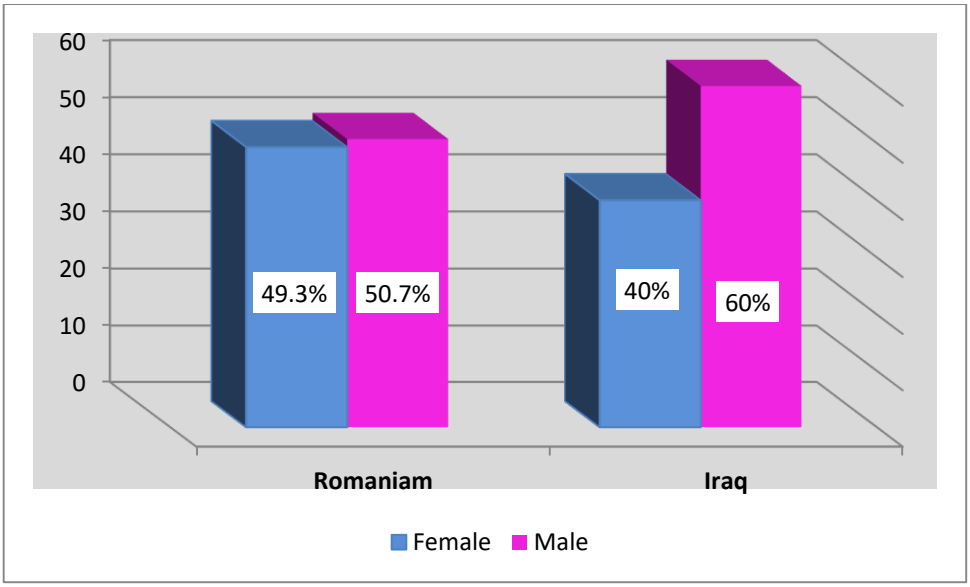

Figure 18. Sample Distribution According to Gender Variable

Table (5) and figure 19 show that:

Romanian: regarding the age variable, Romania has the highest percentage of students distribution with (42.7%) for the specific age group of (16 years old), while (25.6%) was the lowest percentage for (15 years old).

Iraq: Iraq's percentage of students' distribution of the age variable of was (33.3%) for age groups (15, 16, and 17 years old).

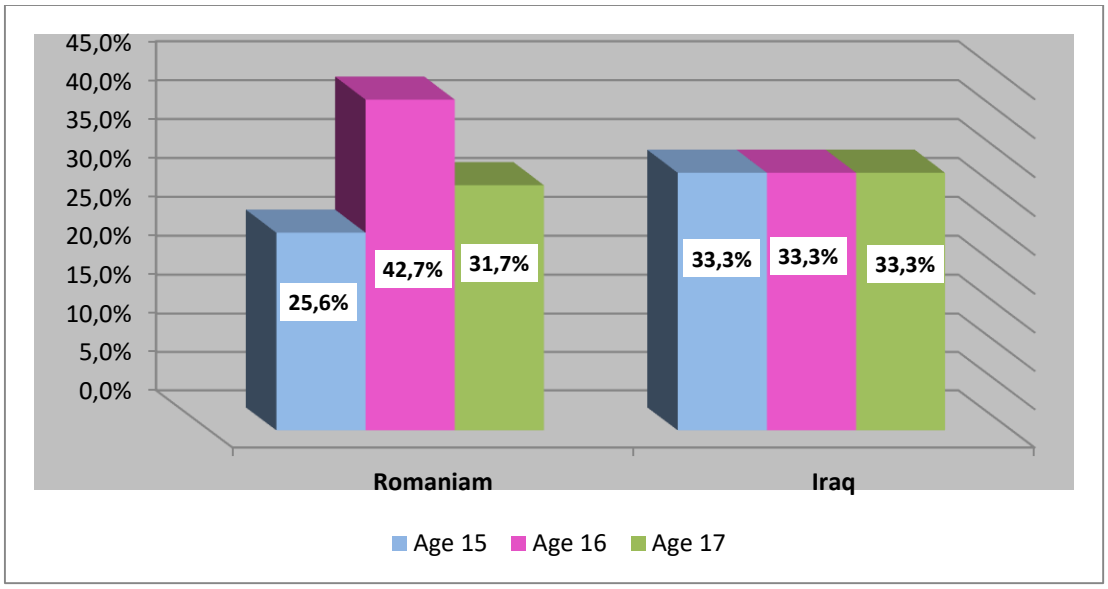

Figure 19. Sample Distribution According to age Variable

Table (5) and figure 20 show that:

Romanian regarding the Grade at school variable, Romania has the highest percentage of students distribution with (42.7%) for Grade at school group (Grade 10), with a lowest percentage of (25.6%) regarding school Grade (Grade 9).

Iraq: regarding the Iraqi sample, the students' distribution percentage regarding the school Grade variable was (33.3%) for school Grade groups (Grade 9,

Grade 10, Grade 11).

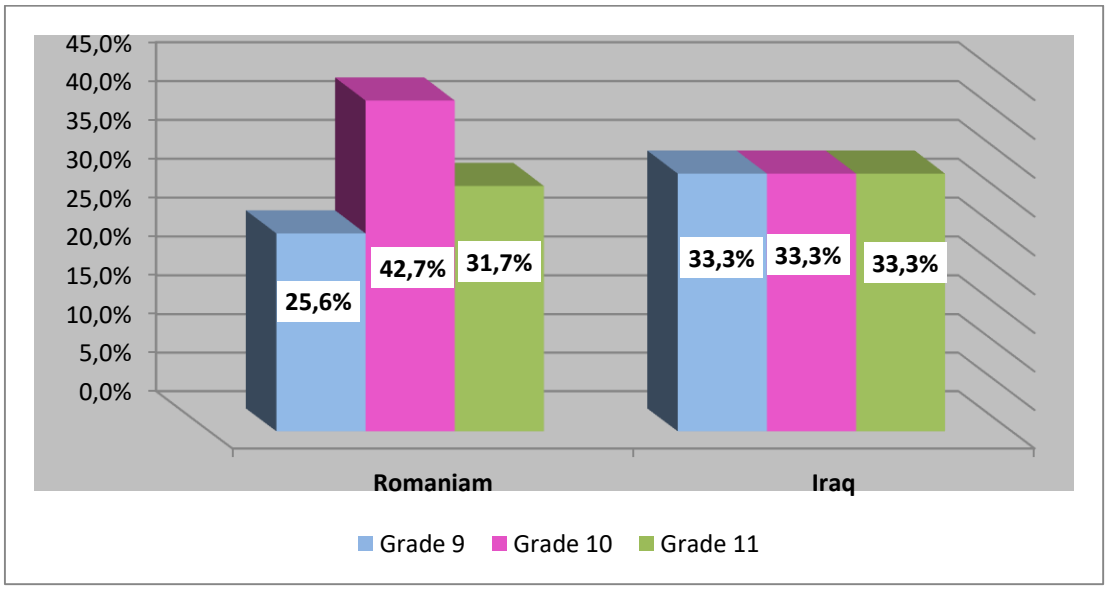

Figure 20. Sample Distribution According to age Variable

Second:.

the sample consisted of (100) Parent in Romanian, (150) Parent in Iraq .The following table describes the Parents' sample distribution according to personal characteristics based on some variables of a demographical nature.

Table 5. Parents sample distribution according to demographic variables

		Romanian		Iraq	
		Frequency	**Percent**	**Frequency**	**Percent**
Do you have a son or a	My daughter	40	40.0	60	40.0
	My son	60	60.0	90	60.0
	Total	100	100.0	150	100.0

daughter at this school?		Romanian		Iraq	
		Frequency	**Percent**	**Frequency**	**Percent**
Age	30 to 39	20	20.0	43	28.7
	40 to 49	43	43.0	67	44.7
	50 to 59	27	27.0	28	18.6
	60 to 69	10	10.0	12	8.0
	Total	100	100.0	150	100.0
educational status	Doctoral degree	2	2.0	18	12.0
	Master degree	9	9.0	22	14.7
	Bachelor(university) degree	51	51.0	40	26.6
	Vocational school graduate	5	5.0	27	18.0
	High school graduate	33	33.0	43	28.7
	Total	100	100.0	150	100.0
Gender	Female	35	35.0	60	40.0
	Male	65	65.0	90	60.0
	Total	100	100.0	150	100.0
marital status	Married	75	75.0	130	86.7
	Divorced	0	0	3	2.0
	Separated	15	15.0	7	4.6
	Widowed	10	10.0	10	6.7
	Total	100	100.0	150	100.0

Table (5) and figure 21 show that:

Romanian: The Romania sample's largest portion of Parents' distribution based on the son or a daughter at this school variable was (60.0%) for answer (My son), while the lowest percentage (40.0%) was for answer (My daughter).

Iraq: Regarding the Iraqi sample, based on the variable of the son or a daughter at this school, the answer (My son) got (60.0%) as the largest portion of the Parents' distribution of in Iraq, and for the answer (My daughter), (40.0%) as the lowest percentage.

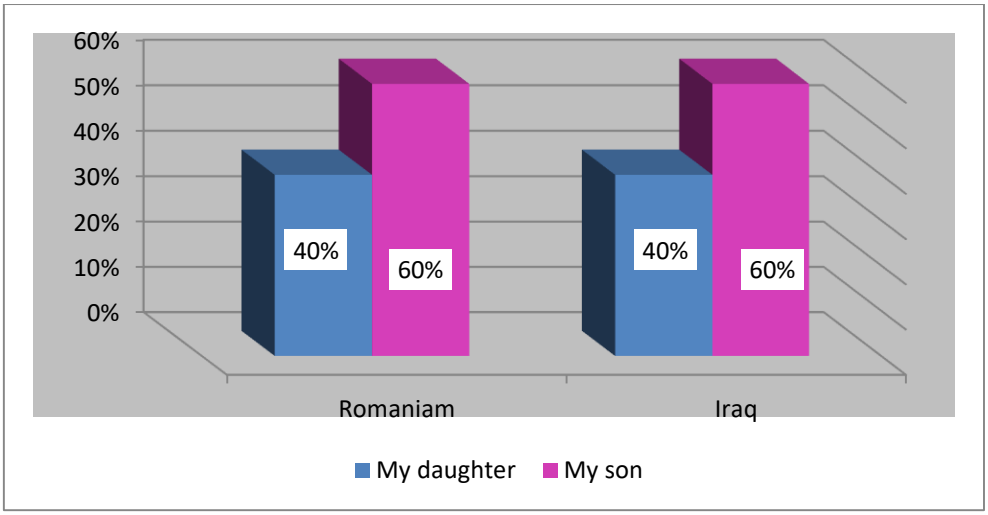

Figure 21. Sample Distribution According to son or a daughter

Table (5) and figure 22 show that:

Romanian: Based on the age variable, with the largest portion of (43.0%) for the distribution of Parents in Romania for the age groups of (40 to 49), and (10.0%) as the lowest percentage based on age groups (60 to 69). **Iraq**: with (44.7%) as the highest percentage of Parents' distribution in Iraq based on the age variable for groups (40 to 49), and with (8.0%) as the lowest percentage for age group (60 to 69).

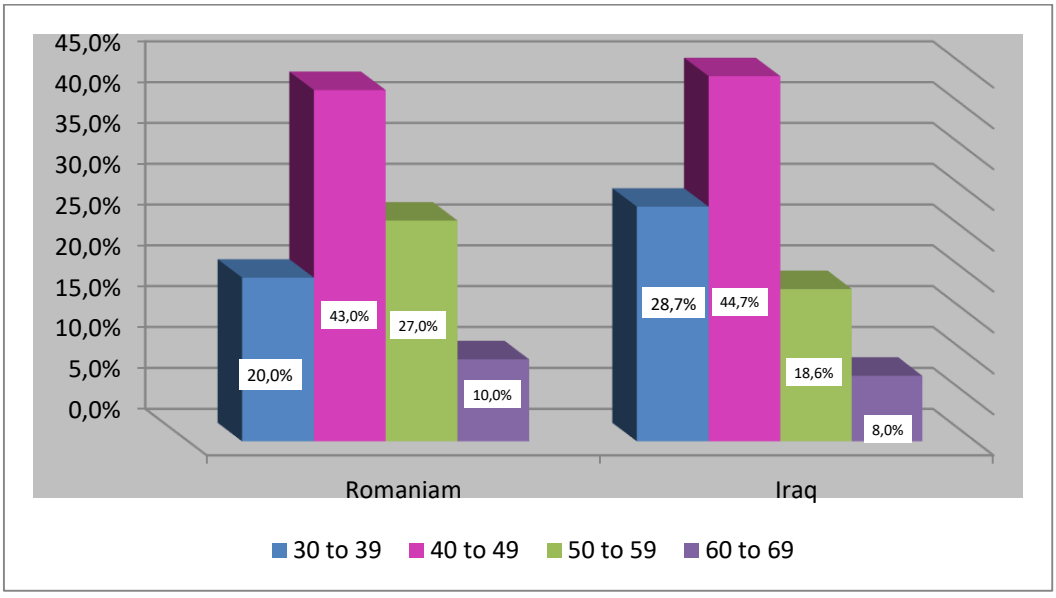

Figure 22. Sample Distribution According to age

Table (5) and figure 23 show that:

Romanian: With (51.0%) as the largest portion of the distribution of Romanian Parents based on the variable of the educational status (Bachelor (university) degree), (2.0%) as the lowest percentage based on the educational status (Doctoral degree).

Iraq: While for the Iraqi sample, (28.7%) was the largest portion of the distribution of the Iraq Parents based on the variable of the educational status (High school graduate), and (12.0%) as the lowest percentage for educational status (Doctoral degree).

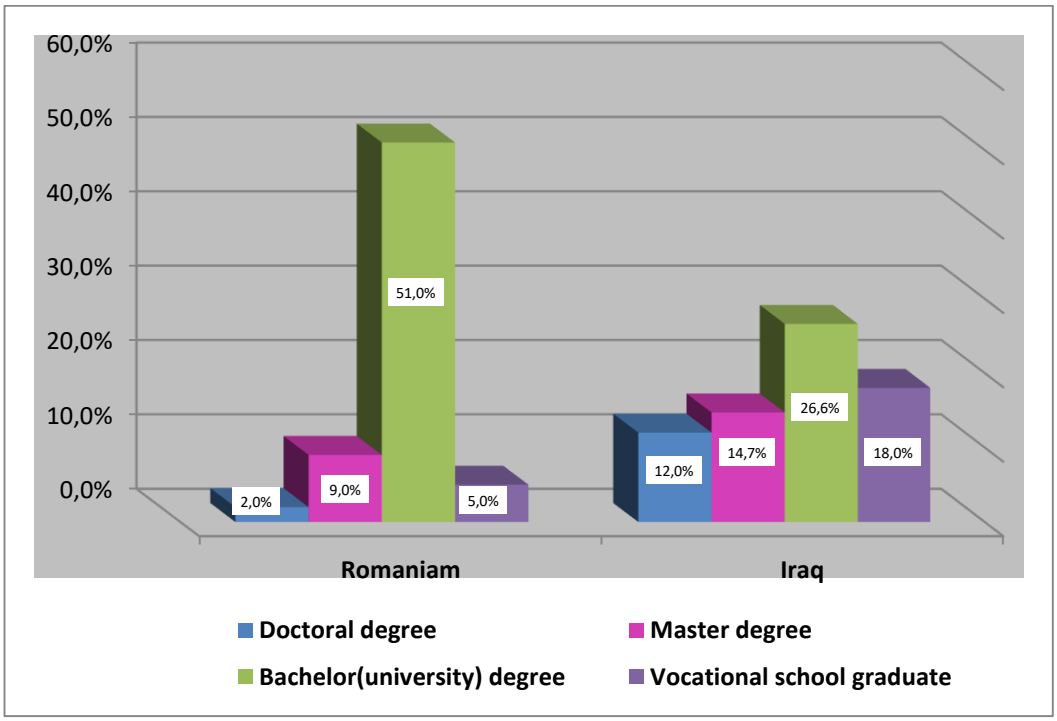

Figure 23. Sample Distribution According to educational status

Table (5) and figure 24 show that:

Romanian: with 35.0 % of females participation rate, and 65.0 % for males.

Iraq: with 40.0 % of females participation rate, and 60.0 % for males.

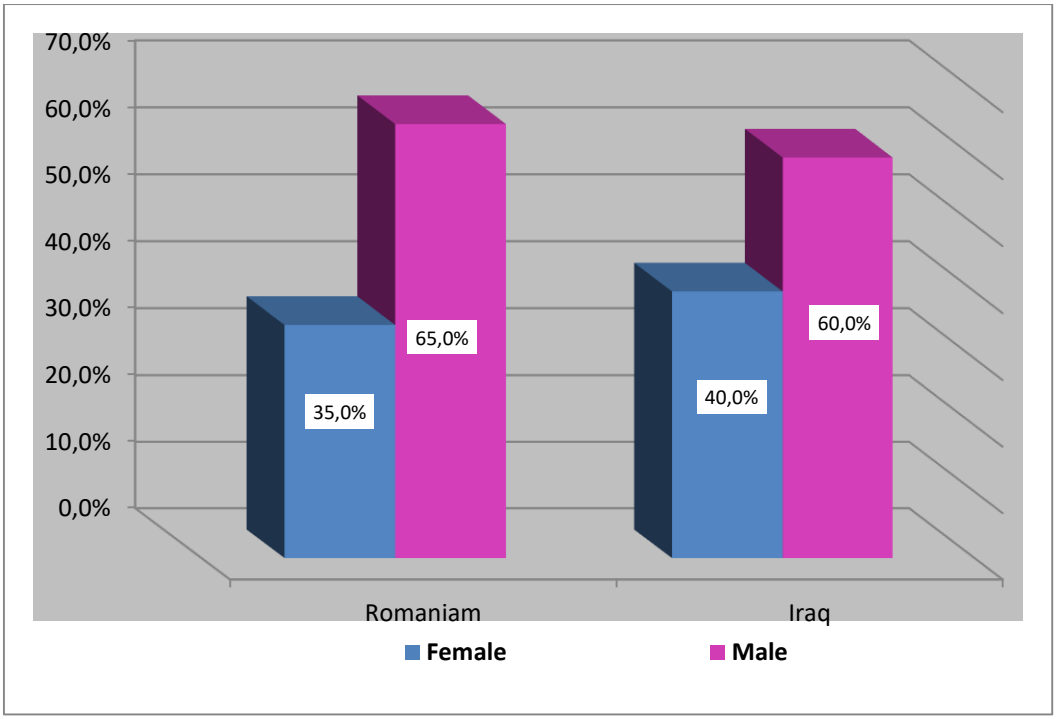

Figure 24. Sample Distribution According to gender

Table (5) and figure 25 show that:

Romanian: Regarding the marital status' variable, (75.0%) is the portion that the Romanian sample got of the distribution of Parents for marital status (Married), and the smallest portion (0.00%) for the status (Divorced).

Iraq: The biggest portion (86.7%)of the distribution of the Iraqi parents based on the marital status' variable (Married), while (12.0%) was its smallest portion marital status for (Divorced).

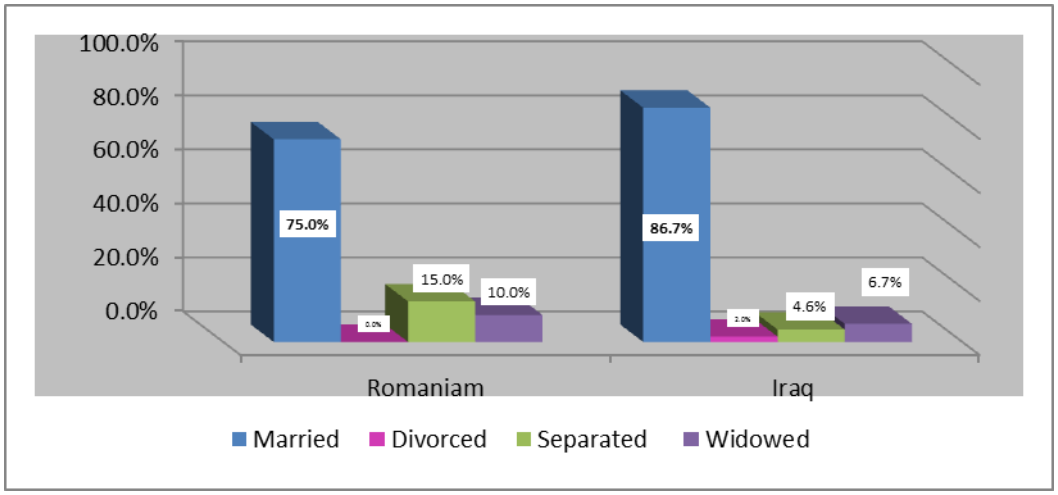

Figure 25. Sample Distribution According to marital status

Third: The selection of teachers' samples was based on personal features, with (140) Romanian teachers, and (200) Iraqi teachers. Based on such variables of demographical value, this table shows the distribution of these samples.

Table 6. Teachers sample distribution according to demographic variables

		Romanian		Iraq	
		Frequency	**Percent**	**Frequency**	**Percent**
age	25 to 39	30	21.4	77	38.5
	40 to 49	80	57.2	86	43.0
	50 to 59	30	21.4	37	18.5
	Total	140	100.0	200	100.0
educational status	Doctoral degree	30	21.4	22	11.0
	Master degree	50	35.7	38	19.0
	Bachelor(university) degree	60	42.9	140	70.0
	Total	140	100.0	200	100.0
gender	Female	90	64.3	88	44.0
	Male	50	35.7	112	56.0
	Total	140	100.0	200	100.0

Table (6) and figure 26 show that:

Romanian: The biggest portion (57.2%) of the Romanian teachers based on the age variable for the age group (40 to 49), and (21.4%) as the lowest portion for the age groups of (25 to 39, 50 to 59).

Iraq: The biggest portion of Iraqi teachers (43.0%) based on the age variable for the age group (40 to 49), and the smallest portion (18.5%) was (50 to 59).

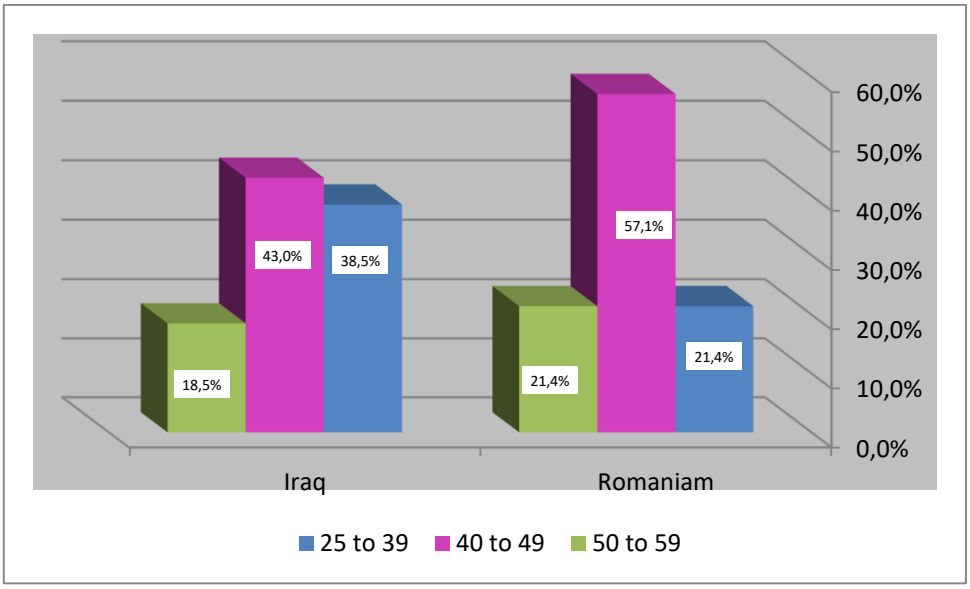

Figure 26. Sample Distribution According to age

Table (6) and figure 27 show that:

Romanian: The biggest portion of the Romanian teachers (42.9%) based on the educational status variable for (degree of Bachelor), and the smallest portion (21.4%) for (PhD degree).

Iraq: The biggest portion of the Iraqi teachers (70.0%) based on the educational status variable for (Bachelor degree), and the smallest portion (11.0%) for (PhD degree).

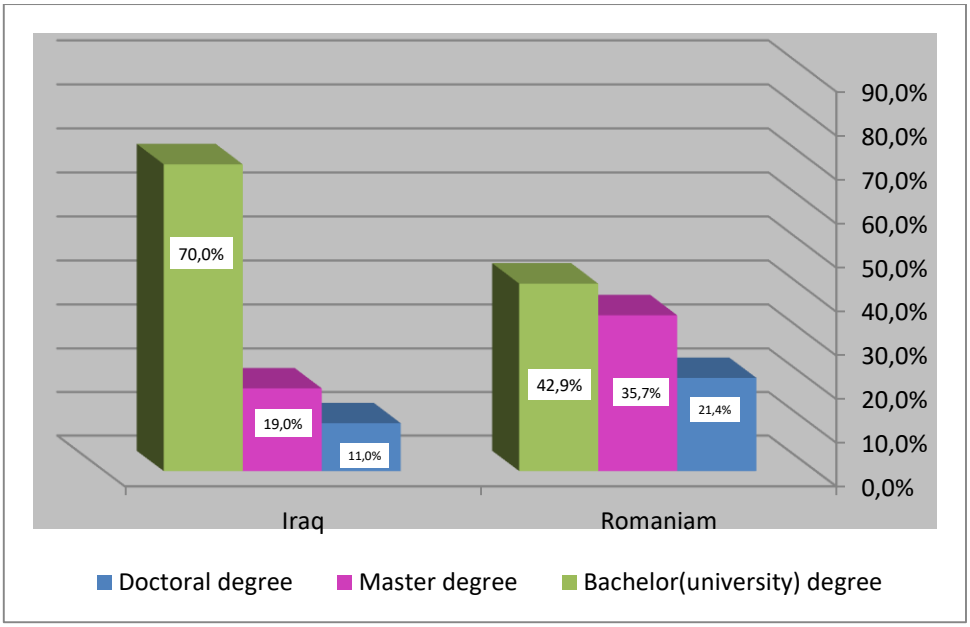

Figure 27. Sample Distribution According to educational status

Table (6) and figure 28 show that:

The Romanian sample: the biggest portion of the samples (64.3 %) are females and only 35.7 % are males.

The Iraqi sample: the biggest portion of the samples (44.4 %) are females, and only (56.0 %) are males.

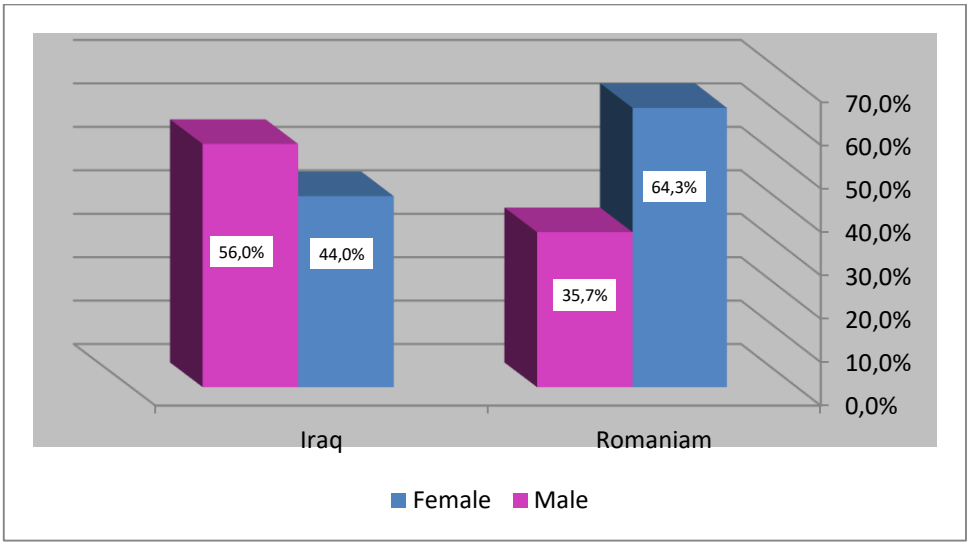

Figure 28. Sample Distribution According to gender

4. Investigating the level of using modern technologies in education

Our aim is to summarize a study regarding the provision of modern techniques in education and their utilization, originally through exploring additional educational institutions in Iraq such as secondary schools, and then we moved one step further with our research into a relatively comparative research between Iraq and Romania, we frequented a number of Iraqi and Romanian educational institutions, and the research was performed through the submission of questionnaires to instructors, learners as well as the parents. There were reactions from school supervisors, instructors, learners and parents.

First: The samples of students consisted were (410) Romanian students, and (600) Iraqi students.

Second: the parents' sample consisted of, (100) Romanian parents, and (150) Iraqi parents.

Third: the teachers' sample consisted of, (140) Romanian teachers, and (200) Iraqi teachers.

6.Data Collection Methods

The necessary details and data for this analysis were collected by using two sources: secondary resources, that included sources such as books and periodicals associated with the analysis subject, and the available online data related to the study's subject, questionnaires that were developed by researcher are its primary sources which were the set of questions associated with the main subject of the analysis.

To find out the selected sample's level of acceptance of the tested dimensions, the analysis implemented the Likert measurement which consists of five levels of

acceptability (1-5), accordingly, where number 5 means [agree] with a very advanced level, 4 [agree] the fact with an advanced level, 3 [agree] with a medium level, 2 [agree] with a low level, and 1 [agree] with a very low level. The following gradation was implemented by the analysis to classify the research's arithmetic mean of the sample members' answers of the members to the questionnaire items:

(A) the arithmetic mean of 1- 2.33 shows a rather low level of acceptance.

(B) the arithmetic mean of 2.34 - 3.66 shows a rather medium level of acceptance.

(C) the arithmetic mean of 3.67-5 shows a rather high level of acceptance.

7. Method of Statistical analysis s

To evaluate the quantitative data gathered from the samples responses several figure testes have been used by the application of SPSS (Statistical Package for the Social Sciences) program. First we have produced illustrative statistics. Then wavelengths, mathematics regular, average, method, distribution, regular difference, standard deviation have been measured. Internal reliability catalog of the study (Alpha-Crombach) has been measured. The Chi-square Analyze has been used on see the connections of the factors. Effect size for the association of factors also measured with Chi-Square Analyze. For the advanced research Factorial research and Regression have been done. Results of the study mostly described in tables, numbers, and digrams.

7.1. Cronbach's Coefficient Alpha Reliability Test

Data Analysis and Interpretation.

The scales were created to be used in our research. The scales were designed to be based on the evaluation of the relevant appropriate theoretical and scientific works, which will provide us with some proof of their content's credibility. This part describes the process of selecting the correct samples to be assessed and tested for their stability and credibility of these measurement. In this study, the consistency of those measures were measured by using Cronbach's coefficient alpha which will based on internal consistency of the samples in each and every scale. The

Acceptability and unacceptability standards of the Cronbach's Alpha coefficient as shown in table no.(nr. 7).

Table 7. Acceptable and unacceptable levels of the Cronbachs' Alpha coefficient

	Alpha coefficient	implied reliability
Below	60	Unacceptable
between	60 - 65	Undesirable
between	65 - 70	Minimally acceptable
between	70 - 80	Respectable
between	80 - 90	very good

As Nunnally (1978) said, scale's reliability is better preferred at 0.70 or more. Nunnally (1978) added that samples with values less than 0.30 to overall correlation can be omitted to enhance the scale's reliability. As a result to this study the Cronbach's coefficient alpha value for scales may vary in values according to the data analysis. This research, will compute Cronbach's coefficient alpha for the measures before data screen, and also after data screen,

Table 8. The stability of the instrument (Cronbach's alpha) for questionnaires

	Cronbach's alpha
Questionnaire for Students	0.82
Questionnaire for Parents	0.83
Questionnaire for teachers	0.81

7.2.Results related to study answers :

7.2.1 Technological teaching techniques' availability at secondary schools in both Iraq and Romania.

We will answer this question by extracting the means and standard deviations of the sample members' responses focusing on elements such as those of the technological teaching techniques' availability at secondary schools:

- **Students:**

Table 9. Means and standard deviations of the responses of the sample (Students) members were extracted from the elements of the availability of teaching techniques in secondary schools

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	My teachers use modern teaching techniques	2.90	0.97	Medium	2.30	1.15	Low
2	My teachers use modern devices at classes	2.93	1.05	Medium	2.21	1.14	Low
3	There are enough modern facilities for education	2.88	1.20	Medium	2.06	1.14	Low
4	We use E-Books, Smart classrooms and Multimedia in education	1.96	1.20	Low	2.30	1.35	Low
5	Most of the teaching techniques used are attractive.	2.74	1.14	Medium	2.26	1.16	Low
6	The curriculum takes into account individual differences among students	2.29	1.22	Low	3.10	1.34	Medium
7	The teachers explain very well how to use modern technological devices.	2.72	1.26	Medium	3.50	1.12	Medium
8	The textbooks are very attractive and include images, shapes, graphs and maps.	3.07	1.19	Medium	3.75	1.14	Low
9	The images or shapes used are closely related to the text.	3.44	1.02	Medium	3.54	1.14	Medium
10	Book's sizes are convenient to use.	3.12	1.19	Medium	3.25	1.30	Medium
Total		2.81	1.09	Medium	2.83	1.12	Medium

*** the means of (5).**

Table (9) shows that the Romanian Students' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (1.96-3.44), and item No. (9) as their highest, which states: " The images or shapes used are closely related to the text ", while the lowest was item No. 4, which reads:" We use E-Books, Smart classrooms and Multimedia in

education"; with the average (2.81) for the whole area, showing a level of technological teaching techniques' availability at Romanian secondary schools.

Table (9) shows that the Iraqi Students' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (2.06-3.75), and item No. (9) as their highest, which states: "The textbooks are very attractive and include images, shapes, graphs and maps ", while the lowest was item No.3, which reads: "There are enough modern facilities for education "; with the average (2.83) for the whole area, showing a level of technological teaching techniques' availability at Iraqi secondary schools.

As we clearly shown earlier, the a convergence of the level of technological teaching techniques' availability at both of the Iraqi and Romanian secondary schools is as shown in, Figure (29):

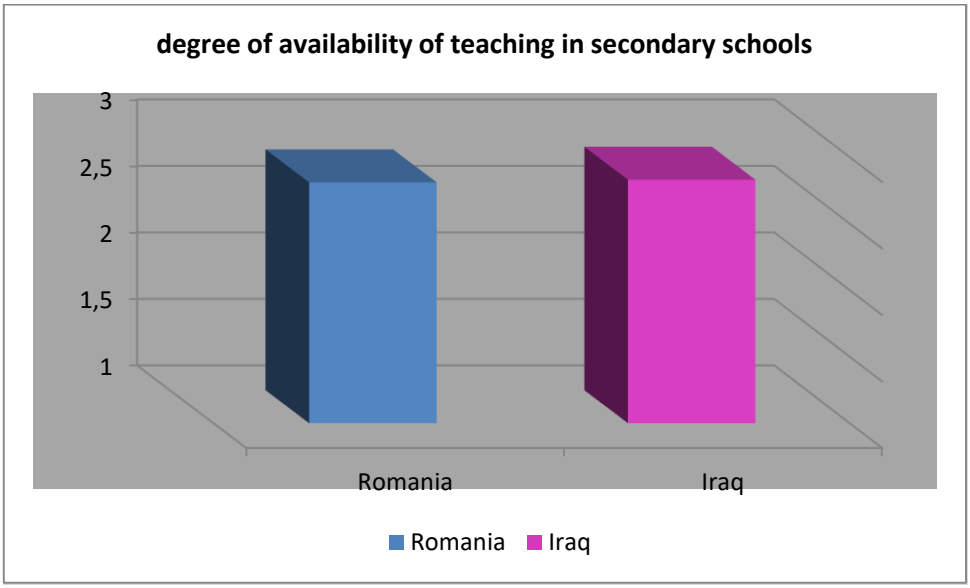

Figure 29. Degree of availability of teaching in secondary schools in Iraq and Romania techniques

Table 10. Means and standard deviations of how do you feel about the use of modern technologies?

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	How do you feel about the use of modern technologies?	3.36	1.18	Medium	4.01	1.04	High
2	How do you interpret your teacher's visit to your home?	3.46	1.12	Medium	3.34	1.31	Medium

*** the means of (5).**

Table (10) clearly declares that the arithmetic means for the Romania (Students) sample ranged between (3.36) with the statement "How do you feel about the use of modern technologies? ". As far as the arithmetic means for the Romania (Students) sample reaches (3.46) as its highest with the statement "How do you interpret your teacher's visit to your home?" Figure (30) shows that:

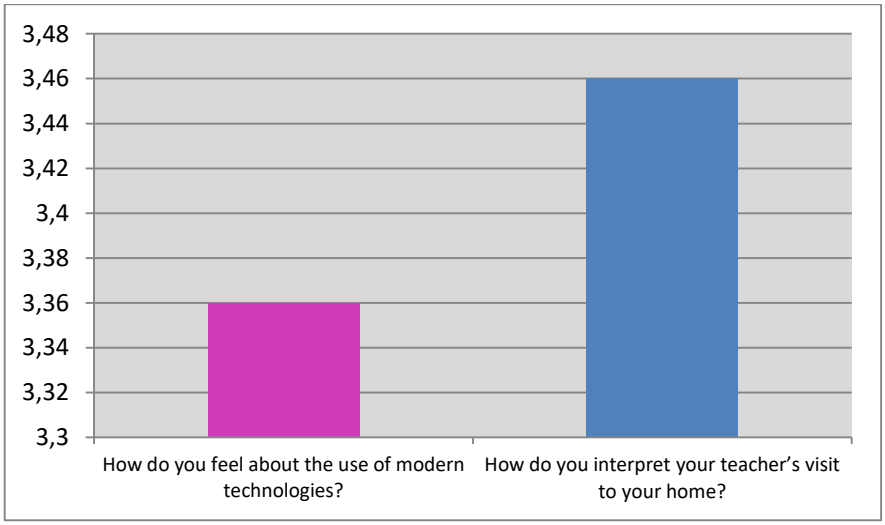

Figure 30. Means of how do you feel about the use of modern technologies?

Table (10) states clearly that the arithmetic means (4.01) of the Iraqi (Students) sample as its highest value for the statement "How do you feel about the use of modern technologies? ", and the Iraqi (Students) sample reached (3.34) as the highest for the statement "How do you interpret your teacher's visit to your home?".

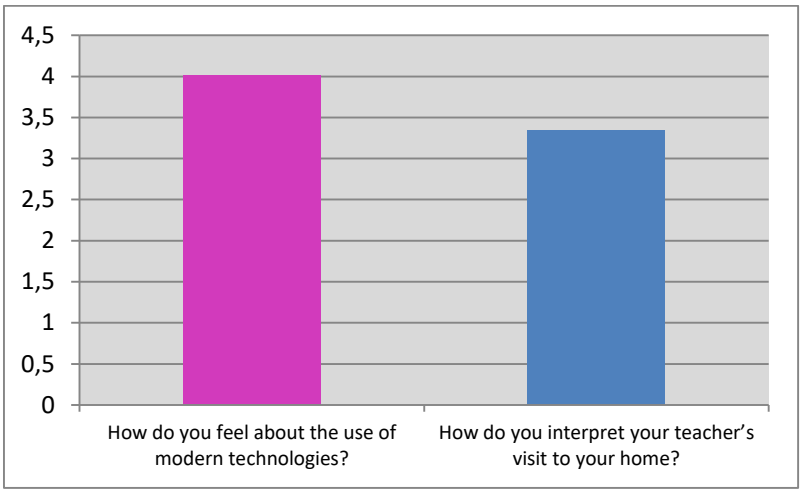

Figure 31. Means of How do you feel about the use of modern technologies? (Iraq)

- **Teachers:**

Table 11. Means and standard deviations of degree of availability of teaching techniques at your secondary schools

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	Computer education and its applications	0.81	0.39	High	0.43	0.50	Medium
2	Education and distance learning	0.29	0.45	Low	0.06	0.24	Low
3	Global Information Network online	0.79	0.41	High	0.20	0.40	Low
4	Multimedia in education	0.71	0.45	High	0.23	0.42	Low
5	satellite channels educational	0.21	0.41	Low	0.41	0.49	Medium
6	E-Book	0.50	0.50	Medium	0.18	0.39	Low
7	The electronic board	0.50	0.50	Medium	0.12	0.33	Low
8	Smart classroom	0.14	0.35	Low	0.06	0.24	Low
9	PowerPoint	0.86	0.35	High	0.22	0.42	Low
10	Scientific laboratories	0.83	0.38	High	0.40	0.49	Medium
	Total	0.56	0.42	Medium	0.23	0.17	Low

*** The means of (1).**

Table (11) shows that the Romanian teachers' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (1.14-0.86), and item No. (9) As their highest, that states: "PowerPoint ", while the lowest was item No.(8), which reads: " Smart classroom "; with the average (0.56) for the whole area, showing a level of technological teaching techniques' availability at Romanian secondary schools.

Table (11) shows that the Iraqi teachers' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (0.06-0.43), and item No. (1) As their highest, which states: "Computer education and its applications ", while the lowest was item No.(2, 8), which reads: :" Education and distance learning, Smart classroom "; with the average (0.56) for the whole area, showing a level of technological teaching techniques' availability at Iraqi secondary schools.

As stated earlier, there is a change of the availability's level of technological teaching techniques at the selected secondary schools in Romania and Iraq, Figure (32) shows that:

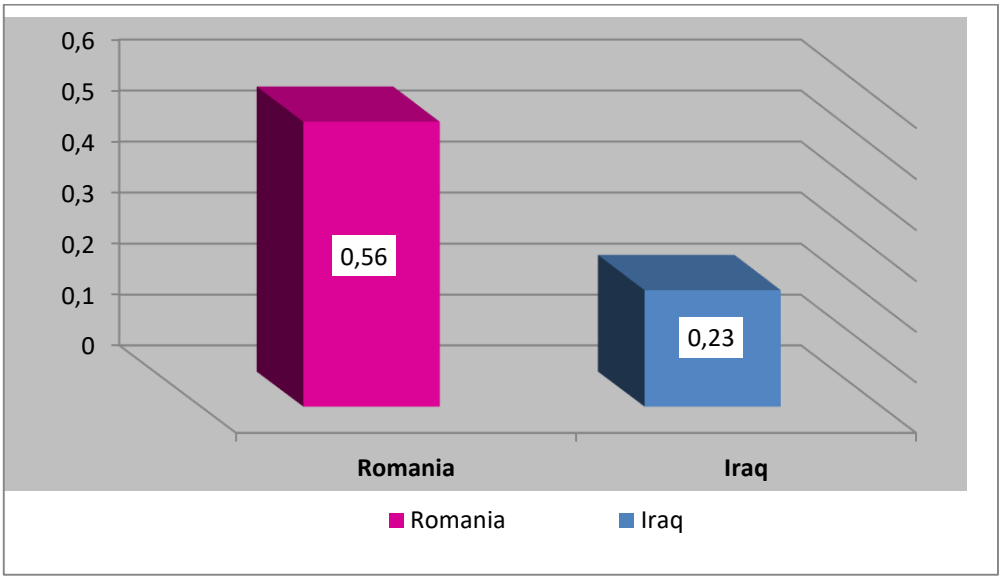

Figure 32. Means of degree of availability of teaching techniques at your secondary schools

- **Parents:**

Table 12. Means and standard deviations of how do you feel about the use of modern technologies?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
Are you satisfied with the degree of availability of teaching techniques at the secondary schools of your children?	3.76	1.16	High	2.56	1.33	Medium

*** The means of (5).**

Table (12) states the, Romanian parents' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (3.76) "Are you satisfied with the degree of availability of teaching techniques at the secondary schools of your children ", and the Iraqi parents' sample arithmetic means regarding their approval of technological teaching techniques availability at their secondary schools ranges between (2.56) "Are you satisfied with the degree of availability of teaching techniques at the secondary schools of your children ". Figure (33) shows that:

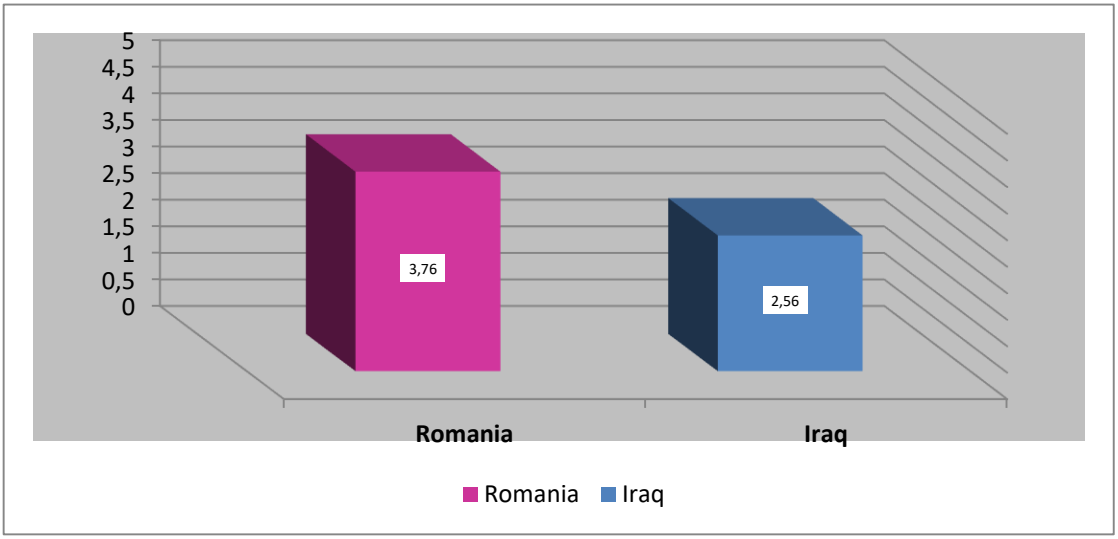

Figure 33. Means and standard deviations of how do you feel about the use of modern technologies?

7.2.2. The modern teaching devices and techniques to be used at the school.

Table 13. Means and standard deviations of how do you feel about the use of modern technologies?

	Romania	Iraq
the modern teaching devices and techniques to be used at the school.	Multimedia in education	Computer education and its applications
	E-Book	Global Information Network online
	The electronic blackboard	Multimedia in education
		E-Book
		The electronic blackboard
		Scientific laboratories

The responses of members of the Romania (parents) sample for the question "What do you like as the modern teaching devices and techniques to be used at the school "As:

(1). E-Book

(2). The electronic blackboard

(3). Multimedia in education

The responses of members of the Iraq (parents) sample for the question "What do you like as the modern teaching devices and techniques to be used at the school "As:

(1). The electronic blackboard

(2). Scientific laboratories

(3). Multimedia in education

(4). E-Book

(5). Computer education and its applications

(6). Global Information Network online

Table 14. Means and standard deviations of how often does your child / do your children make PowerPoint presentation or use modern devices for their homework?

No	Romania			Iraq		
	Mean*	standard deviation	Assessment degree	Mean*	standard deviation	Assessment degree
How often does your child / do your children make PowerPoint presentation or use modern devices for their homework?	3.60	0.92	Medium	2.44	1.14	Medium

*** the means of (5).**

Table (14) states that the Romania (Parents) sample's arithmetic means reached (3.60) for the question "How often does your child / do your children make PowerPoint presentation or use modern devices for their homework?", and (2.44) for the Iraqi (parents) sample for the questions: How often does your child / do your children make PowerPoint presentation or use modern devices for their homework?", Figure (34) shows that:

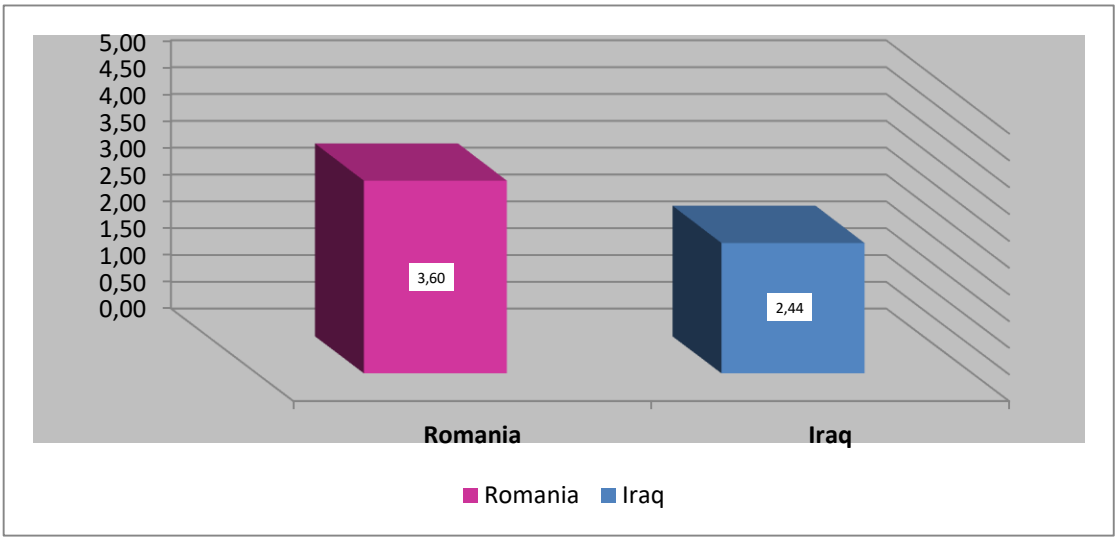

Figure 34. Means of how often does your child / do your children make PowerPoint presentation or use modern devices for their homework?

Table 15. Means and standard deviations of Do you think that teachers at school have an educational technology background?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
Do you think that teachers at school have an educational technology background?	4.29	1.04	High	3.29	1.19	Medium

*** the means of (5).**

Table (15) states that the Romania (Parents) sample's arithmetic means reached (4.29) for the question “Do you think that teachers at school have an educational technology background? ", and (3.29) for the Iraqi (parents) sample for the questions: “Do you think that teachers at school have an educational technology background?” Figure (35) shows that:

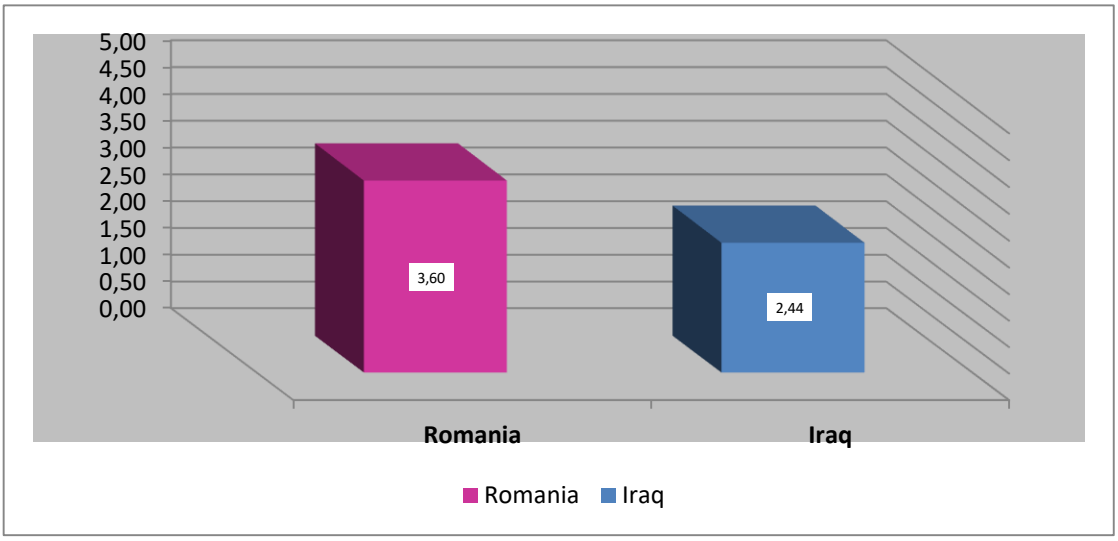

Figure 35. Do you think that teachers at school have an educational technology background?

Table 16. Means and standard deviations of Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)?	3.98	1.18	High	2.66	1.25	Medium

*** the means of (5).**

Table (16) states that the Romania (Parents) sample's arithmetic means reached (3.98) for the question "Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)? ", and (2.66) for the Iraqi (parents) sample for the question "Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)?" Figure (36) shows that:

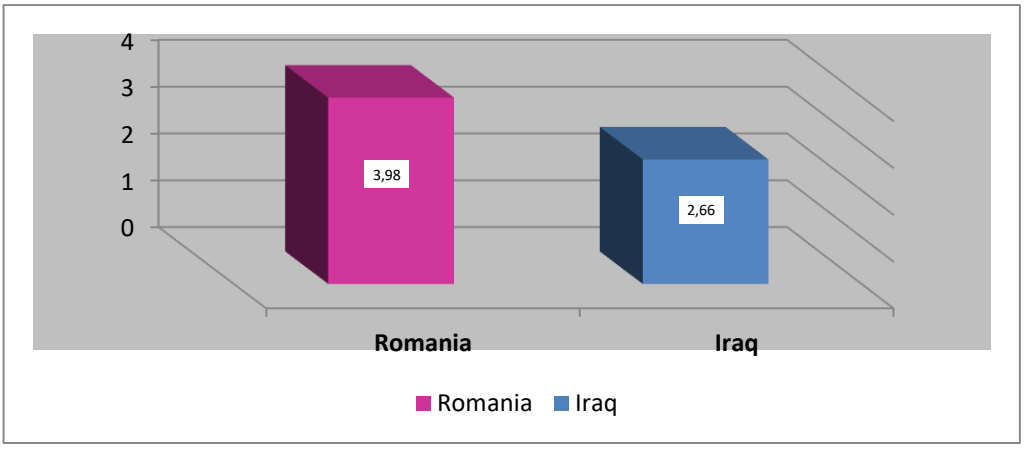

Figure 3. Means of Do Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)?

Table 17. Means and standard deviations of Are there any teaching techniques used in the teaching that you think are attractive to students?

No	Romania			Iraq		
	Mean*	standard deviation	Assessment degree	Mean*	standard deviation	Assessment degree
Are there any teaching techniques used in the teaching that you think are attractive to students?	4.38	0.92	High	2.80	1.28	Medium

*** the means of (5).**

Table (17) states that the Romania (Parents) sample's arithmetic means reached (4.38) for the question "Are there any teaching techniques used in the teaching that you think are attractive to students?" and (2.80) for the Iraqi (parents) sample for the question " Are there any teaching techniques used in the teaching that you think are attractive to students?" Figure (37) shows that:

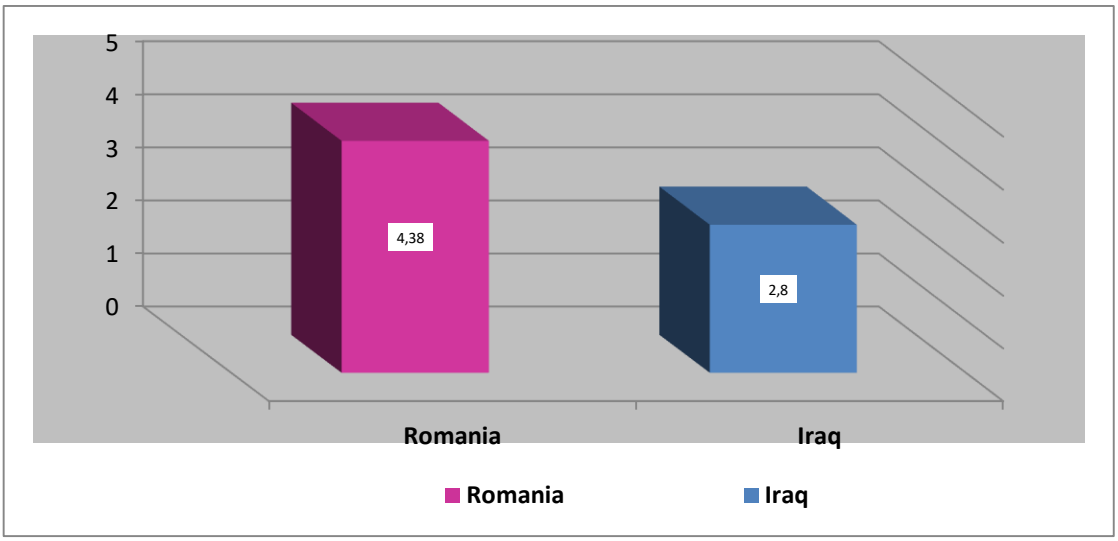

Figure 37. Means of Are there any teaching techniques used in the teaching that you think are attractive to students?

Table 18. Means and standard deviations of Do you think that your children are sufficiently informed about the use of internet and computers by the school?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
Do you think that your children are sufficiently informed about the use of internet and computers by the is school?	4.17	1.01	High	2.78	1.29	Medium

*** The means of (5).**

Table (18) states that the Romania (Parents) sample's arithmetic means reached (4.17) for the question “Do you think that your children are sufficiently informed about the use of internet and computers by the school?", and (2.78) for the Iraqi (parents) sample for the question “Do you think that your children are sufficiently informed about the use of internet and computers by the school?”. Figure (38) shows that:

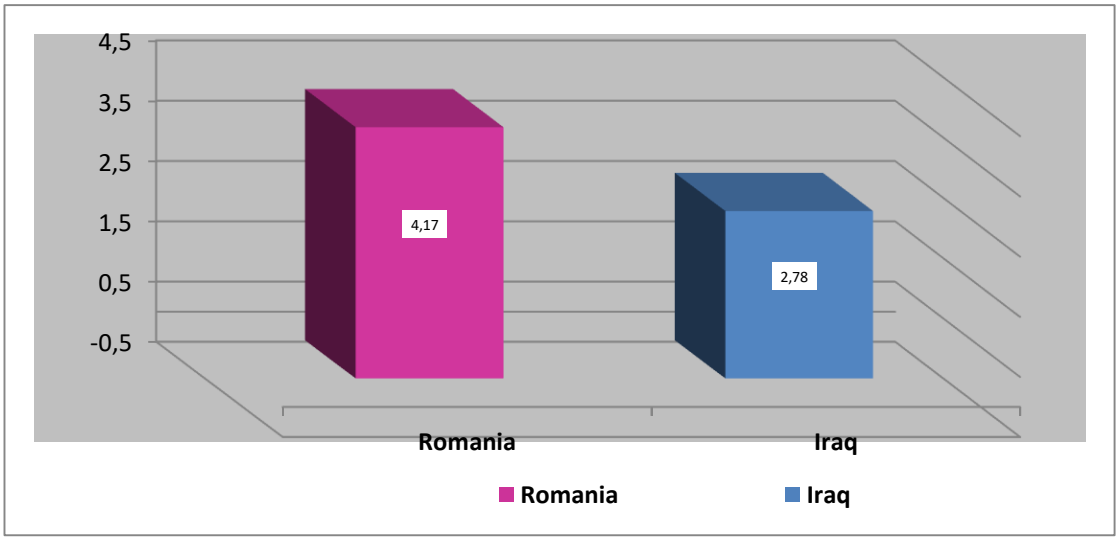

Figure 38. Means of Do you think that your children are sufficiently informed about the use of internet and computers by the school?

Table 19. Means and standard deviations of Who informs you about your daughter's/son's achievements and behavior?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
a) My daughter/son	3.92	1.16	High	2.62	1.08	Medium
b) The teacher	4.34	0.95	High	3.24	1.23	Medium
c) The school website	4.13	0.92	High	1.74	1.11	Medium

*** the means of (5).**

Table (19) states that the Romanian parents' sample arithmetic means regarding their approval of applying the degree of informs you about your daughter's/son's achievements and behavior at their secondary schools ranges between (3.92-4.34), and item No.(a) As their smallest, which states: " My daughter/son ".

Table (19) states that the Iraqi parents' sample arithmetic means regarding their approval of practicing the degree of informs you about your daughter's/son's achievements and behavior at their secondary schools ranges between (1.74-3.24), and item No.(b) which states: "read the teachers", and (c) As their smallest, which states: " school's website ". Figure (39) shows that:

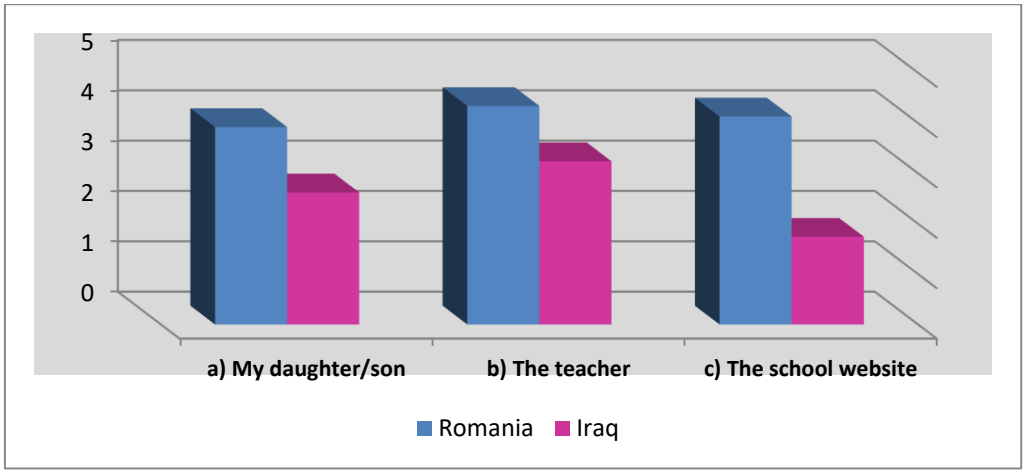

Figure 39. Means of Do you think that your children are sufficiently informed about the use of internet and computers by the school?

Table 20. Means and standard deviations of Would you encourage the use of eBooks at school?

No	Romania			Iraq		
	Mean*	standard deviation	Assessment degree	Mean*	standard deviation	Assessment degree
Would you encourage the use of eBooks at school?	3.50	1.37	Medium	3.38	1.25	Medium

*** the means of (5).**

Table (20) states that the Romania (Parents) sample's arithmetic means reached (3.50) for the question: “Would you encourage the use of eBooks at school? ", and (3.38) for the Iraqi (parents) sample for the question “Would you encourage the use of eBooks at school?". Figure (40) shows that:

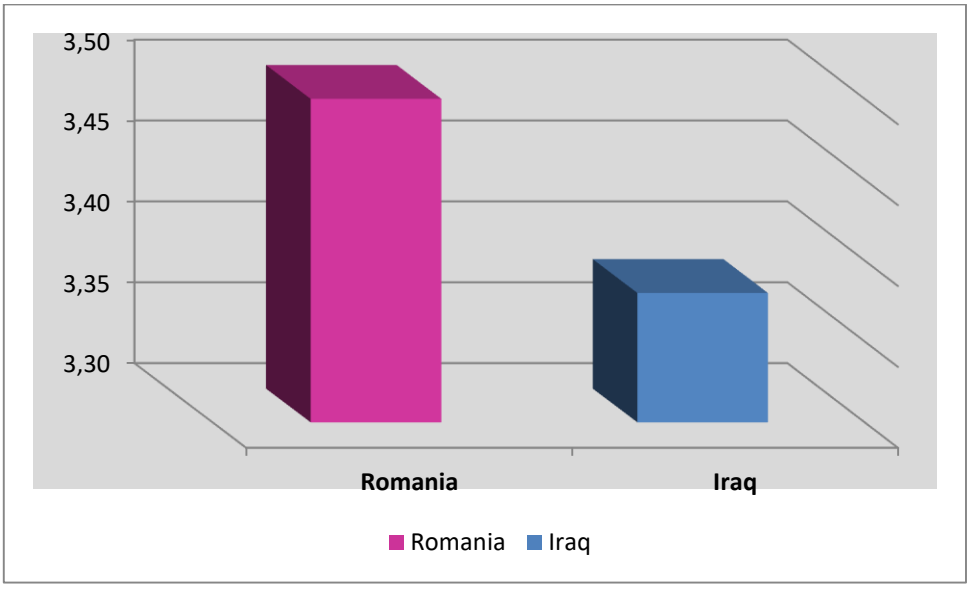

Figure 40. Means of Would you encourage the use of eBooks at school

Table 21. Frequency and percentage of Would you like the teacher of your daughter/son to use more modern educational techniques and technological devices at classes?

	Romania		Iraq	
	Frequency	**percentage**	**Frequency**	**percentage**
Yes, I would	97	97.0	105	70.0
No, I wouldn't	3	3.0	45	30.0

Table (21) and figure 41 show that:

Romanian: Romanian Parents' largest percentage answered the question: ***Would you like the teacher of your daughter/son to use more modern educational techniques and technological devices at classes?*** (97.0%) of them answered with the answer (Yes, I would), and (3.00%) of them answered (No, I wouldn't).

Iraq: Iraqi parents' largest percentage of answered the question: ***Would you like the teacher of your daughter/son to use more modern educational techniques and technological devices at classes?*** (70%) of them answered with the answer (Yes, I would), and (30%) of them answered (No, I wouldn't). Figure (41).

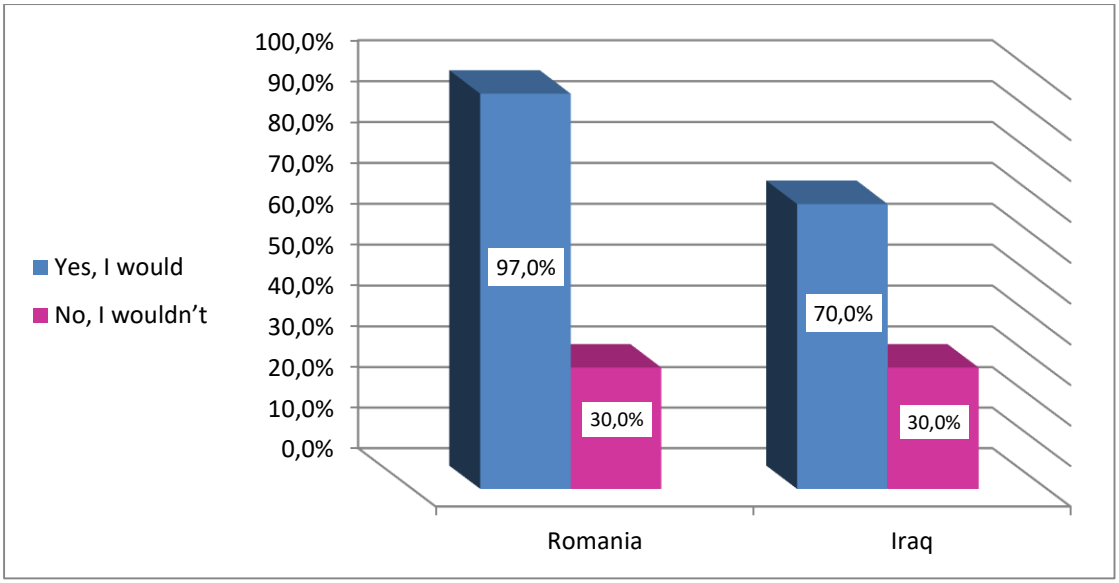

Figure 41. Percentage of Would you like the teacher of your daughter/son to use more modern educational techniques and technological devices at classes?

Table 22. Means and standard deviations of How useful do you think it is for children to develop digital competences?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
How useful do you think it is for children to develop digital competences?	4.64	0.66	High	3.52	1.26	Medium

*** the means of (5).**

Table (22) states that the Romania (Parents) sample's arithmetic means reached (4.64) for the question "How useful do you think it is for children to develop digital competences? ", and (3.52) for the Iraqi (parents) sample for the question "How useful do you think it is for children to develop digital competences?". Figure (42) shows that:

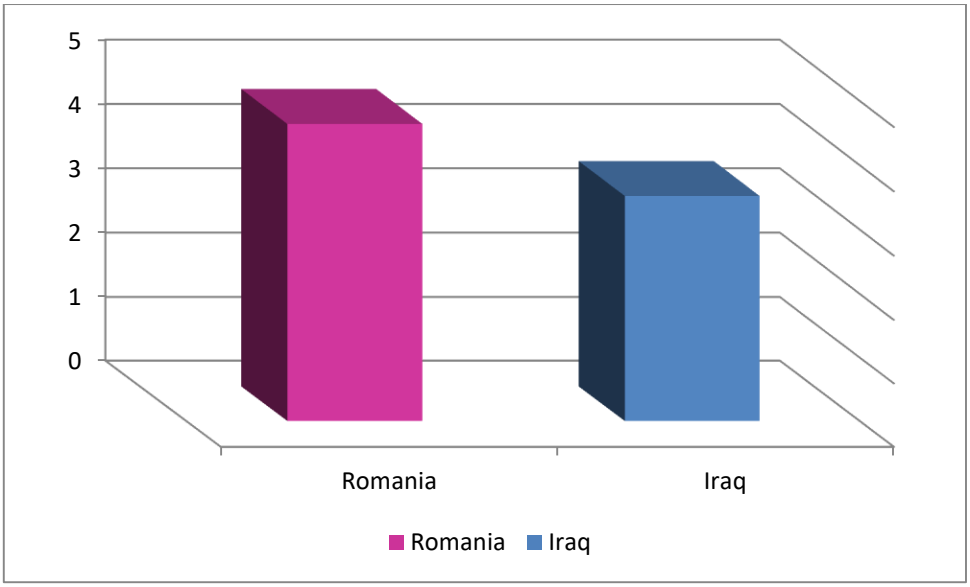

Figure 42. Means of How useful do you think it is for children to develop digital competences

Table 23. Means and standard deviations of Do you think your daughter/son is satisfied with her/his school?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
Do you think your daughter/son is satisfied with her/his school?	4.39	0.90	High	3.14	1.29	Medium

*** the means of (5).**

Table (23) states that the Romania (Parents) sample's arithmetic means reached (4.39) for the question “Do you think your daughter/son is satisfied with her/his school? ", and (3.14) for the Iraqi (parents) sample for the question "Are you satisfied with the degree of "Do you think your daughter/son is satisfied with her/his school?”, Figure (43) shows that:

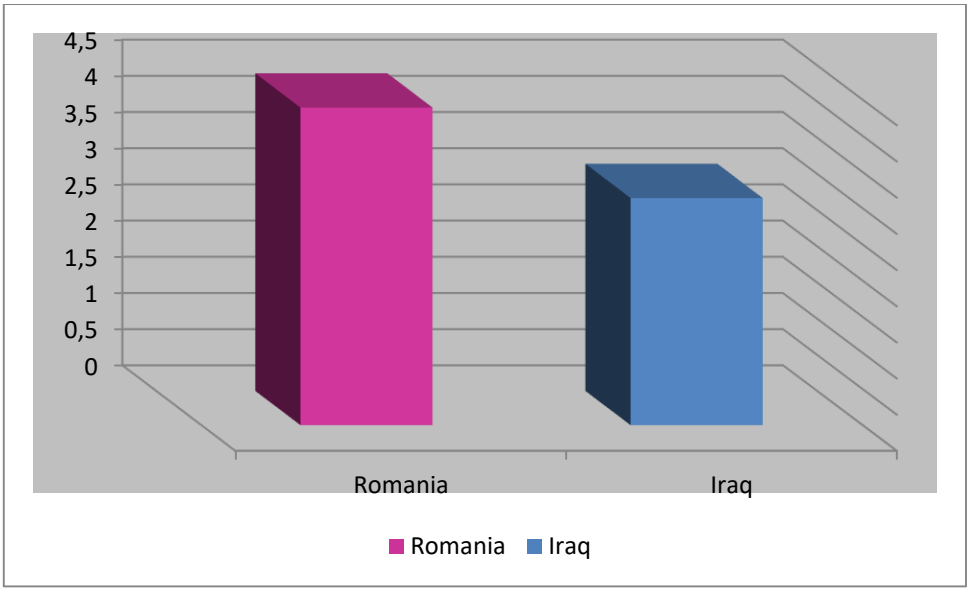

Figure 43. Means of Do you think your daughter/son is satisfied with her/his school?

Table 24. Means and standard deviations of How would you describe the laboratories at your children's school in terms of adequacy?

No	Romania			Iraq		
	Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
How would you describe the laboratories at your children's school in terms of adequacy?	4.33	0.97	High	2.42	1.14	Medium

*** the means of (5).**

Table (24) states that the Romania (Parents) sample's arithmetic means reached (4.33) for the question "How would you describe the laboratories at your children's school in terms of adequacy?", and (2.42) for the Iraqi (parents) sample for the question "How would you describe the laboratories at your children's school in terms of adequacy?", Figure (44) shows that:

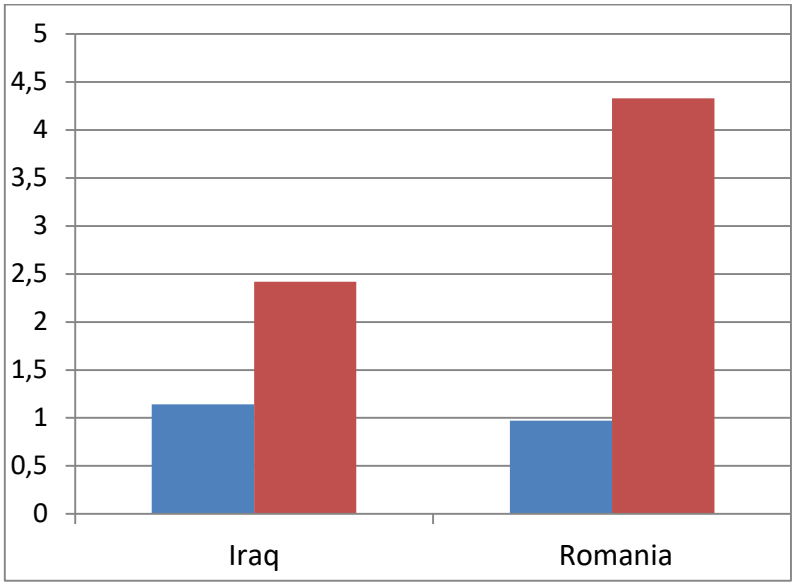

Figure 44. Means and standard deviations of How would you describe the laboratories at your children's school in terms of adequacy?

Table 25. Frequency and percentage of Do you think a female teacher or a male teacher would have a better technological competence in order to teach daughter…../son……?

	Romania		Iraq	
	Frequency	**percentage**	**Frequency**	**percentage**
Female teacher	2	2.0	30	20.0
Male teacher	4	4.0	92	61.3
No difference	94	94.0	28	18.7

table (25) and figure 44 show that:

Romania : Romanian Parents' largest percentage answered the question: ***Do you think a female teacher or a male teacher would have a better technological competence in order to teach daughter…../son……?*** (94.0%) of them answered with the answer (No difference), and (2.0%) of them answered (Female teacher).

Iraq: Iraqi Parents' largest percentage of answered the question: ***Do you think a female teacher or a male teacher would have a better technological competence in order to teach daughter…../son……?*** (61.3%) of them answered with the answer (Male teacher), and (18,7%) of them answered (No difference). Figure (45) shows that:

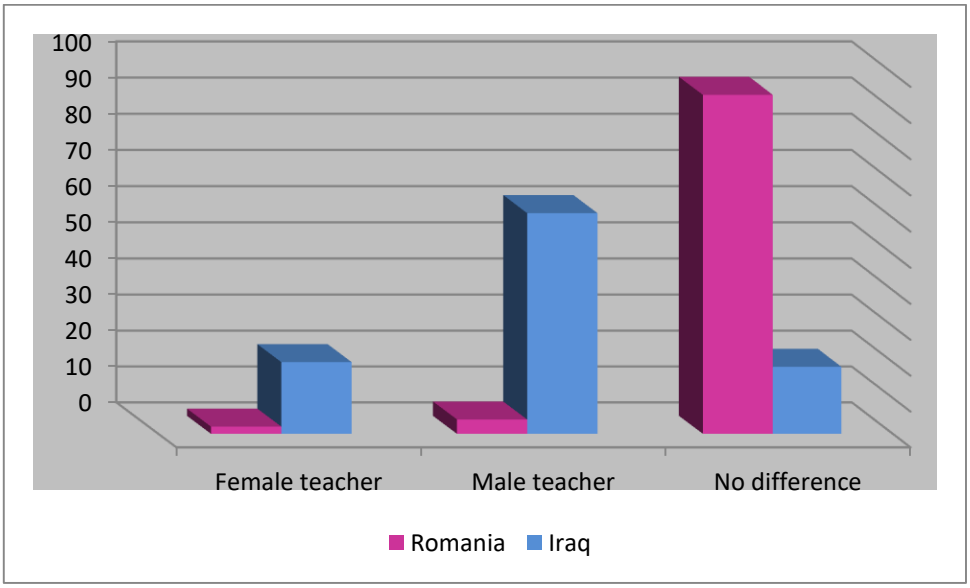

Figure 45. Percentage of Do you think a female teacher or a male teacher would have a better technological competence in order to teach daughter…../son……?

Table 26. Frequency and percentage of One of the difficulties at the school of your son/ daughter is the lack of encouragement from the school administration to the use of educational techniques?

	Romania		Iraq	
	Frequency	**percentage**	**Frequency**	**percentage**
yes	98	98.0	45	30.0
no	2	2.0	105	70.0

table (26) and figure (46) show that:

Romania: Romanian Parents' largest percentage answered the question: ***One of the difficulties at the school of your son/ daughter is the lack of encouragement from the school administration to the use of educational techniques?*** (98.0%) of them answered with the answer (yes), and (2.0%) of them answered (no).

Iraq: Iraqi Parents' largest portion of answered the question: ***One of the difficulties at the school of your son/ daughter is the lack of encouragement from the school administration to the use of educational techniques?*** (70.0%) of them answered with the answer (No), and (30.0%) of them answered (yes). Figure (46) shows that:

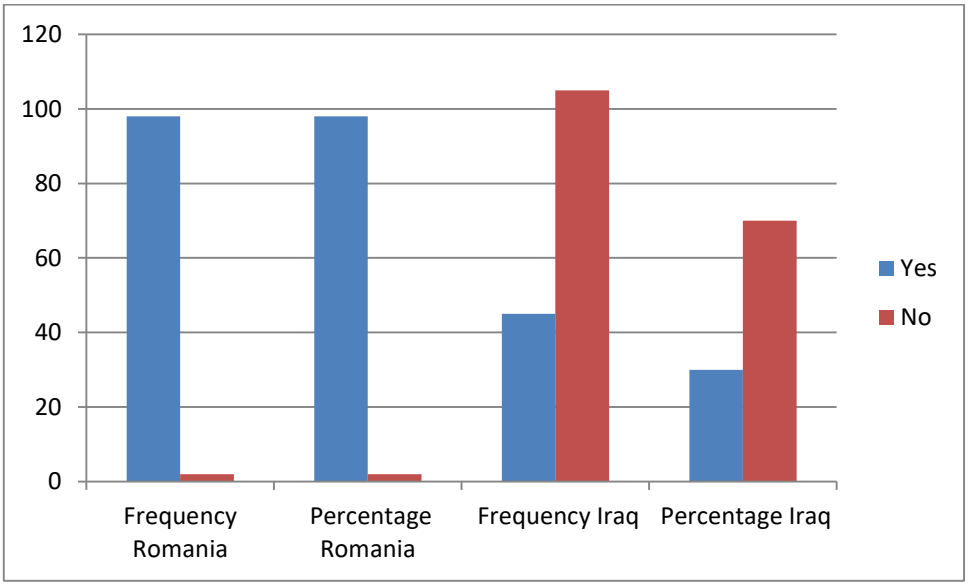

Figure 46. Frequency and percentage of One of the difficulties at the school of your son/ daughter is the lack of encouragement from the school administration to the use of educational techniques?

7.2.3. The degree of usage of teaching techniques at secondary schools in Iraq and Romania.

The answer of such question, the means and standard deviations of the responses of the sample members were based on the degree of technological teaching techniques usage at high schools:

Table 27. Means and standard deviations of degree of usage of teaching techniques at your secondary schools

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	Computer education and its applications	3.37	1.27	Medium	2.00	1.04	Low
2	Education and distance learning	2.20	1.33	Low	1.33	0.75	Low
3	Global Information Network online	3.47	1.18	Medium	1.60	0.96	Low
4	Multimedia in education	3.19	1.42	Medium	1.79	0.89	Low
5	satellite channels educational	2.16	1.25	Low	1.80	0.99	Low
6	E-Book	2.51	1.30	Medium	1.51	1.01	Low
7	The electronic board	2.74	1.42	Medium	1.34	0.86	Low
8	Smart classrooms	2.18	1.36	Low	1.38	0.95	Low
9	PowerPoint	3.87	1.08	High	1.49	0.83	Low
10	Scientific laboratories	3.56	1.42	Medium	1.98	0.99	Low
Total		2.93	0.83	Medium	1.62	0.63	Low

*** the means of (5).**

Table (27) shows that the Romanian Teachers' sample arithmetic means regarding their approval of technological teaching techniques usage at their secondary schools in Romania ranges between (2.16-3.87), and item No.(9) As their highest, which states: "PowerPoint ", and item No.(5) As their lowest with (2.93), that states: :"satellite channels educational " with the overall percentage as a medium.

Table (27) states that the Iraqi Teachers' sample arithmetic means regarding their approval of technological teaching techniques usage at their secondary schools in Iraq ranges between (1.33-2.00), and item No.(1) As their highest, which states: "Computer education and its applications ", and item No.(2) As their lowest (1.62), which states: : :" Education and distance learning " with the overall percentage as a Low.

This shows a difference between level of technological teaching techniques usage at secondary schools in Iraq and Romania. Figure (46) shows that:

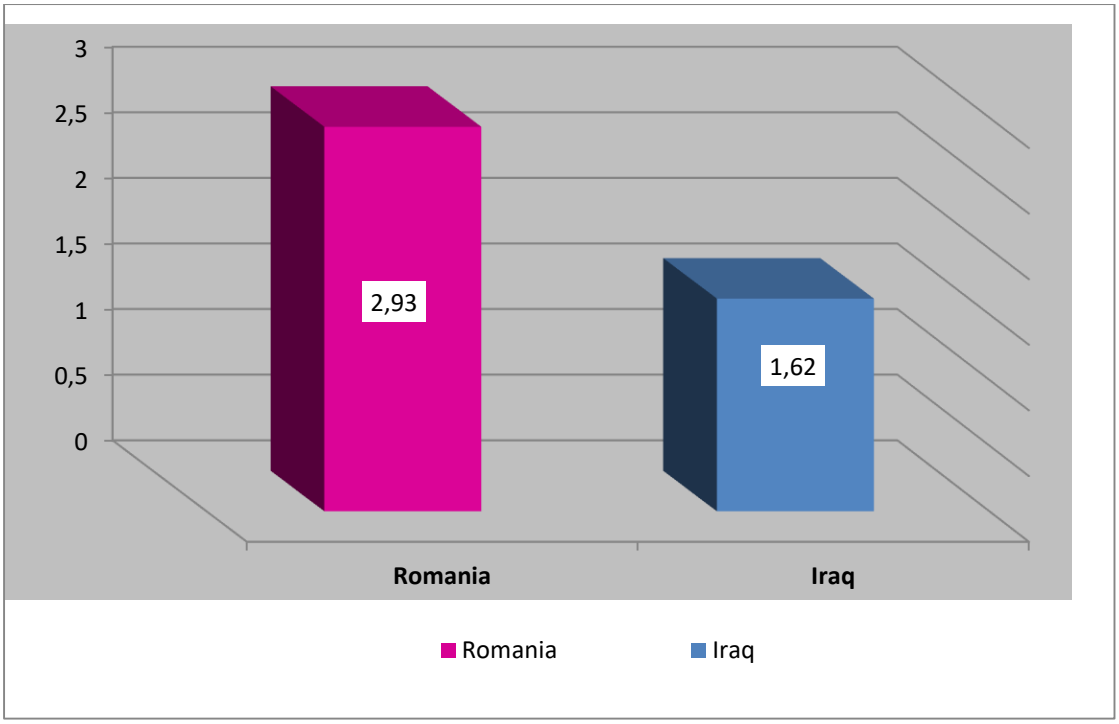

Figure 47. Means of degree of usage of teaching techniques at your secondary schools

7.2.4. The factors which help in the use of educational techniques in secondary schools.

this question can only be answered as, the sample members' the means and standard deviations were extracted from the elements of factors which help in the use of educational techniques in secondary schools:

Table 28. Means and standard deviations of factors which help in the use of educational techniques in secondary schools

No		Romania			Iraq		
		mean	standard deviation	Assessment degree	mean	standard deviation	Assessment degree
1	The adequacy of the number of educational techniques at schools for the needs of teachers.	3.10	1.05	Medium	2.89	1.08	Medium
2	The appropriateness of educational techniques for the	2.96	1.11	Medium	3.18	1.18	Medium

No		Romania			Iraq		
		mean	**standard deviation**	**Assessment degree**	**mean**	**standard deviation**	**Assessment degree**
	physical environment of the classroom which encourages the use of educational techniques.						
3	The appropriateness and validity of certain educational techniques and devices.	3.18	1.01	Medium	2.94	1.05	Medium
4	Most of the teaching techniques used in teaching are attractive to students.	3.13	1.11	Medium	2.86	1.01	Medium
5	The appropriateness of the educational techniques with the curriculum and its objectives	3.20	0.95	Medium	3.10	1.22	Medium
6	The presence of special rooms and laboratories at the school for the use of modern educational techniques	3.23	1.20	Medium	3.09	1.08	Medium
7	Provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)	3.26	1.23	Medium	3.02	1.13	Medium
Total		3.15	1.03	Medium	3.01	0.61	Medium

*** the means of (5).**

Table (28) states that, this sample's (-Teachers)arithmetic means acceptance of factors which help in the use of educational techniques in secondary schools in Romania ranged (2.96-3.26) the highest of was item No. (7), which reads: " Provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)", but item No. 2 was its lowest in value, which reads:" The appropriateness of educational techniques for the physical environment of the classroom which encourages the use of educational techniques "; the collective percentage of this part in total was (3.15) with the assessment degree as medium, which shows that the level of factors which help in the use of educational techniques in secondary schools in Romania.

Table (28) states that the (-Teachers)sample's arithmetic means for the acceptance of factors which help in the use of educational techniques in secondary schools in Iraq ranged (2.86-3.18) the highest of was item No. (2), which reads: " The

appropriateness of educational techniques for the physical environment of the classroom which encourages the use of educational techniques ", but item No. 4 was their lowest, which reads:" Most of the teaching techniques used in teaching are attractive to students "; the total percentage of this part was (2.86) with a degree of assessment as medium, which shows that the level of factors which help in the use of educational techniques in secondary schools in Iraq.

As shown above, there is a convergence of the degree of factors which help in the use of educational techniques in secondary schools, Figure (47) shows that:

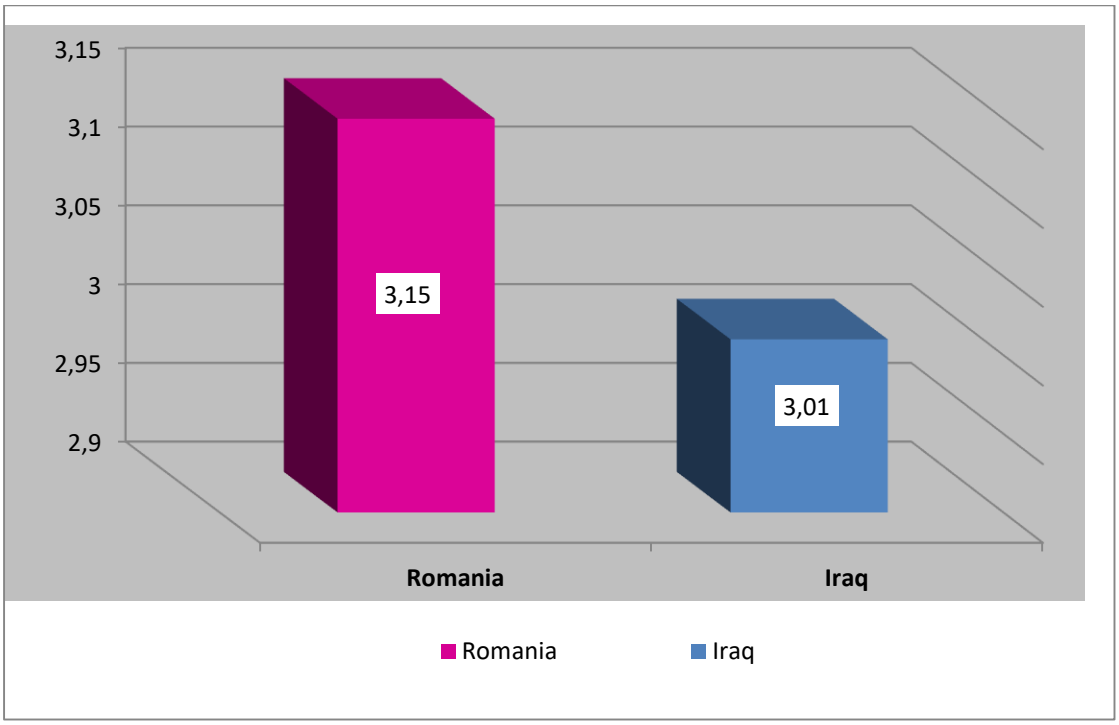

Figure 48. Means of factors which help in the use of educational techniques in secondary schools

7.2.5. The difficulties facing the use of educational techniques in secondary schools.

this question can only be answered as, the means and standard deviations of difficulties facing the use of educational techniques in secondary schools:

Table 29. Means and standard deviations of the difficulties facing the use of educational techniques in secondary schools

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	The degree of difficulty of keeping a record of the kinds of educational techniques you usually use?	3.07	1.33	Medium	3.39	1.09	Medium
2	The difficulties of accepting learning with the help of teaching techniques because of the damage it cause on the learning nature of humanity that distinguishes it?	3.34	1.26	Medium	3.28	0.91	Medium
3	Of the difficulties are the lack of availability of special laboratories by educational means that require a particular climate and conditions?	3.40	1.20	Medium	3.13	1.04	Medium
4	It is difficult not to organize the preservation of educational materials and teaching aids in a suitable manner	2.65	1.16	Medium	3.17	1.02	Medium
5	One of the difficulties is the lack of a timetable for the use of teaching materials and materials by teachers of the same teaching subjects	3.57	1.16	Medium	3.07	1.07	Medium
6	It is difficult not to know the available educational means within the school	3.14	1.08	Medium	2.92	1.17	Medium
7	Does the class time limit hinder you in using the techniques?	3.46	1.29	Medium	3.02	1.28	Medium
8	One of the difficulties is the lack of encouragement from the school administration to the use of educational techniques	3.00	1.23	Medium	3.21	1.06	Medium
Total		3.20	0.73	Medium	3.15	0.79	Medium

*** the means of (5).**

Table (29) states that the(Teachers) sample's arithmetic means for the acceptance difficulties facing the use of educational techniques in secondary schools in Romania ranged (2.65-3.57) the highest of was item No. (5), which reads: "One of the

difficulties is the lack of a timetable for the use of teaching materials and materials by teachers of the same teaching subjects ", item No.(4) was its lowest, which reads:" It is difficult not to organize the preservation of educational materials and teaching aids in a suitable manner "; the total percentage for this part was (3.20) with an assessment degree as medium, which shows that the level of difficulties facing the use of educational techniques in secondary schools in Romania.

Table (29) states that the (Teachers) sample's arithmetic means for the acceptance of difficulties facing the use of educational techniques in secondary schools in Iraq ranged (2.92-3.39), and item No. (1) as their highest, that states: “The degree of difficulty of keeping a record of the kinds of educational techniques you usually use? ", while the lowest was item No. (6), which reads:" It is difficult not to know the available educational means within the school "; the total percentage of this part was (2.92) with an assessment degree as medium, difficulties facing the use of educational techniques in secondary schools in Iraq. As shown above, there is a convergence of the degree of difficulties facing the use of educational techniques in secondary schools, Figure (48) shows that:

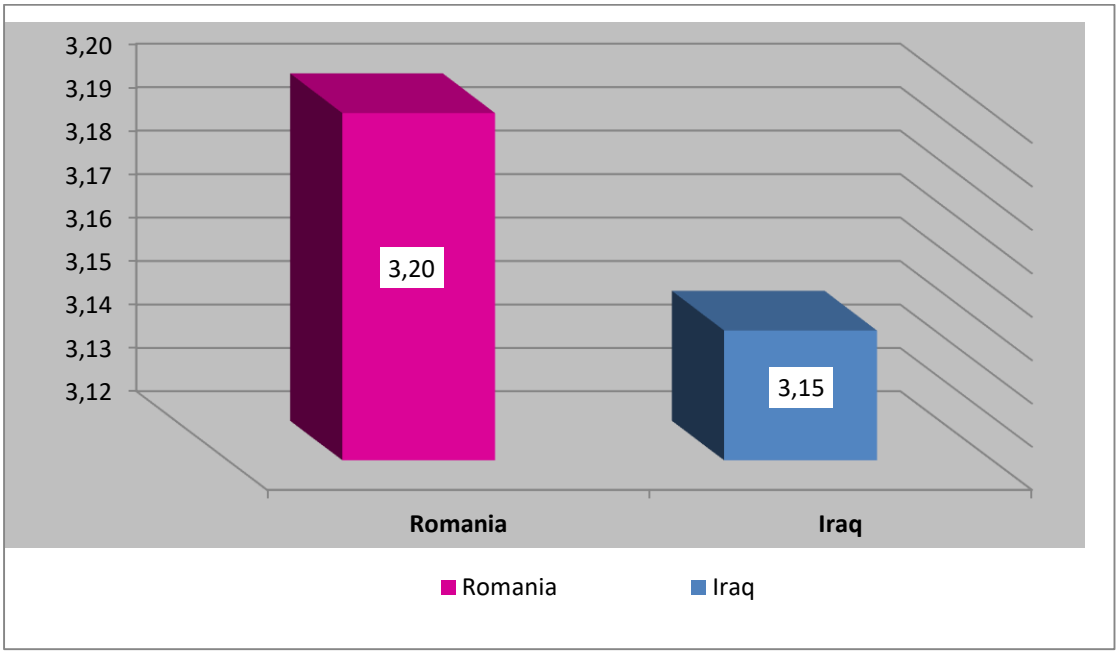

Figure 49. Means of the difficulties facing the use of educational techniques in secondary schools

7.2.6. Extent the curriculum's content is organized and clear to you.

Such a question can only be answered as, the means and standard deviations of extent the curriculum's content is organized and clear to you:

Table 30. Means and standard deviations of extent the curriculum's content is organized and clear to you

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	The curriculum has specific objectives.	3.76	1.04	High	3.60	1.40	Medium
2	Curriculum content is commensurate with the students' level.	3.21	1.00	Medium	3.76	1.30	High
3	There is a balance between the subjects of the textbook, in light of the objectives of the curriculum.	3.44	1.08	Medium	3.47	1.30	Medium
4	The curriculum takes into account individual differences among students.	2.93	0.99	Medium	3.46	1.34	Medium
5	The curriculum keeps up with the developments of the times.	2.90	1.07	Medium	3.51	1.33	Medium
6	Topics in the curriculum are interrelated and complementary to each other.	2.50	0.86	Medium	3.59	1.46	Medium
7	The curriculum takes into account the diversity of different environments.	3.24	0.94	Medium	3.55	1.51	Medium
8	Every scientific material is related to other subjects.	3.39	0.96	Medium	3.56	1.07	Medium
9	Taking into account the social, cultural and economic values within the targeted society.	3.29	1.04	Medium	2.80	1.20	Medium
10	The Content is related to and addressed to deal with environmental issues.	3.27	1.03	Medium	3.87	1.13	High
11	The scientific material is directive to more external readings.	3.13	1.00	Medium	3.70	1.06	High
12	It demands the use modern strategies in curriculum teaching.	3.20	1.03	Medium	3.76	1.10	High
Total		3.19	0.45	Medium	3.55	0.77	Medium

*** the means of (5).**

Table (30) states that the (Teachers) sample's arithmetic means for the acceptance of the difficulties facing the use of educational techniques in secondary schools in Romania ranged (2.50-3.76), item No.(1) as their largest, that states: " The curriculum has specific objectives ", but item No. 6 was their smallest, which reads:" Topics in the curriculum are interrelated and complementary to each other "; the total percentage of this part was (3.19) with assessment degree as medium, that states, the difficulties' level facing the use of educational techniques in secondary schools in Romania.

Table (30) states that the (Teachers) sample's arithmetic means for acceptance of the difficulties facing the use of educational techniques in secondary schools in Iraq ranged (2.80-3.87) the highest of was item No. (10), which reads: " The Content is related to and addressed to deal with environmental issues ", item No. 9 was their lowest, that states:" Taking into account the social, cultural and economic values within the targeted society "; the total percentage of this part was (3.55) with an assessment degree as medium, that states that the difficulties' level that facing the use of educational techniques in secondary schools in Iraq, Figure (49) shows that:

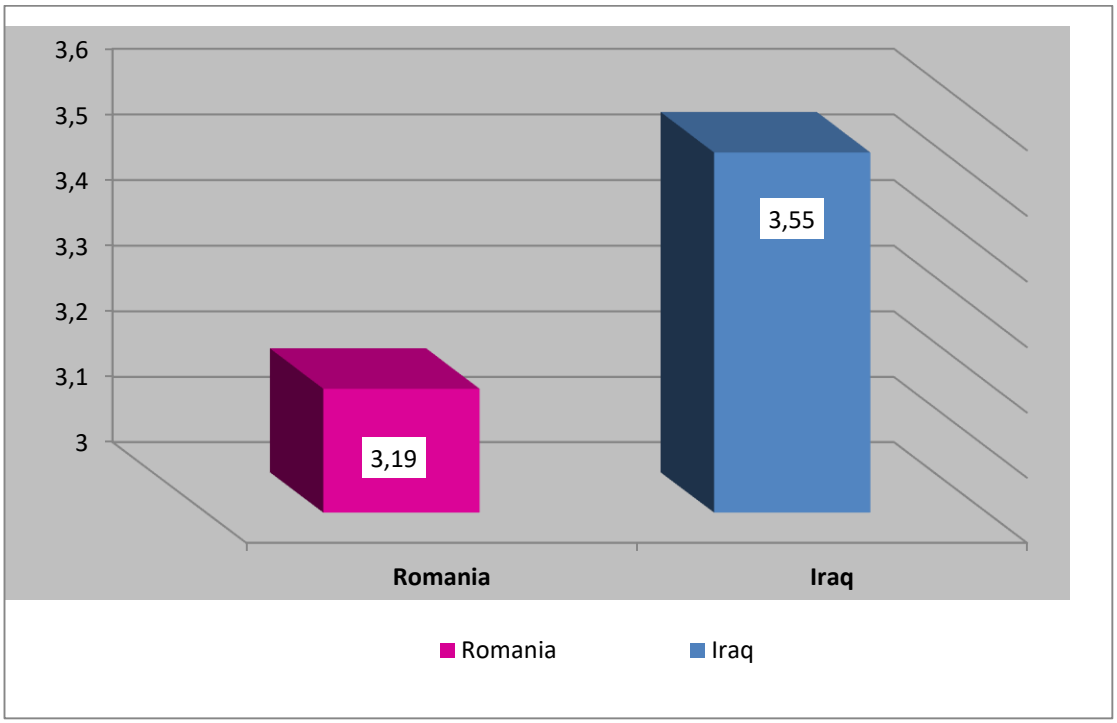

Figure 50. Means of extent the curriculum's content is organized and clear to you

7.2.7. The level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it.

Such a question can only answered as, the means and standard deviations of level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it:

Table 31. Means and standard deviations of level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	It uses clear, easy, language to display information.	3.51	0.97	Medium	3.43	1.11	Medium
2	The style of the presentation varies depending on the presented subject.	3.57	1.04	Medium	4.02	1.15	High
3	Takes into account the element of excitement in the display.	3.14	1.09	Medium	3.69	1.18	High
4	Key concepts and generalizations stand out clearly	3.57	1.08	Medium	3.52	0.93	Medium
5	There are clear shapes, graphs and maps.	3.59	0.94	Medium	3.23	1.13	Medium
6	The images or shapes used are closely related to the text.	3.69	1.05	Medium	3.29	1.03	Medium
7	Includes a list of references and specific sources.	3.50	0.99	Medium	3.24	1.09	Medium
Total		3.51	0.81	Medium	3.49	0.75	Medium

*** the means of (5).**

Table (31) states that the(Teachers) sample's arithmetic means of the acceptance of the organization's level and clarity of the language of the textbook and the method of presentation of the curriculum in it ranged in Romania (3.14-3.69) the highest of was item No. (6), which reads: " The images or shapes used are closely related to the text ", item No. 3 was their lowest, that states:" Takes into account the element of excitement in the display "; the total percentage of this part was (3.51) with an assessment degree as medium, that states that the organizational level and clarity of the language of the textbook and the method of presentation of the curriculum in it in Romania.

Table (31) states that the (Teachers) sample's arithmetic means for the acceptance of the level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it ranged in Iraq (3.23-4.02) the highest of was item No. (2), which reads: " The style of the presentation varies depending on the presented subject ", and item No. 5 as their lowest , that states:" There are clear shapes, graphs and maps "; the total percentage of this part in total was (3.49) with an assessment degree as medium, that states, the level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it in Iraq. Figure (50) shows that:

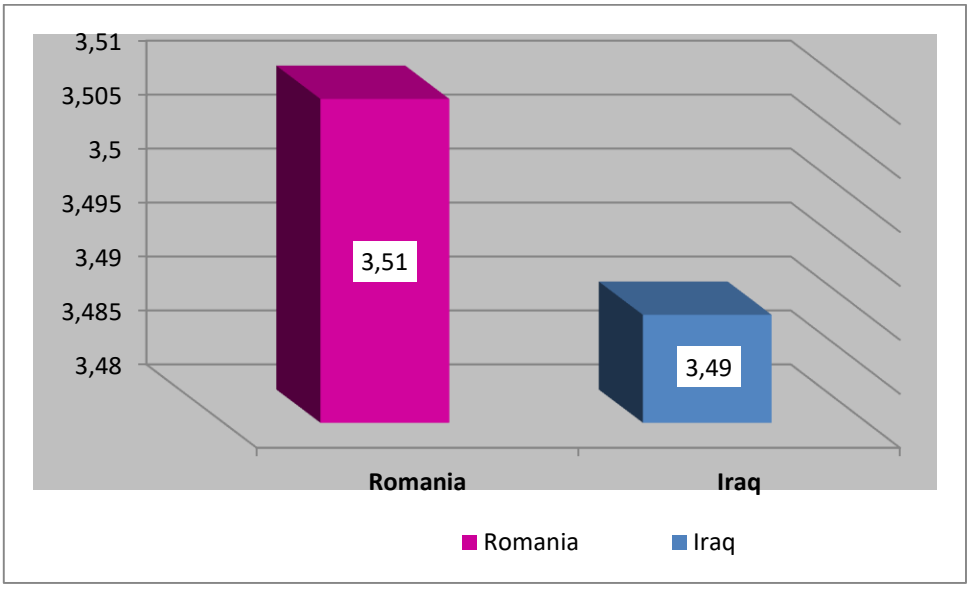

Figure 51. Means of level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it

7.2.8. The extent of organization of the curriculum.

To answer this question, the means and standard deviations of the responses of extent of organization of the curriculum:

Table 32. Means and standard deviations of extent of organization of the curriculum

No		Romania			Iraq		
		Mean*	**standard deviation**	**Assessment degree**	**Mean***	**standard deviation**	**Assessment degree**
1	Keeps the organization in the presentation of subjects and points of interest.	3.71	0.90	High	2.99	1.13	Medium
2	Its entrances keeps on one format in both form and image	3.47	1.01	Medium	3.14	0.98	Medium
3	Includes a well-organized, easy-to-read reference list.	3.47	0.94	Medium	3.03	0.97	Medium
4	Includes a list of its attachments.	3.27	1.00	Medium	3.00	0.93	Medium
5	Book's size is convenient to use.	3.66	0.98	Medium	3.39	0.94	Medium
6	Its outer shell is firm and sturdy.	3.29	0.95	Medium	3.04	0.95	Medium
7	The text size is appropriate for the age of the learner.	3.59	1.00	Medium	2.93	1.03	Medium
Total		3.49	0.48	Medium	3.07	0.77	Medium

*** the means of (5).**

Table (32) states that the(Teachers) sample's arithmetic means of the acceptance of the organization's level and clarity of the language of the textbook and the method of presentation of the curriculum in it ranged in Romania (3.27-3.71) the highest of was item No. (6), which reads: “Keeps the organization in the presentation of subjects and points of interest ", item No. 4 was their lowest, that states:" Includes a list of its attachments "; the total percentage of this part was (3.49) with an assessment degree as medium, that states that the organizational level and clarity of the language of the textbook and the method of presentation of the curriculum in it in Romania.

Table (32) states that the(Teachers) sample's arithmetic means of the acceptance of organization of the curriculum ranged in Iraq (2.93-3.39) the highest of was item No. (5), which reads: “Book’s size is convenient to use ", item No. 5 was their lowest, that states " The text size is appropriate for the age of the learner "; the total percentage of this part was (3.07) with an assessment degree as medium, that states that the organizational level and clarity of the language of the textbook and the method of presentation of the curriculum in it in Iraq. Figure (51) shows that:

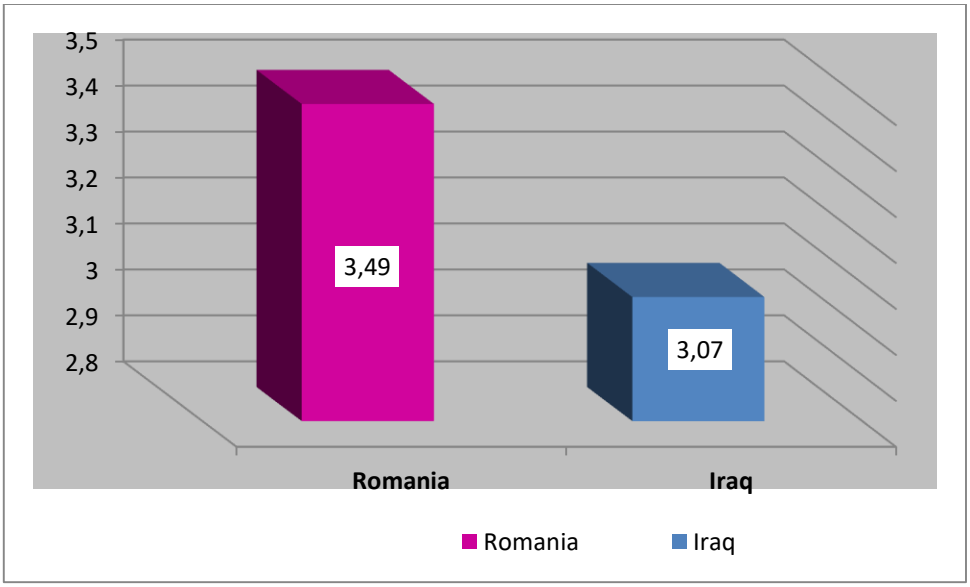

Figure 52. Means of extent of organization of the curriculum

7.2.9. The role of the curriculum in the use of educational techniques.

Table 33. Means and standard deviations of role of the curriculum in the use of educational techniques

No		Romania			Iraq		
		Mean*	standard deviation	Assessment degree	Mean*	standard deviation	Assessment degree
1	The school curriculum contains instructions on how to use the teaching method.	3.53	0.91	Medium	3.04	1.08	Medium
2	The focus of the curriculum is on behavioral goals.	3.39	1.06	Medium	3.81	0.92	High
3	The focus of the curriculum on educational techniques and their importance.	3.51	0.89	Medium	3.61	0.88	Medium
4	The educational techniques proposed in the curriculum take into account individual differences among students.	3.21	0.93	Medium	3.38	1.01	Medium
5	The modernity of the educational techniques available in the textbook and its relevance to modern teaching methods	3.30	0.98	Medium	3.61	0.95	Medium
6	The quota allocated to subjects is sufficient to use educational techniques according to the	3.09	1.06	Medium	3.68	0.84	Medium

	curriculum						
Total		3.34	0.75	Medium	3.52	0.75	Medium

*** the means of (5).**

Table (33) states that the(Teachers) sample's arithmetic means of the acceptance of the organization's level and clarity of the language of the textbook and the method of presentation of the curriculum in it ranged in Romania (3.09-3.53) the highest of was item No. (1), which reads: " The school curriculum contains instructions on how to use the teaching method ", item No. 6 was their lowest, that states: " The quota allocated to subjects is sufficient to use educational techniques according to the curriculum "; the total percentage of this part was (3.34) with an assessment degree as medium, role of the curriculum in the use of educational techniques in Romania.

Table (33) states that the(Teachers) sample's arithmetic means of the acceptance of organization of the curriculum ranged in Iraq (3.04-3.81) the highest of was item No. (2), which reads: “The focus of the curriculum is on behavioral goals ", item No. 1 was their lowest, that states :" The school curriculum contains instructions on how to use the teaching method "; the total percentage of this part was (3.52) with an assessment degree as medium, role of the curriculum in the use of educational techniques in Iraq. Figure (51) shows that:

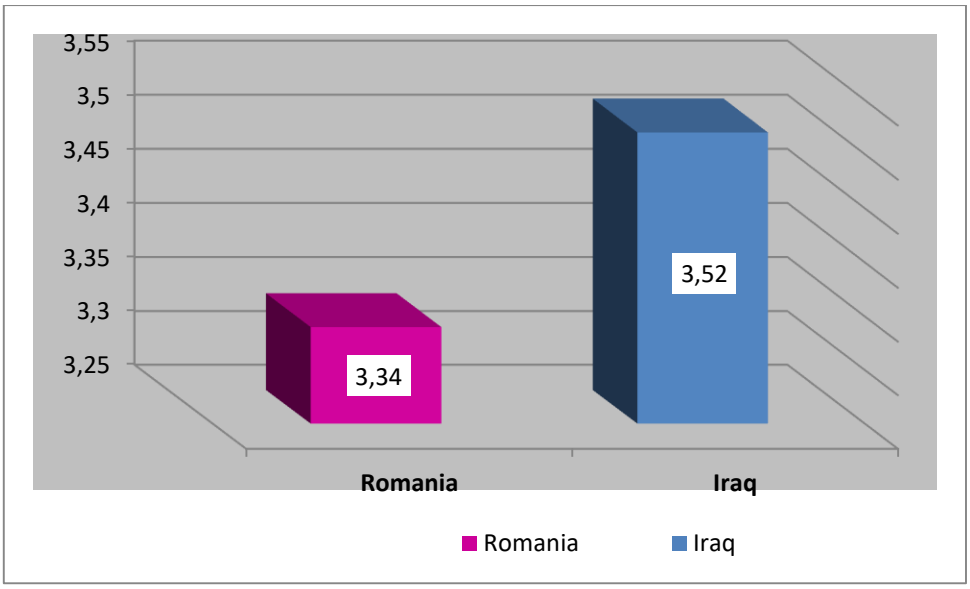

Figure 53. Means of role of the curriculum in the use of educational techniques

7.2.10. Significant differences regarding the teachers' use of information technology due to the variables of sex, experience and qualifications.

To answer this question has been the application of interpretations of variance (Independent Samples T-Test) regarding the teachers' use of information technology due to the variables of gender, and (ANOVA) regarding the teachers' technological information usage due to the variables of experience and qualifications. Tables (32-33) show that.

Table 34. Results for (Independent Samples T-Test) regarding the teachers' use of information technology due to the variables of gender

		Romanian				**Iraq**			
		mean	**standard deviation**	**T**	**Sig.**	**mean**	**standard deviation**	**T**	**Sig.)**
gender	Female	2.87	0.82	0.97	0.33	1.57	0.57	1.123-	0.26
	Male	3.02	0.84			1.67	0.67		

Table (34) shows the following:

Romanian: no significant differences regarding the teachers' technological information usage due to the variable of gender, Where the value of (T) reached (1.787) is a value statistically not important at the importance level of ($\alpha \leq 0.05$)**.**

Iraq: no significant differences regarding the teachers' technological information usage due to the variable of gender, Where the value of (T) reached (1.90) is a value statistically not important at the importance level of ($\alpha \leq 0.05$)**.**

Table 35. Results for (ANOVA) regarding the teachers' use of information technology due to the variables of sex, experience and qualifications

		Romanian				Iraq			
		mean	**standard deviation**	**F**	**Sig.**	**mean**	**standard deviation**	**F**	**Sig.**
Age	25 to 39	2.93	0.64	0.75	0.47	1.65	0.64	4.29	0.02
	40 to 49	2.98	0.90			1.50	0.62		
	50 to 59	2.77	0.79			1.85	0.56		
educational status	Doctoral degree	2.93	0.80	1.18	0.31	1.71	0.59	0.26	0.77
	Master degree	3.06	0.92			1.61	0.64		
	Bachelor(university) degree	2.81	0.75			1.61	0.63		

*A statistically significant function at the significance level (α≤0.05).

table (35) shows the following:

Romanian: no significant differences regarding the teachers' technological information usage due to the variables of age and qualifications, Where the values of (F) reached (0.75, 1.18) is a value statistically not important at the importance level of (α≤0.05)

Iraq: no significant differences regarding the teachers' technological information usage due to the variables of experience. While the results showed significant differences regarding the teachers' use of information technology due to the variables of age, to find out differences source of Post Hoc Tests (Scheffe) was used, to find out variations based on the age group (50 to 59).

7.2.11. The relationship between degree of availability of teaching techniques secondary schools and degree of usage of teaching techniques secondary schools.

The extraction of correlation coefficients (Pearson) to verify the relationship between degree of availability of teaching techniques secondary schools and degree of usage of teaching techniques secondary schools, Table (36) shows that:

Table 36. correlation coefficients (Pearson) to verify the relationship between degree of availability of teaching techniques secondary schools and degree of usage of teaching techniques secondary schools

Iraq	Pearson Correlation	0.42
	Sig. (2-tailed)	0.00
Romanian	Pearson Correlation	0.77
	Sig. (2-tailed)	0.00

Table (36) shows the relationship between degree of availability of teaching techniques secondary schools and degree of usage of teaching techniques secondary schools.

The degree of availability of teaching techniques at secondary schools in Iraq and Romania did showed some differences, in Romania it was medium and in Iraq it was low, and showed There is a relationship between degree of availability of teaching techniques secondary schools and degree of usage of teaching techniques secondary schools in Iraq and Romania.

8. Conclusion.

The analysis revealed various differences between the 2 countries, which appaears to be normal, given the different cultures. There are areas in which similarities have also been found, for example :

Iraq and Romanian sample: Study results showed that there is no statistically significant differences in relation to teachers usage of information technology at secondary schools due to gender variable and experience. While the results showed significant differences in teachers usage of information technology because of the variables of age, where the older the teacher the greater the use was less.

- the level of degree of availability of teaching techniques at your secondary schools.

The teachers' sample results show the educational skills at secondary schools in Romania, where "power point" came as the highest in terms of degree of use, and the sample of teachers to practice the degree of usage of the techniques of education at secondary school in Iraq, "computer education and applications" came in a higher place, while the least was "distance learning", indicating that the level of usage of educational technology at secondary schools in Iraq came with a Low degree This indicates a difference between the level of use of teaching techniques at secondary schools in Romania and Iraq.

- **the level of degree of used of teaching techniques at secondary schools in Romania and Iraq.**

that the arithmetic means for the sample's (-Teachers) approval of practicing the degree of usage of teaching techniques at your secondary schools in Romania ranged (2.16-3.87) the highest was item No. (9), which reads: "PowerPoint ", while the lowest was item No. 5, which reads:" satellite channels educational "; the overall average for the area as a whole was (2.93) by a medium assessment degree, which shows that the level of degree of usage of teaching techniques at your secondary schools in Romania.

that the arithmetic means for the sample's (-Teachers) approval of practicing the degree of usage of teaching techniques at your secondary schools in Iraq ranged (1.33-2.00) the highest was item No. (1), which reads: "Computer education and its applications ", while the lowest was item No. 2, which reads:" Education and distance

learning "; the overall average for the area as a whole was (1.62) by a Low assessment degree, which shows that the level of degree of usage of teaching techniques at your secondary schools in Iraq.

This indicates a difference between level of degree of usage of teaching techniques at your secondary schools in Romania and Iraq.

- the factors which help in the use of educational techniques in secondary schools.

The factors that assist in the use of educational techniques at secondary schools in Romania are physical facilities for the presentation of the educational medium "eg, electrical connections, proper lighting, and overhead projectors", the least of which is: "The appropriateness of educational techniques for the physical environment In the classroom that encourages the use of educational techniques, "indicating that the level of factors that assist in the use of educational techniques at secondary schools in Romania came with medium statues. .
It has been shown that the factors that help in the use of educational techniques at secondary schools in Iraq, were: "The appropriateness of educational methods of the physical environment in the classroom, which encourages the use of educational techniques" as the highest, while the least is: "Most of the teaching methods used in Teaching is attractive to students, "indicating that the level of factors that assist in the use of educational techniques in secondary schools in Iraq came with a medium degree of importance, which shows that there is a convergence of the factors that help in the use of educational techniques at secondary schools.

- **the difficulties facing the use of educational techniques in secondary schools.**

The results show that the difficulties facing the use of educational techniques at secondary schools in Romania are like: "the lack of a timetable for the use of educational materials and materials by teachers of the same educational materials" that came in the with highest importance, while: "It is difficult not to organize conservation Educational material and teaching aids" came as the least important, indicating that the level of difficulties encountered in the use of educational techniques at secondary schools in Romania came to be of a medium degree. While the difficulties faced by during use of educational techniques at secondary

schools in Iraq, are like "the degree of difficulty to keep a record of the types of educational techniques that you use normally" came at the highest place, while the least important was : "It is difficult not to know the educational means available within the school". This means that the difficulties faced during the use of educational methods at secondary schools in Iraq came with medium level of importance, indicating that there is a convergence of the degree of difficulties in the use of educational methods at secondary schools.

- **the level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it.**

The results showed that the level of organization and clarity in the textbook language and presentation method in the Romania context, "The images or forms used closely related to the text," came as the highest important of them, while the least was: "takes into account the element of excitement in the presentation," and this shows that it came With an average rating in Romania.

While the level of organization and clarity in the textbook's language and presentation method in the Iraqi context, "Presentation style varies depending on the subject presented" as the most important ,while the least was: "There are clear forms, graphs and maps," indicating the level of regulation, and clarity in the language of the textbook and the method of presentation of the curriculum in Iraq came with a medium degree of importance.

- **the extent of organization of the curriculum.**

The extent of the organization of the curriculum in Iraq and Romania has reached a medium degree of importance in both of the two countries.

- **the role of the curriculum in the use of educational techniques.**

While the role of curriculum in the use of educational techniques in Romania, "The curriculum contains instructions on how to use the teaching method" came as the most important, while the least was: "The quotas allocated to subjects sufficient to use educational techniques according to the curriculum" Which means that the role of curricula in the use of educational technology in Romania came with a medium degree of importance. .

And the role of curricula in the use of educational technology in Iraq, the most

important of them is: the curriculum is on the behavioral goals, "while the least was: " The curriculum contains instructions on how to use the teaching method" which demonstrates that the role of curricula in the use of educational techniques in Iraq Came to a of medium importance degree.

In both countries slight standard deviations of role of the curriculum in the use of educational techniques have been found. However, the degree of availability of teaching techniques at secondary schools in Iraq and Romania did showed some differences, in Romania it was medium and in Iraq it was low, It is important to find meaningful ways and bring change that would shape the learning system into an efficient but also creative one, captivating. I believe educational technology can open big opportunities, for students, teachers and schools as well. I strongly hope more research will be conducted on the benefits of educational technology improvements and the good impact they have on the educational system, regardless of the country they are in.

This analysis can therefore serve as an instrument for further research.

CHAPTER V: THE RECOMMENDATIONS AND SUGGESTIONS OF THE STUDY FOR IRAQ IN EDUCATION TECHNOLOGY COMPETENCY

PART I

The results of the study showed that the Iraqi educational is facing some major challenges, and they are like:

1. School buildings
2. Curriculum and education technology competency
3. Teachers
4. Teaching methods
5. Educational technology, means, and educational activities
6. Examinations, and methods of measurement and evaluation
7. Educational supervision and adequacy

First: The main issues and challenges facing the educational system

The educational sector, which has been deficient in the planning of studied scientific negative practices led to the emergence of major issues and challenges in the reconstruction and modernization of the educational system, the most prominent of which is

1. School buildings

An important aspect of the success of the education process is the provision of adequate school buildings, maintenance and sustainability. The problem is that there is an increasing shortage in the supply of school buildings, which caused the inability to absorb the raise in the registered number. And was shown as an increase in its number of schools operating a two-time system .Many schools still do not have the minimum number of physical educational facilities that facilitate the use of educational technologies.

The improvement in educational services requires efforts not usually to rebuild. The shortage in the school buildings reached (4269) school buildings in 2004, and this

number is increasing due to the new opening in the areas of education that were previously deprived.

From the above, the problem of school buildings can be summed up by the following points

Lack of validity of most of the school buildings for educational use, which lose the school environment educational conditions to contain the student and teacher at the same time.

The severe shortage of school buildings, which can not be found in areas where students can easily attend High student density in schools where double use rate (double and triple), which negatively affects the school atmosphere and rationalize its practice

2. Curricula and education technology competency

One of the most important challenges faced by the educational sector, which should be addressed in relation to educational curricula and its stalemate, as well as the lack of harmony and compatibility and adaptation to the labor market requirements and its focus on traditional teaching methods and indoctrination without deep understanding. In order to meet these challenges, the Ministry of Education has adopted new directions for educational policy aimed at improving the type of education which helps a lot in keeping up with the rest of the world and the developments in its education and improve the capacity of educational and teaching staff and their competencies to achieve a better response to the working force needs of sustainable development. Basic to raise the quality of education. Therefore, the Ministry of Education should adopt a number of principles in reviewing the curriculum and updating it as the educational reform process, that should be based on an objective study and a comprehensive study of educational environment, and educational system's problems and the obstacles in the way of the process of its reforming and reconstructing, the educational system's responsibility should extended beyond the scope The Ministry of Education and its institutions to ensure the participation of the spectrum of Iraqi society as a whole in the process of

change, and all special decisions to reform the curricula must be purely Iraqi and consistent with the values and heritage of Iraqis.

The curriculum's reform and development requires revision of the curricula and their vocabulary in order to modernize and reorient them to better answer learners' requirements of national development, as well as to keep pace with the level of countries with high performance in the field of education as the curricula used for many attempts to review and improve in order to lead To real development in the curriculum objectives or content or methods.

3. Teachers

The Iraqi teacher suffers an extreme neglect and after that, scientific and technical development, and his inability to keep pace with modern technological methods and commensurate with educational objectives and policies, which led to poor effectiveness and continuity with students either in delivering the course material or in activating its role in keeping up with The educational process, as well as the weak link with students and their parents in order to form a coherent and successful educational family, so the conditions of the educational body did not need to consider, both in terms of technical level or performance and the level of professional preparation for teachers.

That's why a close look at the rehabilitation of the teacher on modern methods and training him in the use of computer and modern techniques and teaching methods in the modern era, in order to increase his skills and upgrading his level using modern techniques of equipment, laboratories and other equipment and advancement, and to promote it to the required level to the success of the educational process with the development of new programs for the coming years to develop the capacity of teachers and their abilities and awareness. The government should also pay a special attention to the process of improving the living standards of teachers by increasing their salaries to match the current market prices, which will positively be reflected on their performance.

4. Selection of teaching methods

Methods of teaching will be chosen and identified, methods and strategies appropriate for each subject of the article shall be determined. Such methods, methods and strategies shall be relevant to the content, their harmony with the objectives, their motivation for the learners' motivation, and the opportunity for the learner to participate positively in learning, Critical and problem-solving skills, and should be flexible, so that they can be developed or modified, depending on the conditions of the learning environment.

6. Educational techniques, means, and educational activities

The Educational process requires the a better way in handling the different tools and techniques of education that help both teachers and learners to achieve the objectives of the curriculum. It may introduce new topics on the curriculum that require the use of new images, films, recordings, CDs or cards to facilitate their learning and learning. The necessary technical devices for some educational materials are provided in the hands of learners, teachers and educational supervisors who participate in the application, follow-up and evaluation of the curriculum.

On the basis of the choice of class and non-classroom activities are selected that enhance learning and strengthen learning, enrich experience, help to modify behavior, acquire positive attitudes, satisfy needs, develop trends and hobbies. And to take into account the principle of individual differences, and provide opportunities to help acquire positive values and trends, and educational skills consistent with the nature of the age, especially self-learning skills, and dealing with the technology of education.

7. Exams and methods of measurement and evaluation

The exams play an important role in understanding the learner's understanding of the main educational issues and their scholastic achievement through the academic

years he / she goes through. It is also the means used to assess the learner's abilities to determine the success of the educational process.

The school exams in Iraq suffered from the use of old methods and methods in the process of evaluating the student to prevent repetition and dropout due to the lack of specialists in the development of studies necessary to know how to measure and evaluate the learner and the extent of his/her absorption of the subject of the study and evaluation where there are still difficulties in follow-up student and trainee trainee during school years.

That's why the total educational policy should adopt a new approach in the development of methods of measuring the academic achievement of the student in the course of its plan in the coming years and try to develop modern scientific means to help the teacher to know the extent of excellence in delivering the article to the learner's mind correctly and to indicate the extent of success.

7. Educational supervision and adequacy

The deterioration of the educational process in Iraq for the past years included all educational axes, including educational supervision, where the educational supervision in previous years suffered from weakness in guidance, training, evaluation, inertia and neglect, as well as weak role in the educational process, and the role of educational supervisor Is to evaluate the effectiveness of the teacher, but this did not help to mobilize the teacher in the process of education, because of the poor qualification of the educational supervisor and lack of modern educational foundations in the follow-up teacher, and the lack of interaction with the teacher educational supervisor helped the weakness of the educational supervisor, that's why the related authorities should establish a new foundations in improving the role of educational supervisor and attention to be more interactive, and through training in accordance with modern methods to raise its capabilities.

8. Recommendations

The Ministry of Education attaches great importance to the events of qualitative changes in the educational system with all its components, inputs, processes and outputs, through concerted efforts and wide community participation in planning, implementation and evaluation, and providing appropriate and rapid support from the world's friendly countries and international organizations and organizations. An educational strategy has been prepared and formulated for the next five years and the directions of its implementation are determined through:

- Reforming the educational system by reviewing the laws and regulations of the ministry so as to enable schools to absorb the citizens who wish to teach and spread it throughout the country, and promote the principle of its immunity in public schools, with the expansion of civic education and the contributions of civil society organizations.
- Formulating an educational strategy clearly characterized by its objectives and the possibility of translating it into educational plans that accommodate the various proposals so as to ensure the development of the educational system.
- Review the organizational structure of the Ministry and re-establish the administrative and administrative frameworks that will undertake the task of implementing the reform and continuation of the educational system.
- Adoption of the annual planning for the stages of education and each general Directorate, and the introduction of the rates of implementation material as an indicator to assess the adequacy of the performance of educational departments.
- Updating educational and financial departments and functions and preparing and implementing performance adequacy standards for administrative units to deal with administrative underdevelopment and financial corruption.
- Developing teachers' training institutions and training them in service to raise their educational skills and enhance their social and scientific status.
- Development of methods of assessment for students and administrative institutions and the development of modern methods and methods in evaluating the adequacy of performance and achievement of students and the

establishment of modern systems for examinations to include form and content.

- Introducing modern technologies in education at all stages and keeping abreast of developments in this regard.
- Construction of new schools with modern specifications and the replacement of school buildings leased with government buildings, and the demolition and reconstruction of schools falling under specific programs and timings.
- Making vocational education a product by linking it to the labor market in accordance with central regulations that are consistent with national principles.
- Enhancing the role of educational supervision and raising the status of the professional and social educational supervisor for his active role in building the educational process. And provide him with professional and technical skills.
- Re-examine the curriculum in its broad sense to determine the actual needs of society, and re-formulation of educational philosophy and educational goals according to specific timetables and stages.
- Benefit from the experiences of other countries in the field of education through openness to it, especially donor countries and advanced, as well as closer cooperation with organizations concerned with education at the international and regional levels.
- Developing more educational research and carrying out research and studies in various fields under the supervision of specialized researchers through more attention to research and educational institutions.
- Achieve the principle of equal educational opportunities by reducing the gap between the education of boys and girls and provide more educational opportunities for girls and rural areas and the children of immigrants and displaced.

PART II

1. challenges of traditional education in Iraq- solutions

First: Related to students.

- The repeated and unexplained absence of students and the dropouts because of the students' sense of boredom caused by the traditional methods of teaching.
- The weak students' abilities such as seeing and hearing, keeping in mind the different individual abilities of students.
- The varieties of students levels of understanding.
- The students' lack of attention during classes which will cause the wastage of information and efforts on the teachers' side.

Second: Curriculum's challenges

- the fact that curriculum sometimes will be outdated and behind the rest of the world.
- Curriculums may too long and cannot be completed in one academic year
- A weak application part as compared to the theoretical part .

Third: organization and school administration

- Classes overcrowding (large classes).
- Insufficient class-time which is too short for the curriculum.
- The wasted time issue.

.The previously mentioned issues are only some of the isuess that might easily affect the curriculum and keeping in mind that such a wide variety of curriculum issues can only be eliminated with the use of modern technologies in enhancing the curriculum, some of these solutions are:

2. Suggested solutions for Educational Technologies:

First: based on students themselves.

- Students' absence: with the e-school the issue of student absence from school can be fixed simply because students can get all of their lessons by emails. .
- the only point of weakness with this method is that students will experience a sort of weaknesses in the development of their audiovisual skills,

that are stimulating, attractive, practical and fast.

- Students varaitions according to the level of their comprehension: e-learning

eliminates those variations by simply giving the student the space of time that they need, by repeating the lesson to those who need it and to give an extra work to those who need It.

- Students' use of modern technologies is very developed nowadays simply because their exessive use and sometimes on a daily basis, this can be used in attracting students' attention to the class.

Second: Curriculum related issues

The curriculum itself is a very sativa thing, introducing the learners with the modern technologies will open a vast space of a continuously developing knowledge that connects the learners with the rest of the world and eliminating the wide educational gaps.

Third: classes organization and school administration

- **Large classes**: Introducing the modern technologies in education will help in solving such a problem, simply the large number of students will not be an issue if they all have an access to computers and internet, the teacher's role will be minimized and all of the learners will have access to the targeted knowledge.

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- **Time lack for the curriculum**: Such an issue can be easily treated with the moden technologies, simply because student will have all day access to the lessons on their portal.

3. The technology's importance in modern education

Nowadays modern technologies play an important role in facilitating the different educational activities, giving modern technologies a primary role in the process of modern education.

• With the rising number of daily use hours, now days most of the young generation are very strongly attached to the use of their electronic devices and such devices are playing a guiding role in the process of education.

• Internet has an important role in an e-classroom by opening a new horizons for the learners.

• Technology has opened a very wide space for daily communication between the learners and their teachers.

4. Steps to apply education technology

The application of educational technology is as follows.

First: Determining the educational technique or educational subject to be addressed.
Second: Determining the objectives behind the subject.

Third: Choosing the right technology
Fourth: Designing the educational environment
Fifth: Implementation
Sixth: the evaluation stage that determines the validity of the used technology, its weaknesses, and the strengths.
Conclusion: Educational technology doesn't only refer to the use of modern technologies in education such as the smart board and online teaching portals, but also the good use and command over the simple classroom materials, such as chalk and blackboard, and making the full use of them.

Suggested Recommendations and solutions

Based on our previously mentioned findings, a number of recommendations should be made:
1) The need to hold training courses for members of the teaching staff in general education using up to date technologies and employing such technologies alongside with its use for teaching purposes.
2) It is necessary to introduce modern techniques in public schools by keeping with the development of curricula. The development of curricula must be accompanied by the development of the techniques used in education.

3) The need to conduct research on the difficulties that impede the use of educational techniques in Iraq's public education.
4) Conducting training workshops on a regular basis, so that every three months, for example, students will learn about the importance of using modern technologies in

education to encourage these learners to take part in an educational process and to activate their part in it.

5) The need to provide the necessary educational softwares and other materials to be used in the process of teaching the students' curricula.

6) Conducting more research activity in the field of e-learning on a continuous basis to keep the teachers informed regarding technology in the education process.

7) Advocacy to make ICT an essential tool in the educational process at all levels, in addition to provide the infrastructure for this technology in schools such as computers, laboratories, communication networks, and so on.

6. Some educational techniques - icons - symbols for used in classrooms in secondary schools:

6.1. Computer Education and its Applications

Information and communication technology is increasingly used for educational purposes by the means of presentation, storage and processing of information. This technology is particularly valuable in the process of teaching children. Education in the perspective of new technologies has opened new directions and orientations in the educational-educational process. It is necessary for the traditional education system to fill its forms and means of intervention in accordance with the current economic and social requirements. The advantage of new technologies is the high receptivity of young people, consumers of new media.

6.2. Education and Distance Learning

Distance learning involves the use of a wide range of educational resources and technologies: study materials printed or inserted on CD / DVD or other external memories. In addition, students learn at their own pace, in the place and time they choose. The place of learning is freely chosen (at work or at home). At the same time, they have access to the library; have meetings with teachers (usually once a month, on Saturdays and Sundays). The most important features of distance learning that need to be taught are flexibility and independent learning / self-learning Another alternative available to free students over the weekend is low-frequency education. This is characterized by weekly activities dedicated to the application and synthesis preparation that are compulsory in the curricula, which also require the direct meeting of the students with the teaching staff.

6.3. Global Information Network Online

The internet is indispensable. Children are asked to use it to do their school projects. The Internet is useful if we know how to use it properly. Otherwise, it becomes dangerous. The new challenge in education is andragogy, that is, the teacher becomes a facilitator who promotes and lets students discover by experience the truths that they must reach. When doing so, students understand things and start to assume them.

6.4. Multimedia in Education

The contemporary evolution of society increasingly involves the use of computers and new technologies in almost all fields. In this respect, today's teacher is "forced" to find new opportunities for the teaching-learning process to be attractive for both students and teachers. Educational multimedia offers pupils and teachers solutions to achieve a gaming-based interaction, animations, logic exercises that can also increase the objectivity of the evaluation.

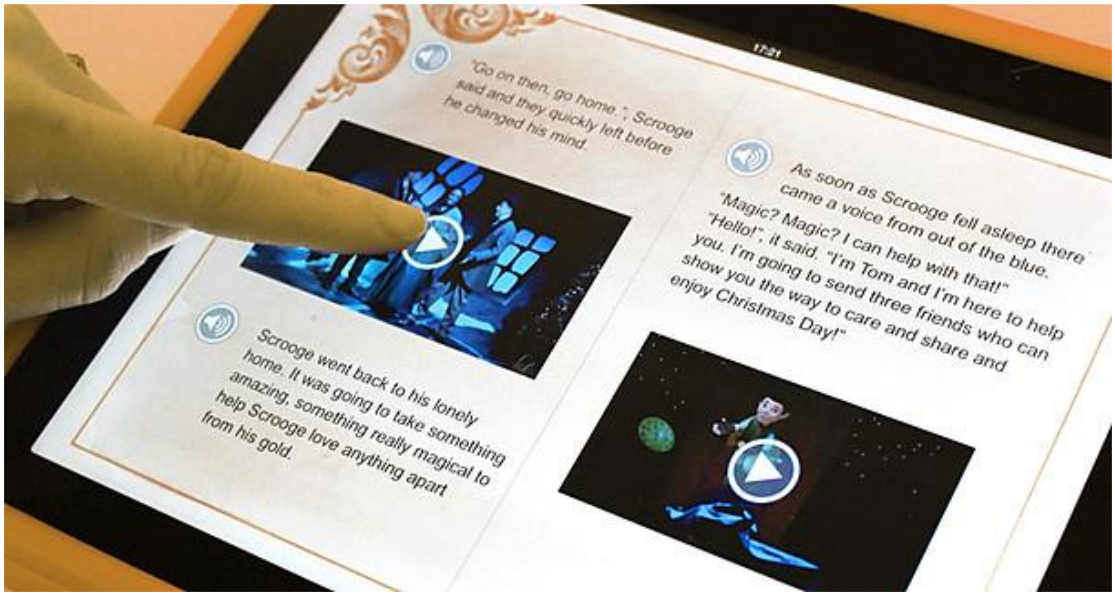
6.5. Satellite Channels Educational

Satellite educational channels are useful in distance education due to its functions and characteristics in delivery, presentation and control characteristics. The approach of educational channels is the same as in distance learning, amplified by sound and visual aids. Children programs are a valid example. Satellite educational channels are also valuable in teaching foreign languages and using multiple technological tools.

6.6. E-Book

According to Al-Dulaimi "E-books and mobile devices have quickly grown in popularity. E-books become mainstream and percentage of study materials available as e-books is growing very rapidly. Today, the online learning environment is a popular alternative for those without the time or desire to sit in a traditional classroom for hours on end. Now, the increased availability of e-books (short for electronic

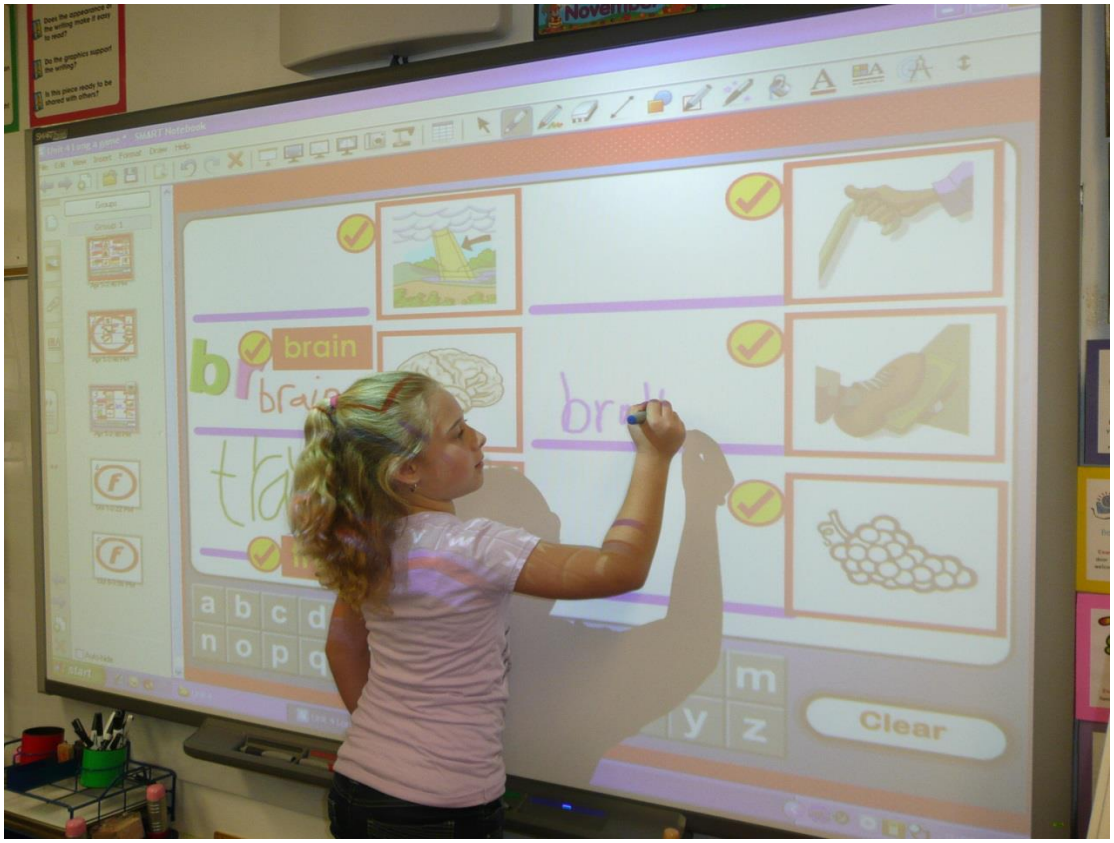
books) has made online study even more convenient and affordable"(Al-dulaimi, 2017).



6.7. The Electronic Board

Interactive whiteboard or "smart board" is a powerful tool for a modern and interactive education, for sessions, presentations, or training sessions, transforming any space into an attractive auditorium. The fact that students assimilate information taught much more easily by using interactive methods is no longer a secret. Digital

education is already present in education and more and more educational institutions choose to equip classrooms with interactive learning equipment



6.8. Smart Classrooms

The Smart classroom is based on the integration of multiple technological tools in the classroom, such as interactive whiteboard, computers, PowerPoint presentation, E-Board, Smart TV and tablets. Applications that teach students in the three cities where

SmartClassrooms are located do not replace 100% textbooks, but it certainly simplifies matter, and students become more creative and communicating.

6.9.PowerPoint Data Show

PowerPoint presentations have come to be the order of the day on any matter. A great emphasis is placed on students' skills to present their ideas in a more attractive way, making them useful later. In vain you have brilliant ideas if you cannot convey them

to others! It is in the interest of the children to learn how to make exciting presentations as early as possible.

6.10. Scientific laboratories

Scientific laboratories are very important in the study of science and its applications. Without scientific laboratories students cannot understand fully the concepts and

cannot develop scientific practical skills. It is important for any school to have scientific laboratories.

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APPENDIX

Questionnaire for Parents

This questionnaire is about **Curriculum and educational strategies for education technology competency** and addresses parents. Please read every question with attention and answer sincerely choosing the appropriate choice of given answers reflecting your opinions and attitudes **Curriculum and educational strategies for education technology competency** for the better future of youths. Your answers will be confidential and will only be statistically processed on computer. This **questionnaire is anonym and does not engage any official responsibility.**

We thank you!

The recommended general evaluation scale to be used for you to answer the questions and in the function of processing the answers:

5- Very good, very useful, yes absolutely, too many, too much, always, strongly approve

4- Good, somewhat useful, yes I help enough, many, a lot, usually, approve, agree

3- Moderate, Moderate, a little, some, enough, often,

2- Fair, not very useful, no not enough, very few, too little, sometimes, disapprove, disagree, dissatisfied

1-Unsatisfactory, never, not at all useful, I can't help, none, not at all, strongly disagree, strongly disapprove, very dissatisfied

Please do not hesitate to write your valuable opinion about open-ended questions.

1. **Are you satisfied with the degree of availability of teaching techniques the secondary schools of your children?**

(5) Very good	(4) Good	(3) Moderate	(2) Fair	(1) Unsatisfactory

2. **What do you suggest to change or improve about the presence of special rooms and laboratories in the school for the use of modern educational techniques?**

   .....
   .....
   .....

3. **What do you like the best from the modern teaching devices and techniques used in the school?**

   ……
   ……

4. **How often does your child / do your children make powerpoint presentation or use modern devices for their homework?**

(5) Every month	(4) Every semester	(3) Every year	(2) Not often at all	(1) Never

5. **Do you think the teachers in the school have an educational technology background?**

(5) Very good knowledge	(4) Good knowledge	(3) Moderate	(2) Not very good knowledge	(1) Not at all

6. **Does the school of your child/children provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)?**

(5) Yes, absolutely	(4) Yes, I think the physical facilities are adequate enough	(3) A little	(2) No, not enough	(1) No, not at all

7. **What are the difficulties facing the use of educational techniques in the school of your daughter/son?**

……
……
……

8. **Are there any teaching techniques used in teaching that you think are attractive to students?**

(5) Too many	(4) Many	(3) Some		(2) Very few	(1) None

If you have any suggestions please mention.

……
……

9. **Do you think your children sufficiently informed about the use of internet and computers by the school?**

(5) Very much	(4) A lot	(3) Enough	(2) too little	(1) Not at all

10. **Who informs you about your daughter's/son's achievements and behavior?**

	Always	Usually	Often	Sometimes	Never
a) My daughter/son	5	4	3	2	1
b) The form teacher	5	4	3	2	1
c) The school website	5	4	3	2	1

11. **Would you encourage the use of eBooks at school?**

(5) Always	(4) Usually	(3) often	(2) Sometimes	(1) Never

12. **Would you like the form teacher of your daughter/son to use more modern educational techniques and technological devices at classes?**

- ☐ Yes, I would
- ☐ No, I wouldn't

13. **How useful do you think it is for children to develop digital competences?**

(5) Very useful	(4) Somewhat useful	(3) Moderate	(2) Not very useful	(1) Not at all useful

14. **Do you think your daughter/son is satisfied with her/his school?**

(5) Very satisfied	(4) Satisfied	(3) Moderate	(2) Dissatisfied	(1) Very dissatisfied

15. **How do you figure out that?**

……
……
……

16. **How would you describe the laboratories in your children's school in terms of adequacy?**

……
……
……

17. **What do you think about computer education and its applications?**

……
……
……

18. **Do you think a female teacher or male teacher would have a better technological competence in order to teach daughter…../son……?**

- ☐ Female teacher
- ☐ Male teacher
- ☐ No difference

19. **One of the difficulties in the school of your son/ daughter is the lack of encouragement from the school administration to the use of educational techniques?**

- ☐ yes
- ☐ no

Last are some demographic questions that will be used for classification purposes only

20. **Do you have your son or daughter in this school?**

- ☐ My daughter
- ☐ My son

21. **What is your age?**

- ☐ 30 to 39
- ☐ 40 to 49
- ☐ 50 to 59
- ☐ 60 to 69

22. **What is your current educational status?**

- ☐ Doctoral degree
- ☐ Master degree
- ☐ Bachelor(university) degree

- Vocational school graduate
- High school graduate

23. What is your gender?

- Female
- Male

24. What is your current marital status?

- Single
- Married
- Divorced
- Separated
- Widowed

25. Is there anything you would like to add for us to think about? Please mention.

……
……
……
……

THANK YOU FOR COMPLETING OUR QUESTIONAIRE!

Questionnaire for Students

This questionnaire is about **Curriculum and educational strategies for education technology competency** and addresses students. Please read every question with attention and answer sincerely choosing the appropriate choice of given answers reflecting your opinions and attitudes. Your answers will be confidential and will only be statistically processed on computer. This **questionnaire is anonym and does not engage any official responsibility.**

We thank you!

The recommended general evaluation scale to be used for you to answer the questions and in the function of processing the answers:

5- Very good, very useful, too many, too much, always, strongly approve, strongly disagree
4- Good, somewhat useful, many, a lot, usually, approve, agree
3- Moderate, Moderate, a little, some, enough, often
2- Fair, not very useful, no not enough, very few, too little, sometimes, disapprove, disagree, dissatisfied
1-Unsatisfactory, never, not at all useful, none, not at all, strongly disagree, strongly disapprove, very dissatisfied

Please do not hesitate to write your valuable opinion about open-ended questions.

We want to know your thoughts about the degree of availability of teaching techniques in your secondary schools **(5) totally agree, (4) agree, (3) moderate, (2) disagree, (1) totally disagree.** (Circle one response for each item.)

	Totally agree	Agree	Moderate	Disagree	Totally disagree
1. My teachers use modern teaching techniques	5	4	3	2	1
2. My teachers use modern devices at classes	5	4	3	2	1
3. There are enough modern facilities for education	5	4	3	2	1
4. We use E-Books, smart rows Multimedia in education	5	4	3	2	1
5. Most of the teaching techniques used are attractive.	5	4	3	2	1
6. The curriculum takes into account individual differences among students	5	4	3	2	1
7. The teachers explain very well how to use modern technological devices.	5	4	3	2	1
8. The textbooks are very attractive and include images, shapes, graphs and maps.	5	4	3	2	1
9. The images or shapes used are closely related to the text.	5	4	3	2	1
10. Book's sizes are convenient to use.	5	4	3	2	1

11. How do you feel about the use of modern teachnologies?

(5) Very happy	(4) Happy	(3) Moderate	(2) Unhappy	(1) Very unhappy

12. How do you interpret your form teacher's visit your home?

(5) Strongly agree	(4) Agree	(3) Moderate	(2) Disagree	(1) Strongly disagree

13. What is your gender?

- ☐ Female
- ☐ Male

14. What is your age?

……..

15. What is your grade at school?

- ☐ Grade 9
- ☐ Grade 10
- ☐ Grade 11
- ☐ Grade 12

THANK YOU FOR COMPLETING OUR QUESTIONAIRE!

Questionnaire for teachers

This questionnaire is about **Curriculum and educational strategies for education technology competency** and addresses students. Please read every question with attention and answer sincerely choosing the appropriate choice of given answers reflecting your opinions and attitudes. Your answers will be confidential and will only be statistically processed on computer. This **questionnaire is anonym and does not engage any official responsibility.**

We thank you!

1. **What is your age?**
   - 30 to 39
   - 40 to 49
   - 50 to 59
   - 60 to 69

2. **What is your current educational status?**
   - Doctoral degree
   - Master degree
   - Bachelor(university) degree
   - Vocational school graduate
   - High school graduate

3. **What is your gender?**
   - Female
   - Male

	Educational techniques	Degree of availability	
		Not available	Available
1	Computer education and its applications		
2	Education and distance learning		
3	Global Information Network online		
4	Multimedia in education		
5	satellite channels educational		
6	E-Book		
7	The electronic blackboard		
8	Smart rows		
9	PowerPoint		
10	Scientific laboratories		

What is the degree of usage of teaching techniques in your secondary schools?

	Educational techniques	Degree of use				
		Very few	Few	Medium	big	Very larg
1	Computer education and its applications					
2	Education and distance learning					
3	Global Information Network online					
4	Multimedia in education					
5	satellite channels educational					
6	E-Book					
7	The electronic blackboard					
8	Smart rows					
9	PowerPoint					
10	Scientific laboratories					

the number	**the questions**	Strongly Agree	Agree	Average	Disagree	Strongly Disagree
Fifth: What are the factors which help in the use of educational techniques in secondary schools?						
1.	The adequacy of the number of educational techniques in schools for the needs of teachers.					
2.	The appropriateness of educational techniques for the physical environment of the classroom which encourages the use of educational techniques.					
3.	The appropriateness and validity of certain educational techniques and devices.					
4.	Most of the teaching techniques used in teaching are attractive to students.					
5.	The appropriateness of the educational techniques with the curriculum and its objectives					
6.	The presence of special rooms and laboratories in the school for the use of modern educational techniques					
7.	Provide adequate physical facilities for the presentation of the educational medium (such as electrical connections, proper illumination degree, overhead projectors)					
Sixth: What are the difficulties facing the use of educational techniques in secondary schools?						

8.	The degree of difficulty of keeping a record of the kinds of educational techniques you usually use?					
9.	The difficulties of accepting learning with the help of teaching techniques because of the damage it cause on the learning nature of humanity that distinguishes it?					
10.	Of the difficulties are the lack of availability of special laboratories by educational means that require a particular climate and conditions?					
11.	It is difficult not to organize the preservation of educational materials and teaching aids in a suitable manner					
12.	One of the difficulties is the lack of a timetable for the use of teaching materials and materials by teachers of the same teaching subjects					
13.	It is difficult not to know the available educational means within the school					
14.	Does the class time limit hinder you in using the techniques?					
15.	One of the difficulties is the lack of encouragement from the school administration to the use of educational techniques					
Seventh: To what extent the curriculum's content is organized and clear to you ?						
16.	The curriculum has specific objectives.					

17.	Curriculum content is commensurate with the students' level.					
28.	There is a balance between the subjects of the textbook, in light of the objectives of the curriculum.					
19.	The curriculum takes into account individual differences among students.					
20.	The curriculum keeps up with the developments of the times.					
21.	Topics in the curriculum are interrelated and complementary to each other.					
22.	The curriculum takes into account the diversity of different environments.					
23.	Every scientific material is related to other subjects.					
24.	Taking into account the social, cultural and economic values within the targeted society.					
25.	The Content is related to and addressed to deal with environmental issues.					
26.	The scientific material is directive to more external readings.					
27.	It demands the use modern stratigies in curriculum teaching.					
Eighth: What is the level organization and clarity of the language of the textbook and the method of presentation of the curriculum in it ?						
28.	It uses clear, easy, language to display information.					
29.	The style of the presentation varies depending on the presented subject.					
30.	Takes into account the element of excitement in the display.					
31.	Key concepts and generalizations stand out					

	clearly					
32.	There are clear shapes, graphs and maps.					
33.	The images or shapes used are closely related to the text.					
34.	Includes a list of references and specific sources.					
Ninth: What is the extent of organization of the curriculum?						
35.	Keeps the organization in the presentation of subjects and points of interest.					
36.	Its entrances keeps on one format in both form and image					
37.	Includes a well-organized, easy-to-read reference list.					
38.	Includes a list of its attachments.					
39.	Book's size is convenient to use.					
40.	Its outer shell is firm and sturdy.					
41.	The text size is appropriate for the age of the learner.					
Tenth: What is the role of the curriculum in the use of educational techniques?						
42.	The school curriculum contains instructions on how to use the teaching method.					
43.	The focus of the curriculum is on behavioral goals.					
44.	The focus of the curriculum on educational techniques and their importance.					
45.	The educational techniques proposed in the curriculum take into account individual differences among students.					
46.	The modernity of the educational techniques available in the textbook and its relevance to modern teaching methods					

47.	The quota allocated to subjects is sufficient to use educational techniques according to the curriculum					

Diagram of The study sample

	the countries	Schools	Teachers	Parents	Students
1	Iraq	25	**200**	150	600
2	Romania	18	**140**	100	410
3	**Total**	43	**340**	250	1010
4	**Time 2017**			Romania	Iraq
1				**June**	**May**
2				**July**	**June**
3				**August**	**July**
4				December	**August**
5				**October**	**December**
6				**November**	**October**
7				**December**	**November**

Diagram Gantt of the Research

	Timeframe	2015	2016	2017	2018
1	Management, communication and leadership in the field research and practice	October			
2	Advanced Quantitative Research Methods and Techniques in Education Sciences: Applied Statistics	November			
3	Advanced Methods and Techniques of Qualitative Research in Education Sciences	December			
4	Professional development and didactic performance in higher education		February		
5	Evaluative research; Educational and social programs and projects		March		
6	Management of scientific research projects		April		
7	First Report : The Educational Curriculum And The Background And Importance Of The Study		December		
8	Second Report : The Educational strategies			March	
9	Third Report : The Educational Technology And its Role In The Development Of Education			June	
10	Fourth Report : Study Proceduures And Discass The Results			October	
11	Data Collection			May June October November	
12	Data Analysis				January February
13	Writing of the Thesis				March April June
14	Preparation for the Thesis				June
15	Defense of the Thesis				September

Complete matrix of the whole research