E-Learning as a Teaching Strategy Actively Used in FATIH Project

Selami Eryilmaz *
Gazi University, TURKEY

Hayati Adalar
Gazi University, TURKEY

Abdullah Icinak
Ministry of Education, TURKEY

Abstract: The changes and innovations in information and communication technologies influence the economic and social lives of the societies to a great degree. The countries accordingly take new decisions to benefit effectively from these technologies. The new media system scrolling traditional educational paradigms has also required changes in educational systems. Thanks to the new media-equipped education system in which equality of facility and opportunity parallel to world standards is provided and technologic improvement is individualized, a new generation student profile will emerge who has global competitive skill and individual conscious and awareness. The new generation student profile has to carry the skills of problem solving, using the language eloquently, creativity, critical thinking, life-long learning, media, technology and information literacy, social responsibility and teamwork. Notebooks, projectors and internet infrastructure are aimed to provide for the six hundred thousand classes of all the schools in preschools, primary-elementary and high schools to ensure equality of opportunity, amend the technology in schools and make it possible to use more effective use of CT media in teaching-learning process, which will address more senses. The studies on the issue are still continuing. This study is based on qualitative research methods and techniques in which scanning model is used. The actual case has been presented by doing examinations on FATIH project, Turkish education system, teaching strategies used, e-learning and management information systems and a study is executed on teaching strategies of FATIH project in the light of this information.

Keywords: *Teaching strategies, learning management, information system, e-learning, FATIH project*

Introduction

The new media system scrolling the traditional educational paradigms has also required changes in educational systems. Thanks to the new media-equipped education system in which equality of facility and opportunity parallel to world standards is provided and technologic improvement is individualized, a new generation student profile will emerge who has global competitive skill and individual conscious and awareness. Many changes and innovations have been observed in social and economic areas in the world throughout 20th and 21st centuries. With the effect of computer technology and later internet technology, innovation studies in educational area in the world have been conducted accordingly to these technologies. Traditional classroom environments have yielded to new learning environments with the introduction of new media in the educational settings. The education limited to only chalk and blackboard is now getting exchange with information and communication technologies (Tarman & Baytak, 2011). Researchers on education are of the same opinion that new media-equipped education environments have positive effects on more facilitative teaching and increased learning (Teo & Lee, 2010).

The modern technology-based learning model of the 21st century is a new approach attracting all the learners' attention and it facilitates different learning experiences. It also makes the learners active, creative, sophisticated and well-behaved individuals in a global network. In today's world, many students are intertwined to technology. This enables them to have a 7/24 mobile access to information and sources, develop a multimedia content and share them with the world. It also paves the way to participate in online social networks in which all the people share their ideas, collaborate and learn new things. Technology, meanwhile, enables to reach a wider spectrum of sources and establish links with a broader community of "educators" involving teachers, families, experts and counselors outside the classroom. In the 21st century, it's important to integrate the skills like critical thinking, problem solving, working in collaboration and multimedia communication to the each learning areas. Instead of being content expert, the learners are aimed to have the ability to learn more, keep motivation high for more learning and be social network learners wherever and whenever s/he can reach the information (Caglar, 2012).

Through the transition to the information society today, the importance of well-educated manpower is emphasized in all the platforms. In this sense it's so clear that a society comprising of people who follow the developments both in his country and the world,

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* **Corresponding author:**
Selami Eryilmaz, Gazi University, Turkey
Email: selamieryilmaz@gmail.com

open to progress, interrogative, effective user of information and communication technology is the basic component to be a information society. It's apparent and of utmost importance that the students have 21st century skills like critical thinking, problem solving, working in collaboration (TUSIAD, 2011).

Educational organizations have made changes in their teaching programmes for the students to be able to get better education and show higher success. The most salient one in these changes is e-learning in which information access and transfer is easy. Emerged as an alternative to formal education, e-learning is more functional as an assistance to existing teaching systems. The points missed in traditional classroom environments can be taught and reinforced thanks to e-learning. Vivid imagining of abstract concepts can be easier by means of simulation programmes, the system profit. Besides, visual objects and simulations are also key factors to a permanent learning (Isik & Yagci, 2011).

It is obligatory to benefit from the facilities of information technologies in all teaching processes to be able to transmit the qualified education to wider range of people equally and effectively. It's necessary to amend the learning and teaching environments by information technology, increase the opportunities, raise the quality level of education and extend the scope of educational services by taking advantage of these means. By this way;

- Course review will be easier
- Teaching will be everywhere and every time
- Learning will be long lasting by using various materials in multimedia
- The quality of information technology in our country will rise
- The equality of opportunity will be possible among the families from socio-economically lower and upper families
- The students will achieve out-of-school activities by means of information technologies.

Method

The study is based on qualitative research methods and techniques in which scanning model is used (Yildirim, 2005). The actual case has been presented by doing examinations on FATIH project, Turkish national education system, teaching strategies used in the project, e-learning and a new model proposal is presented in the light of this information.

Findings

By using " The Component of Active CT Use in Teaching Programmes", one of the components of FATIH project, it's aimed to enable teaching programmes, defined as activity, acquisition and student-centered, to have an active use of CT media. The basic goal of this component is to make possible the use of CT, which is provided to the class within FATIH project, more actively in implementation of accordingly prepared

goals and targets of the lesson, learning areas and teaching principles and methods (Yoruk, 2013).

With the introduction of this implementation aiming to raise the quality and efficiency level of education in our country, new teaching methods adopting active use of information and communication technologies and named as web-based or e-learning have become important parameters of this process. Effective use of the e-learning and e-teaching strategies especially for the implementation of educational curricula has become very important in that FATIH project reaches its goal. In this respect, need for a better understanding of e-learning and e-teaching strategies by teachers and in-service training activities for implementation arises. It's obvious that academic studies should be taken into consideration regarding the active use of e-learning in FATIH project to contribute to this need. Upon the literature review, it's seen there isn't enough source to be able to meet this need. We have taken these reasons into consideration and we plan on contributing the related literature by our study.

E-Learning and Main Characteristics

E-learning is the name of electronic technology use in teaching and learning processes. Since the beginning of 20th century, information and communication technologies like cinema films, gramophone, sound tracks, radio, television, magnetic sound bands by which information based on sound and image are stored and transferred have been frequently used in-class teaching and distance learning. With the widespread use of personal notebooks, the term "computer-based education" and with the common use of internet, the term "internet-based education" has become more common. However, all types of use for information and communication technologies in teaching and learning are called as "electronic learning" or shortly "e-learning" (Mutlu, 2013).

According to research of Tai (2005), e-learning is defined as education and training delivered by an instructor or self-paced from a curriculum database stored on the enterprise local area network This also means anything provided, activated or mediated by electronic technology to reach the determined goals of education. E-learning facilitates learning from the information delivered electronically. This provides individualized web-based learning experience and measurable results (Kor, 2008).

Online learning or e-learning is a teaching and learning process in which learning material is transmitted by electronic media like text, sound, animated video, graphics, schemes and animation in electronic media such as computer, internet technology, TV, mobile phone (Özkul, 2011). E-learning is a teaching and learning activity in which the teacher and the student do not have to share the same room and time simultaneously.

E-learning is also defined as learning experiences or formatted education content delivered by electronic

technology. Carrying out, managing and supporting of the educational activities in e-learning environments is possible with the use of internet technology. The use of multimedia technology and data exchange enables an easy collaboration (Caglar, 2012).

What are the differences in the transition from traditional teaching to e-learning ? The answer of this question can be given by comparing the traditional teaching and e-learning in learning organizations.

Table 1. The Comparison of Traditional Teaching and E-Learning

Traditional Teaching	E-Learning
Teaching the content	Learning processes
Classroom-centered	Work-centered
Teacher-centered	Student-centered
Concerning the educational context	Concerning each individual
Activity-centered	Result-based
Experts on education	Learning counsellors

The comparison in Table 1 clearly shows that each individual is responsible for his own learning process and experience in learning organizations. Each worker must get nourishing information to be able to increase his own efficiency and contribute to his organization more. Additionally, if obtaining, distributing and implementation of information are referred as elements of information management, then information management becomes faster and more efficient by e-learning. For example, almost all the big organizations have a webpage. Besides giving information about their products and services, the organization page also provides training opportunities for its workers on various topics like customer service, sales and marketing. The accessibility of these kind of information everywhere and every time and the low cost of transport makes e-learning more attractive among the organizations. The workers become aware of the latest news and announcements concerning their organizations and outer world by use of these pages. It's inevitable in the next few years that e-learning will be more important and commonly used in the world of companies (Yoruk, 2013).

The biggest difference of e-learning from the traditional educational sense is its radical change foresight, rather than the technology it has. This approach is an individual-centered model which gives priority to him and encourages in attaining the information. In e-learning, the teacher and the student do not have to share the same room and time simultaneously during the educational activities (Aytac, 2003).

One of the most basic characteristics of e-learning is "Socializing the Learner". The individuals participating in e-learning may have difficulty in feeling in a classroom atmosphere. Therefore as much communication media as possible should be used in learning so that the learners feel comforted in getting contact with the instructor and the other learners. Including some facilities like forum and chat in the e-learning encourage the communication among the students. The instructor can also follow the learners easily by these communication media. The instructor can get in touch online with the learners and answer their questions. The social networks lately popular can also be included in e-learning environments. Accounts in social networks like Twitter and Facebook can be opened for e-learning environment and missing learning can be compensated by this way (Tozmaz, 2011).

Types of E-Learning

Researchers have formed different concepts frequently come upon nowadays in accordance with the development of Educational Technologies. Below the modules to be in an e-learning system are listed:

- Web-Based Instruction
- Synchronized Instruction
- Asynchronized Instruction
- Virtual Instruction
- Computer-Based Distance Education
- Computer-Mediated Communications
- Internet Based/Aided Education
- Online Education
- E-Learning

According to Henderson, e-learning has three main types figuring how the learning time is planned and how to get interaction with the others.:

1. Synchronized e-Learning
2. Self-Directed e-Learning
3. Asynchronized e-Learning

1. Synchronized E-Learning: In this type of learning, the students from different locations meet an instructor via Internet at the same time. Throughout the communication, the students are all online. In this process student-student and student-instructor interactions are observed (Tozmaz, 2011). Although both the students and the instructor are in different locations, this type of learning offers classroom-like environment as the students hold the same activity at the same time. (Tozmaz, 2011). Depending on this, the students have the facility to be involved in a much familiar environment enabling them to feel more comfortable throughout the learning process.

2. Self-Directed E-Learning: In this type of learning the students process the target material with their own efforts, in which there is neither students nor instructors to interact with (Tozmaz, 2011). CD-DVD based activities and the videos on the net can be given as an example for this type of learning.

3. Asynchronized E-Learning: This type of learning is a mixture of the two techniques mentioned above. The students meet an instructor via net and get interaction with. However, it is not required to be online at the same time. The students leave messages to each other and their instructors to be answered later. The students can work on their own while they still interact with the others (Tozmaz, 2011). The materials to be covered are delivered by small lessons which are sequenced as problem solving, simulation and exercises.

Thanks to this, the students can directly follow the lessons. There is an assessment test at the end of each lesson (Tozmaz, 2011). In this type of learning self-discipline of the students is very important. As it offers a learning environment based on written and visual materials, the students need to have the ability to read effectively and write their thoughts about the target material efficiently, which sometimes makes them feel stressed. Any of the e-learning types is not better than the other. All of them are increasingly used (Tozmaz, 2011).

When searched thoroughly, it will be clear that not all institutions in the world offer distance learning; as a result it is possible to categorize the e-learning carried out according to the use of internet. The Organization for Economic Cooperation and Development stresses on the two types of e-instruction: Web-Supported e-Teaching and Web-Based e-Teaching (Dogan, 2011).

Web-Supported e-Teaching: In this type of instruction, education in classroom environment is the case. The use of internet at particular time adds a different dimension to the classroom environment.

Web-Based e-Teaching: The students are required to connect to the sessions, participate in discussions and get access to the lecture notes in this type of instruction. Except having interaction with each other, it is not compulsory to keep pace with time.

Mixed e-Teaching: It is needed to meet the students face to face in order to discuss about the lessons and present projects. At the time of the lesson it is crucial that students are all online. Briefly, this type of instruction carries some patterns of classical classroom environment. By the research held by Noir Sur Blanc, the institutions carrying out the e- instruction in Europe are identified and the percentage of implementation according to the countries is figured out. As a result, it is noted that the perception of e-teaching does not cover the same practices in every institution. When categorized the answers of the questions to describe this situation, it is seen that three different types of strategies are placed emphasis on:

1. Extensive e-teaching strategy
2. Concentrated e-teaching strategy
3. Integrated e-teaching strategy

Extensive e-teaching Strategy is the implementation of transmission the e-learning to the educational programs as ECTS or time in which the e-teaching is restricted to a certain degree. As a result distance learning is not applied in this system. Concentrated e-teaching strategy is completely the implementation of e-teaching in which developing telecommunication systems are made use of. It is practicable to apply distance learning in this system. Integrated e- teaching strategy is a system around which all the pedagogical elements are located and a minority of 5% is taken a base in education. This is different from the other e-teaching implementations (Dogan, 2011).

Lesson Softwares Implemented In Learning

When searched the required items for computer based instruction, it is understood that it covers a lot of components such as equipment, softwares, laboratory, training of teachers and assistant staff. Lesson software is accepted as the most important factor of the other items and it is claimed that the success of computer-based teaching is directly related to the lesson softwares implemented in learning process (Keser, 1988). When examined the factors which are supposed to affect the process of computer based instruction, it is stated that the motivation of students, improvement, interaction, personal differences in learning, the type, content and the quality of the lesson program, the instructor's perception, attitude and expectation of the program, the role of variables, the integration of lesson program, the format of the target application at school are all included (Askar, 1991).

In e-learning, there are lesson softwares developed within the framework of different theories. Private lesson, Exercise and Simulation, Pedagogical Game and Problem Solving are the most common lesson softwares in Computer Based Teaching (Yalin, 2008).

1. Private Lesson: According to Yalin, the softwares of private lesson are initialized with a detailed introduction arousing interest of the students by giving general information. Thereafter, each level covers a serial of activities such as presentation of information, asking questions about the target material, receiving students' answers and assessing them and giving an appropriate feedback (Yalin, 2008).

In an introduction of a private lesson, the items listed below are observed:

- Drawing attention
- Informing students of the goal
- Giving instructions about the use of the program
- Recalling previous information
- Providing a summary or schema including the general features of the subject matter (Yalin, 2008).

Tutorial programs tell the subject matter like a teacher, provide a wide range of exercises and motivate students as well as assessing their achievement. The aim of this program is to create a learning environment through one to one interaction between the computer and the student. The most significant characteristic of this program is that it enables student to study

according to his own speed. In addition, the student has the opportunity to revise the topic as long as he wants. This program also decreases the time of instruction; therefore, it provides the facility to do more exercises in the rest of time (Usun, 2004).

In private lesson softwares, the "Introduction" is followed by the section where the comprehensive information is presented. In "Question and Answer" part, questions with short answers about the subject matter are posed. Questions and answers put forward a framework which summarizes the topic as well as allowing students to assess themselves. In the section of the "Assessment of the Answers" the correct answers of the questions are provided. The "Feedback" session is the part where it is showed whether the student has comprehended the subject at the desired level or not and accordingly whether it is needed to revise the subject once more or not.

2. Exercise: This one of the classical software of e-teaching, is another program which is widely made use of. It is also the easiest computer based program to be prepared of the commonly known ones (Demirel and Yagci, 2001). According to Demirel and Yagci, the program flows as shown below:

- Software asks a question to the student.
- The student answers the question.
- Software checks whether the answer is correct or incorrect.
- Software gives feedback to the student.

3. Simulation: Simulation is a method by which learning is done by a model developed accordingly for real-life situations and problems in classroom environment. It facilitates working and developing in situations where implementations in real environments are difficult, dangerous and costly (Usun, 2004). Simulation softwares are aimed to give knowledge and skills by modeling a set of events or situations (Yalin, 2008). In a simulation program the items listed below are included:

- Scenario
- Modeling
- Teaching tactics and strategies (Yalin, 2008).

In a simulation program, the student learns some complicated skills by experiencing real life situations and builds an awareness of economic, social and environmental problems by taking part in a presentation (Yalin, 2008).

4. Pedagogical Game Softwares: Games are enjoyable activities which improve students' physical and mental skills as well as increasing their interest in art. Pedagogical games make it possible to reinforce the covered topic in a more comfortable environment through revision. The format of the game helps students to understand the target material easier by developing their problem solving skills and keeping them on alert throughout the learning process. This type of softwares is promoted for pleasure, but aimed

at providing extra practice for students at the same time. The main concern is whether the software motivates the students or not as this type of softwares is equipped with games facilitating learning process. It depends on the instructor to improve the qualities of the software. To what extent the program is informative is directly related with how carefully the software is prepared (Yoruk, 2013).

The Benefits of E-Learning

E-learning environments can offer more learning opportunities than the students can find in traditional learning environments. Besides the most important advantages, learning independently from time and place, it has lots of benefits. For example:

- The learner can study anywhere and anytime he wishes.
- It provides cost advantage.
- It enables more collaboration and interaction among the students (Jones, 2007).
- It makes possible to reach more people with less workload
- It facilitates lifelong learning by removing the obstacles like time, distance and socio-economic status (Aytac, 2003).
- The learners can make plans and make progress on their own learning by selecting materials appropriate to their level
- It addresses to students with different types of learning.
- It enables the learners to take the responsibility of their own learning by developing their sense of responsibility and self-confidence (Del Vecehio & Loughney, 2006).

The Limitations of E-Learning

Though e-learning offers many advantages for the traditional learning environment, it has some negative aspects as in every new learning method. For example:

- The students not having the habit of studying regularly and with low motivation level may have problems following the lessons.
- The learners may feel isolated from their classmates and the instructor.
- The interactive activities may be challenging for the learners used to traditional learning environments.
- The learners may have problem reaching the instructor during the learning when needed (Del Vecehio & Loughney, 2006).
- Creating the content is exhaustive, expensive and time-consuming.
- The application of some acquisitions like hand-skills, laboratory skills in virtual environment may be difficult for both the learner and the instructor
- The learners may have high level of interest; however they also should have a sufficient income. Cheap and safe access facilities should be supported publicly to be able to overcome this problem (Aytac, 2003).

Fatih Project and Examples of Teaching In Lesson Within E-Learning

In the report presented after "Fatih Project – The Workshop on Education of Future" hosted by Okan University in June 11, 2012, it was emphasized that different learning environments and concrete materials should contribute to the realization of the approaches in teaching programmes. According to the report, it is very important for the students to learn by discovering in guidance with the teacher especially in some branches. Teaching should be student-centered.

Examples:

Science Field: More permanent learning should be aimed by enabling the students do the experiment of static electrization in classroom environment instead of watching it in video or an animation in tablet or interactive board. It's necessary to configure the information on radiation experiment in guidance of the teacher because that experiment cannot be done in classroom or laboratory.

Mathematics Field: The students can themselves discover the surface correlation of cylinder by using the concrete materials they have in guidance of teacher. Directly giving the correlation after the developments of the cylinder in video would not help the students to generate the information.

Geometry Field: Dynamic software can be used in tablets or interactive board with computer to show the accuracy of some terms in geometry. Using of these software by the students themselves can contribute to significant and permanent learning of the students. The students' isometric or orthographic drawing of the structures formed by using concrete unit cubes leads to a better learning than watching it in video or animation. When the drawings of fractal images on paper are limited, the images can be more clear with the help of animations / tablets following the on-paper work.

Social Studies/Geography Field: Using the video, animation or ppt presentations contributes to understanding of the concepts like scale, coordinates or maps drawn on different scales and the effects of these on details of land forms. However, it's important for the students to have a permanent learning and transform the knowledge into skill by map drawing skills using paper and cardboards.

Results and Discussion

The use of information technologies in teaching programmes has been emphasized increasingly since the introduction of constructivist approach in our country in 2004. Besides the knowledge, skills, values and concepts to be given to the students, the new teaching programmes especially anticipates getting to the information, using and making it more permanent via information technologies. As the traditional approaches to learning are insufficient, in our era of information and technology, actively using the information technologies is one of the most important skills in multiple intelligence and constructivist learning approaches.

Thanks to the active use of information technologies in teaching programmes, it is stated that many advantages will be observed in learning. For example;

- The lesson reviews will be easier
- The learning will be independent from time and place
- More permanent learning will be possible with the use of various materials in multiple media.
- The quality of information technologies in educational field in our country will rise
- The equality of opportunity will be possible among the children from high and low socio-economic background
- The students will be able to have learning activities by the tools of information technologies outside the classroom.

"The Component of Active Computer Technology Use in Teaching Programmes", one of the components of FATIH Project in education also aims to transform the teaching programmes defined as activity, acquisition or student-centered for more active use of CT media (Caglar, 2012).

Since the FATIH Project's emergence and implementation in pilot schools, many comprehensive discussions and evaluations have been made on all the components of the project. Workshops, project-based case analyses and national/international articles and academic studies at master's level have been done to see the efficacy of the project, the level of meeting the expectations, the problems arising and bring proposals to these problems. These studies show that the project is still not at the desired level and there are big problems in e-teaching methods and strategies applied in learning and teaching process, teaching softwares and educational e-content. Though the project is in harmony with the student-centered and constructivist approach applied in the curriculum of National Ministry of Education since 2005, it's clear that traditional teaching approaches and implementations are still in effect. When the acceptance of the project by the teachers, the first implementers, is taken into account, the importance of the integration of traditional teaching approaches into the project is emphasized in some studies. On the other hand, in some studies like Caglar's (2012) there are some opposite ideas. For example; traditional teaching models should be abandoned in the process of integration of FATIH project to the system and thereby giving priority to the active use of learning/teaching methods and techniques. Also, the issue of creating a model in which technology is not independent from pedagogy and content knowledge or the need of establishing the project on a strong theoretical basis by selecting a model from the literature are emphasized.

Upon an examination of FATIH Project Workshop Report presented in June, 2012, it is observed that the workshop does not elaborate the project-based applicable teaching methods and techniques. Rather, it says it should be developed by universities, private companies and teachers, project implementers, by means of encouragements and supports of some organizations like TÜBITAK. It is suggested that the design of implementation process be open to flexible and constant development and innovation in issues like teaching methods, content, hardware, software of the electronic media, which the schools will be allocated within the framework of the Project. There is an emphasis on preventing the misunderstanding that the use of technologic media in teaching and learning is the prime purpose in this project. Also, it is strongly recommended to establish the required infrastructure in which the teachers in need can get help, prior knowledge or seminars and have an active role in this process. Another point stated is that each lesson should be evaluated in its own category and curriculum and the methods and media for the teaching should be decided and the most appropriate and functional ones be selected in accordance with this decision. Furthermore, it is emphasized that the perception each learning topic involves project-based use of computer and interactive smart board is not correct and the awareness of teachers should be raised on using other alternative and convenient media they have. It is clear from the workshop report that not much has ben done to specify the content wealth and applicable methods and techniques within FATIH project. Therefore, it is highly probable to meet big problems in implementation process unless having a base strong enough in terms of academic, psychological substructure and competency, and as a result, a failure in meeting the expectations despite the allocated high financial costs.

Altan and Tuzun (2011) points out another important problem in the implementation of the project: The use of technology-rich individual learning environments in education increases the workload of the teacher and scrolls his role to guidance. The students perform their learning by themselves in this learning environment and ask help from the teacher so much. When examining the information about FATIH project, it is seen there is a visionary image of teacher lecturing on the interactive smart board. Within the project the teachers should be provided the necessary in-service trainings on guidance in class and active learning if the active learning of the students is aimed to improve.

According to Altan and Tuzun (2011), some teachers may not prefer to use CT media supplied in FATIH project. The use of these media would increase the work prior the lesson. Thinking that this will bring extra workload besides the responsibility of finishing the curriculum, the teacher may not be volunteer to use them. Additionally, some students are able to use CT media better than some of the teachers as they are intertwined to technology in their daily lives. Therefore the teacher may resist using these media feeling himself incompetent in front of the students. The use of CT media in lessons may increase the time duration which will be allocated to assessment activities of student success. The teachers should evaluate the level of substantive learning throughout the lesson in teachings in which technology-rich individual learning environment is used. Also, it has become necessary to evaluate the completed activities of the student after the lesson. The teachers need extra time to evaluate the process and portfolios. Thus the teachers may prefer to continue with the traditional learning and teaching methods.

TUSIAD (2012) has also indicated to the similar points in its report and emphasized that the technology use should not injure the student-teacher communication and sensitivity should be shown on re-arranging the relationship between the student and the teacher. It attracts attention on the importance of doing studies and analyses on how to mix traditional and modern learning methods. Giving regular and detailed feedbacks to maximize the learning is very important for deepening the learning process, the sustainability of focusing, providing help and guidance, shaping and adapting the interpersonal processes and actions.

In this sense, we are of the opinion that the use of both traditional and modern teaching methods in lessons together within the framework of FATIH project and the studies on developing this co-model and similar models will be positive and functional in that FATIH Project reaches its goal when taken the resistance of the teachers in our country towards the modern approaches and especially using the technology (smartboards) thinking that they will fail to achieve the expected level of efficiency.

Starting from this point, Ar and Cengiz (2013) in their work named "Developing Instructional Systems Suitable for FATIH Project - Re-Interpretation Of The Technique Question and Answer" have taken reconsidered "Question and answer" technique from the traditional classroom teaching techniques in accordance with Fatih Project and have examined the differences occurred in students, teachers and educational environment by developing an online evaluation system which students' tablets can communicate with smart boards and teachers' computers. They designed an online question-and-answer system suitable for using within project's facilities in order to see the potential Fatih Project has. Operation of the system is shown in Figure 1.

System consists of question pool in which questions are recorded, student records and statistics module. At the practicing in class The Software of Usage In Classroom of Question Answer Application the following steps are followed:
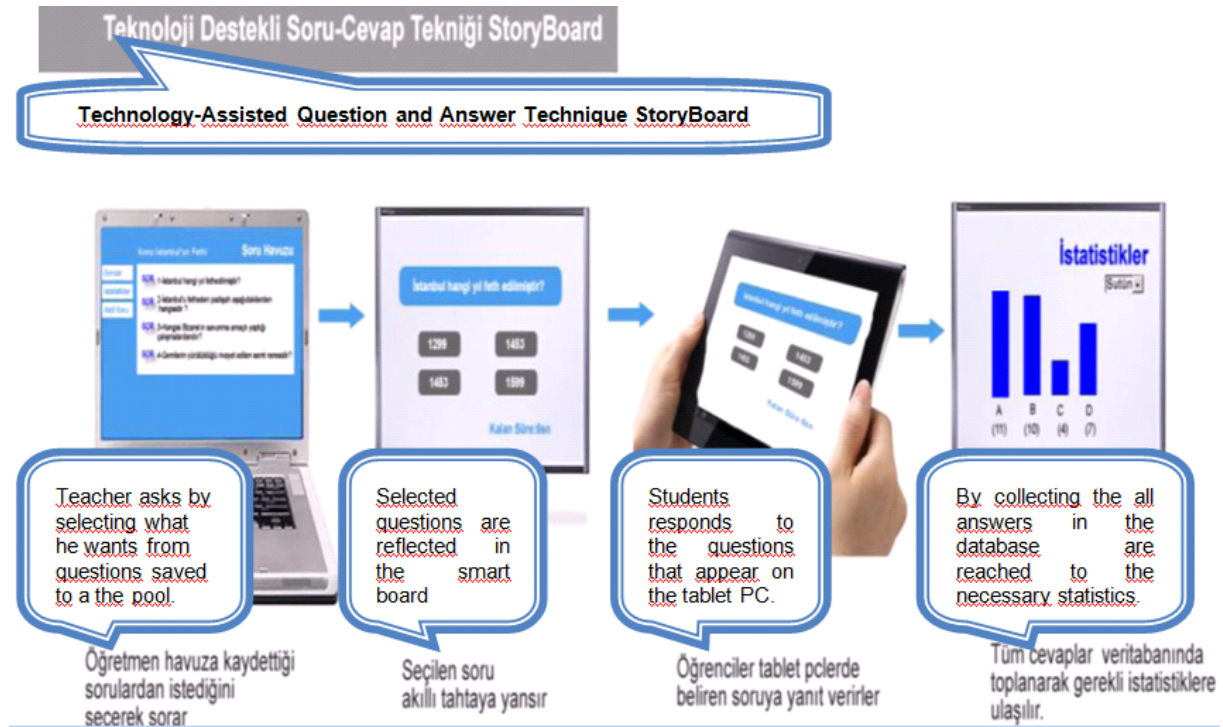
Figure 1. Technology-Based Question and Answer Technique StoryBoard

- The teacher logins into the system with its own password.
- The teacher reaches the question he wants to ask by filtering according to the courses and subjects in the pool.
- Students start to wait for the questions by entering the system with student ID numbers.
- The teacher activates the question and if he wants, he gives a time limit.
- Questions are displayed in the students' computers / tablet computers .
- The students respond to the question by using the application interface.
- Answers are collected in the teacher computer in which the software is installed.
- The required statistics are reflected on the screen.

According to Ar and Cengiz (2013), in this manner, directing all the questions in the system to the entire class and revealing of right and wrong statistics from answers will ensure to make a more successful assessment of mastery learning model, the feelings of exclusion likely to occur at the student towards answer-questions activities will leave its place to attention to be ready for every question. If desired, a competitive classroom activity by ranking the most rapid response among those who response correct answer to the question can be formed and realistic and objective grounds can be based to contentment note by giving points to the correct answer through the symbolic rewards. At the same time, in the question and answer technique, confusion that can occur in the classroom will be prevented and the system will give detailed statistical data.

The most important disadvantage of the system is that the self-expressing ability of the students is not so much possible while in the question and answer technique it is. Thus, this system is not recommended for the first stage of primary education.

Pektas, Celik, Katranci and Kose (2009) investigated the effect of use of computer-aided instructional materials on the student achievement in the science course. In a study consisting of fifth grade students, it is presented computer-aided teaching material to experimental group students, traditional teaching material to the control group. This research has revealed that according to traditional teaching methods, computer-assisted instruction is more effective on student achievement in science courses.

Tozmaz (2011) developed example teaching model for the implementation of e-learning strategy in his master's dissertation and inferred important points. In this study, it is highlighted that if the students see the e-learning as an educational environment ongoing under the guidance of the teacher, it can lead to positive results and will help students with low motivation and poor self-discipline to be connected to lesson as other students with high sense of responsibility. It is emphasized that the studies on the use of images and text in visual materials should be reconsidered for the youth of today, because today's young people spend time in front of the internet constantly in the technology era. Based on the opinion that this situation also will lead to changes in their visual perception, the importance of the re-implementation of the works done in the past to

today's youngsters and the dissemination of the comparison of the results are emphasized.

Turker and Yaylak (2011) noted in their study that the implementation of internet-based teaching methods in the teaching of elementary social studies has increased academic achievement in lessons and has provided the permanence. Thus, he emphasizes teaching should be reinforced with web-based teaching tools which will attract the attention of the students, rather than only using textbooks.

Salman (2012) have reached teachers and students opinions towards all components of the FATIH Project in his thesis study and in the light of this opinion, he has concluded that e-content facilitates the learning (video, animation, e-books, cartoons, educational games, etc..). Through the information technology equipment in classes, he states, on the one hand students are more interested in lesson, however, on the other hand students have failed in teaching-learning process, because they do not receive any support from teachers and they are alone with the computer.

Ayva (2010) has taken the views of students in his work named the students' opinions related to social studies teaching and learning process and there is an expression like "I like lessons most when the smart board is used. Because learning is easier and more fun. My imagination and my intelligence is developing", which is one of the most appreciated opinions. This shows that the use of smart boards in social studies education affects positively the students' attitudes towards lesson, motivates them and they learn better.

Finally, Yoruk (2013)'s study named "A research on the attitudes of general high school principals', teachers', and students' towards technology and views on the use of the project Fatih" highlighted the importance of the blending teaching programs, course curricula, classroom activities with electronic content interactive boards, animation, simulation, online question banks and exams which are provided in the FATIH Project and the importance of the presenting to the students on electronic media.

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