Curriculum evaluation in online education: the case of teacher candidates preparing online for public personnel selection examination

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ABSTRACT. The aim of the present study is to evaluate the efficiency of an online curriculum based on the views of lecturers and students enrolled in the program. The study is mainly based on survey method. In order to collect qualitative data, interviews forms developed by the researcher were used. The reliability and validity of the interview forms were checked by experts of the field. The qualitative data was analysed through content analysis. In the first place, data was coded, the themes emerged, the codes and themes were arranged by the researcher. As a final step, the findings were coded and interpreted. Based on the findings of the study, the strengths and weaknesses of the online curriculum were identified and a number of suggestions were offered based on the findings. The results of the study indicate that both learners and lecturers believe that online education is beneficial as well as productive and they are satisfied with the process. Online education was found to be preferable because it is time-saving, more economical, and flexible. On the other hand, limited interaction, unsustainable motivation, and problems caused by insufficient infrastructure were found to be negative aspects of online curriculum.

KEYWORDS: *Online curriculum, online education, curriculum evaluation*

Introduction

Recently, there have been extensive changes in education during the 20th and 21st centuries. The globalized world, which is changing emerging means of communication, is in a constant state of communication and information exchange, which greatly influences approaches to education. For example, as the gets smaller, more

cultures come into contact and this brings to the fore the issue of information exchange. Therefore, topic-based approach gives way to interdisciplinary and intercultural approaches. This comes to mean that there are two fundamental pillars for intercultural and interdisciplinary planning. In addition, the close relation between knowledge and communication technologies makes the two terms highly important. It is known that life-long learning is on the increase in developed countries. Although schools are viewed as important sources of knowledge, they are not the sole places where learning takes place. Therefore, a new term is emerging "learning how to learn", which has been triggered by the developments in education and information technologies. Active learning, learning how to learn, electronic learning, learning usable information, computer based learning, distance education has become mainstays for the current approaches to curriculum development. Curriculum development has been extensively studied in relation to information technologies.

Current curricula focus on teaching and learning activities rather than elaborating on content in detail although there is a relative focus on determining the content in most curriculum development processes. Traditional curriculum development approaches are mainly based on the assumption that there should be a logical linear progression of the content to be taught and the content should be explicit. This might be valid for scientific and technological subjects. Yet, there may still be debate as regards the psychology behind the learning of these concepts. This means initiating the learning curriculum based on the interest of learners and moving into the underlying logical structure. Fundamental concepts may at times be hard for learners. For example, terms like "timber" or "glass" may turn out to be complex concepts in a chemistry class (Nearly, 2002, Devedižić, 2006; Hamee, Badii and Cullen, 2008).

There is no doubt that the opinions of practitioners vary widely as regards the importance attached to the different aspects of the planning and application processes of a curriculum, and the psychology of learners. With the rise of young researchers, significant developments took place in the field. Some of them are iterated below (Neary, 2002, 57):

- identifying the needs in terms of course content: the importance of new and emerging skills
- defining the content need of the curriculum and attaching more importance to fair and reliable assessment
- defining the importance of the learning process besides learning outcomes
- the importance attached to the active participation of the learner
- the importance attached to both teacher-centeredness and student-centeredness

In short, it can be said that in curriculum development, life-long learning, information technologies play a crucial role (Huddleston and Unwin, 2002; Akkuş, 2008; Badrul and Mohamed, 2015). Learning how to learn can be defined as learning by oneself based on students' using metacognitive thinking skills. Developments in information technologies lead to the development of new learning and teaching environments. Among these are computer-based learning, distance education, online learning and electronic learning (Alessi and Trollip, 2001; Dietinger, 2003; Mu and Ding, 2005; Yanpar, 2006).

The recent technological developments, the widespread use of computers and the Internet, lead to significant developments not only in industry but also in education. It must be emphasized that information technologies and e-learning play a significant role. In particular, with the rise of online learning, traditional ways of teaching and learning may appear to be expensive and demanding. E-learning, or electronic learning, is a term used to define concepts like web-based learning, virtual

class environments, learning from CD / DVD, Internet-based learning. The purpose in these teaching and learning environments is to equip learners with necessary knowledge and skills (Bigdoli, 2004). Viewed as the most powerful communication tool, the Internet brought a new dimension to education. While forming a variety of learning models, the Internet has also brought new dimensions to individuals' learning strategies and motivations. The Internet-based education, which resulted from the rapid integration of the Internet in education processes, turned the unilateral interaction model of the 1800s into bilateral interaction model (Gürol and Sevindik, 2001). The term online education, which enables two-way communication among teachers and students, was popular during the 2000s (Cinkara and Bağceci, 2013). The rapid development of information technologies at the end of the 21st century and their becoming a part of daily life paved the way for the rise of online curricula (Ergül, 2006).

Online Learning

Online learning takes place through computer networks. The teacher and teaching techniques are connected to terminals by means of computer networks. They make synchronous or synchronous teaching possible (Race, 1999).

No matter where courses are conducted, in a short time the need for Web or Internet based materials besides course books will be felt. Since technology makes it possible to work with multimedia, it will provide more information in different formats. Working with technology and integrating it into education curricula has become an indispensable component of education process. Whether online or face to face, students must be in close connection with course materials (Porter, 2004).

From this point of view, it can be argued that there are not actually huge differences between face to face education and distance education. In materials design, both in face to face education and online education, philosophy of education and students' needs should be taken into account. In the case of distance education, students may need a mentor to receive help (Porter, 2004).

Curriculum Development in Online Education

Planning in online education highly depends on the intended goals and the target audience. At that point, whether the course will be conducted online (synchronous or asynchronous) or not and if so how it will be done assumes great importance. Moreover, there are three important points to consider in Internet-based distance education. These are as follows:

- selecting the correct methods and techniques
- supporting the methods with the necessary Internet technologies
- providing technical support and employing efficient materials and teachers

There is no doubt that online education must be planned with utmost care and the resulting course design must be innovative and must be interactional. A constructivist course design could be employed. Each course must comply with the requirements of electronic course curriculum; therefore, sustainability can be ensured in courses and students can progress from lower level cognitive development to higher level cognitive development (Ornstein and Hunkins, 2010).

All in all, it can be put forward that effective planning is a fundamental component of implementing a teaching program (Porter, 2004).

The present study focuses on an online curriculum that was designed for an exam preparation

process. The study evaluates the online curriculum based on the views of the learners and instructors.

Aims of the Study

The fundamental aim of the study is to find out the views of teachers and students enrolled in the online curriculum and conduct evaluation based on these views so that the strengths and weaknesses of the curriculum can be identified. To this end, the following research questions were formulated:

1. What are the views of learners enrolled in the online education in terms of the strengths and weaknesses of the curriculum?
2. What are the views of instructors in the online education in terms of the strengths and weaknesses of the curriculum?
3. What are the suggestions of learners and instructors as to the efficiency of the online curriculum?

Limitations of the Study

Basically, there are two limitations of the study. In the first place, the study group consists of 107 participants. The number of instructors was 11.

Method

Research Design

The present study is descriptive in nature and employs a survey method.

Participants

The participants of the study were 107 students, who are enrolled in the online education curriculum. All the participants are teacher candidates. They are supposed to take the Public Personnel Selection Examination to become teachers. They are all graduates of education faculties from different universities. Some of the participants chose not to answer the questions and they were not included in the study. In addition, 11 of the instructors were contacted and interviewed on the efficiency of the curriculum. The reason why there are 11 instructors is that there are 11 different parts in the exam. These parts or lessons are history, geography, citizenship, Turkish language, mathematics, which are termed as the general culture component, and curriculum development, teaching principles and methods, developmental psychology, psychology of learning, testing and assessment, guidance, which form the educational sciences component.

Data Collection

Qualitative means of data collection were employed in the data collection process. Learner interview form and instructor interview form were used. The interviews were conducted face to face with teachers. With the learners, all the interviews were conducted on the phone. The interviews generally lasted for 7 to 10 minutes. Instructor interviews lasted for 10 to 15 minutes. The interviews were recorded and then transcribed.

Student Interview Forms

In order to collect the views of the participants, "student interview form" was prepared and expert opinion was obtained in order to ensure realiability. Four questions were directed to the participants. These are open-ended questions and based on their results codes were identified. The four questions that were directed to the participants are as follows.

1. How did you find the online curriculum?
2. What are your views on the effectiveness of the online curriculum?
3. What are the strengths and weaknesses of online education in relation to face-to-face education?
4. What are your general views as to the learning process?

Lecturer Interviews

In order to draw comparisons between the views of the participants and instructors and decide on the effectiveness of the online curriculum, "instructor interview form" was developed. Expert opinion was obtained to ensure the reliability of the instructor interview form. Interviews were conducted face to face and recorded. The recorded interviews were converted into electronic data. The questions that were directed to instructors are as follows:

1. How did you find the online curriculum?
2. What are the strengths and weaknesses of online education in relation to face-to-face education?
3. What is the influence of online education on the learning atmosphere?
4. What are your suggestions for a better online curriculum?

Data Analysis

Qualitative research can be defined a research design in which interviews, observations, and document analyses are employed and which aim to find out phenomena in naturally occurring environments in a realistic and holistic manner (Yıldırım ve Şimşek, 2013). In the present study, for the qualitative data, which was collected through interviews, descriptive method was used. Frequencies were calculated where necessary and used in the interpretation of the data. The following steps were followed for the qualitative data analysis in the study:

1. processing data
2. coding the data
3. interpreting the data

Coding the Data

Data coding is used in order to extract important points. There are three stages to this process. In the first stage, concepts found in the data are identified. In the second stage, relationships among the variables are determined. In the third stage, these relations are explained (Punch, 2013). In the present study, concept-based coding was conducted. Descriptive analysis was conducted in order to interpret the data.

Descriptive Analysis

In this approach, data are analysed based on pre-determined themes. In descriptive analysis, direct quotations are used so that important points can be more strikingly highlighted. The aim of this analysis is to present the data in an organized and neat manner. As such, the data are described systematically. As a next step, these descriptions are interpreted, possible causal relations are sought, and a number of conclusions are drawn. Relating the emergent themes, interpreting them and conducting projections as to the future directions are also among the aims of this analysis (Yıldırım and Şimşek, 2013).

Based on the data, the following themes emerged:

1. Views regarding the instructional process
2. The strengths of online education on face to face education
3. The weaknesses of online education compared to face to face education
4. Points favored by the participants as to the effects of online education
5. Criticisms regarding the effectiveness of the online education

The following themes emerged out of the interviews conducted with instructors:

1. Views of instructors as regards the online education process
2. Views of instructors as regards the weaknesses of online education as compared to face to face education
3. Views of instructors as regards the strengths of online education as compared to face to face education
4. The positive contributions of online education to the learning process
5. The negative effects of online education to the learning process
6. The suggestion of the instructors as regards the online education process

The findings were interpreted based on these themes. The analyses were tabulated and explained.

Findings and Interpretation

Out of the 160 students, the number of participants who were interviewed through the interview form is 107 (66,9%). The number of the participants who stated that they were satisfied with the online education was calculated as 57,9% (11,2%, and 46,7%, respectively). 4,7% of the participants stated that they were partially satisfied with the curriculum and 3,7% of the them stated that they were not satisfied with the curriculum. Thus, the 33,6% of the participants did not provide any answer for this question. The results of the interviews conducted the evaluate the efficiency of the online curriculum are presented below.

THEMES, CODES, AND SUB-CODES	N	VIEWS
user views as regards the online education curriculum	65	I like it.
		I was satisfied.
	5	I didn't like it.
- Satisfaction with the curriculum		I wasn't satisfied with it.
- Time management	3	I couldn't concetrate and study. I had adaptation problems.
- Adaptation	1	I think I saved time.
- The advantages	1	It is highly efficient for those who cannot attend face to face education.
	1	not bad.

Table 1. Participant views on the online curriculum and the process

When we examine Table 1, we can see that 65 participants stated that they were satisfied with the online education curriculum. The views of the participants obtained from the third question were subjected to descriptive analysis. The answers provided by the participants were calculated in the form of frequencies. For this question, 64,5% of the participants provided valid answers. Table 2 presents the results. For the 3rd question, which was asked so as to get an understanding of the strengths and weaknesses of online education, 64,5% of the participants stated their views.

THEMES, CODES, AND SUB-CODES	N	VIEWS
	14	The facility to watch and re-watch couses is strength.
The strengths of online education as opposed to face to face education	11	It saves a lot of time.
	6	I can follow courses from my home.
- Time saving	6	It offers advantages for those who cannot attend face to face lessons.
- The facility of re-watching lessons	4	It offers adantages in terms of comfort.
- The course atmosphere		
- Time management and advantage	3	Online education is advantageous in terms of flexible lesson hours.
- Flexible hours		
- Transportation consitions	2	It saves money.
- Focusing	1	Online education is more advantageous in terms of providing access to education process.
- Economic conditions		
- Comfort	1	The main advantage is the there is less distraction.

Table 2. Participant views regarding the strengths and weaknesses of online education compared to face to face education

It is clear from Table 2 that 30% of the participants have positive views as regards online education as it provides flexible class hours and asynchronous viewing facility. These are viewed as the strengths of online education over face-to-face education.

THEMES, CODES, AND SUB-CODES	N	VIEWS
the weaknesses of online education as opposed to face to face education - The problem of dialogue - Communication and interaction - The facility of asking questions - Adaptation and motivation - The application of model tests - Negative influence - The technical structure of the system	11	It is not possible to get answers to questions on the spot and posing questions in written format leads to misunderstandings. Sometimes, some questions are not answered. In face to face education, it is possible to get answers to questions.
	10	There are few opportunities to ask one to one questions and get answers.
	8	There is a lack of communication between the instructor and the student.
	3	It is difficult to concentrate in front of the computer.
	3	There are some problematic parts in model tests.
	2	Technical infrastructure should be corrected.
	1	Instructors do not care for students much.
	1	Online education causes laziness in the brain.
	1	There are no study hours.
	1	I can't get answers for my questions that I pose through mail.

Table 3. The weaknesses of online education as opposed to face to face education

Table 3 shows that students in online education mostly complain about not getting answers on time for their questions and misunderstandings. Students find it difficult to ask questions and the reason for this is writing questions through the keyboard, which takes time or which may be missed by the lecturer. The answers given to questions 2 and 4 were subjected to content analysis. The following frequencies were obtained for questions 2 and 4. 46,7% of the participants expressed positive attitudes and views in favour of online educations. The percentage of those who stated that they had partially positive views was 6,5. In contrast, 9,3% of the participants expressed negative views as regards online education and 37,4% of the participants did not provide any answers for these questions.

THEMES, CODES, AND SUB-CODES	N	VIEWS
The impacts of online education on the instructional process	21	It has great contributions to learning and the education process.
	13	The system is higly successful.
	11	I had a productive learning process.
- The quality of the system and satisfaction	10	The instruction and system are of high quality
- Productivity in the learning process		
- The contributions to learning and education	9	It is an opportunity for students who can't attend face to face courses.
- Opportunities for users and its advantages	9	The instructors are effective and can address all levels.
- Memorability	7	I liked it very much.
- The quality of the instructor and lecture		
- The qualities of courses	5	It is a very effective system.
- Interaction	4	The presentations and lectures are memorable.
- The evaluation process	4	The facility to watch courses asynchrounously has a great impact.
	3	Students who follow synchronous courses will benefit greatly.
	3	It is not different from face to face education.
	2	It was higly beneficial for my learning.
	2	Mathematics courses were very effective.
	1	There was interaction.
	1	I believe that it was especially beneficial for the geography course.
	1	It is financially more convenient.
	1	It is good for comfort.

Table 4. The strengths and weaknesses of online education from the viewpoint of the participants

The results indicate that one of the most important findings is that online education has a tremendous contribution to the learning process. The other important contribution of online education is that it is rather economical and enables people to follow courses at the comfort of their houses. Table 5 presents the negative views of the participants as regards the online educations. One of the most frequently expressed limitations of online education is that courses are conducted rather superficially and lecturers may sometimes not be able to follow the flow of the online chat facility.

THEMES, CODES, AND SUB-CODES	N	VIEWS
the impact of online learning on the learning process	6	Lectures were rather superficial. No details were addressed. The subjects could have been lectured in more detail.
	6	More than one student asks question during the lessons at the same time, and lecturers cannot follow these questions and answer.
	4	It is not the same as face to face education. It is not as successful as face to face education.
- Interaction	4	The lecture subjects were different from the ones in the books. Some subjects were missing.
- Lectures and duration of courses		
- The scope of courses	3	Communicatin is not satisfactory.
- Asking and answering questions and the process of initiating interaction	2	Each student's understanding capacity must be addressed.
	2	Online questions must be explained.
- The level of lectures and learning	2	The fact that there are no test sections negatively affects the process.
- The lecturer		
- Online questions		
- The evaluation process of online education in relation to face to face education	2	Courses were finished before the due hour.
- Exams	1	The shifts in lecturers were my main dissatisfaction point.
	1	Some lecturers do not have experience.
	1	The courses for the final groups must be started earlier.
	1	By chanings, insufficient techers, the education process can be improved.
	1	Unnecessary questions can be eliminated.
	1	I belive that it makes the brain lazy.
	1	Lack of model exams is the only problem.

Table 5. Participant views regarding the use of online education on the learning process

We can understand from Table 5 that one area of dissatisfaction on the part of the participants is lack of details in courses. In addition, the participants also voiced complaints as to the lack of content. Another area of dissatisfaction among the participants is that they cannot get answer to their questions because to many students attempt to ask questions at the same time. This finding is in line with the finding of the previous part.

In Table 3, one of the criticisms of the participants was that "I cannot easily get answers to my questions; questions are misunderstood because we write them. Answers come too late.". Therefore, we can speculate that communication issues seem to have more of a negative impact on the teaching and learning process in online education.

One of the weaknesses mentioned in Table 3 is not receiving answers to questions instantly. There are a number of issues that may lead to this problem. In the first place, students write at the same time and this makes it difficult for the lecturer to follow. This adversely affects the interaction among students and lecturers, which is another issue mentioned in Table 3. Since interacting is of huge significance in teaching and learning process, this problem may hinder the learning process.

From the perspective of the participants, another important point is that online education cannot be the same as face to face education. Most students may wish to have classroom environment. Lack of interaction is also one of the problems mentioned by the participants. Finally, lack of a model test was also one of the problems.

The Evaluation of the Lecturer Interviews

The number of lecturers teaching in the online education system is 15 and 11 of them were interviewed. The interviews were conducted with lectures who teach the general culture and capabilities component. 2 of the participants failed to attend the interviews. Therefore, 9 interviews were conducted. All interviews were conducted face to face and recorded.

Table 6 presents the results of the question: "How did you find the online education?". The results are coded. When we examine the views in Table 6, it can be understood that lecturers have a positive attitude towards online education.

The percentage of those who believe that online education is a great opportunity for those who cannot attend face to face education is 33. The lecturers in the study also stated that online education facilitates the learning process on the part of students.

THEMES, CODES, AND SUB-CODES	N	VIEWS
	3	It is a great opportunity for those who cannot attend face to face education for any reason.
the views of the curriculum in general	3	I think that it is rather different than classroom environment.
	2	We can reach the lecturers from our houses, rooms and we follow courses comfortably in our houses.
- The teaching and learning atmosphere	2	I think that it is very successful.
- The implementation	2	Besides being the best education platforms, it also holds promise for the future of education.
	2	Online education gives us the chance to reach all parts of Turkey.
	1	It is a highly effective means of education. It boths supports visual and written education.
	1	It is a different and extraordinary implementation in the area of education.
	1	It is an effective method in improving students' individual learning process.

Table 6. Lecturers' views on the online education process

On the other hand, 33% of the participants believe that online education is not the same as face-to-face education. There may be some prejudices against online education. However, a significant number of the participants stated that through online education, they could reach all parts of Turkey and it fosters students' creativity and individual development.

THEMES, CODES, AND SUB-CODES	N	VIEWS
The strengths of online education according to the lecturers	6	Students can watch courses asynchronously. They can revise.
	3	Students can overcome psychological borders and ask questions.
	2	It saves time and money.
- It is beneficia for lecturers	2	It visually provides a rich learning atmosphere.
- The versatility of the curriculum	1	It is also beneficial for lectuere in terms of using time efficiently.
	1	While we cannot find time to solve tests in face to face education, we can do that in online education.
	1	The learning process in online education is faster.
	1	It enables people to enter lessons form wherever they want.

When we examine Table 7, 66,7% of the participants stated that one of the most important strengths of online education airs that it makes it possible to watch course videos asynchronously and thus revise the course content. This view was also expressed in interview forms. This view was the most frequently expressed view. Thirty three percent of the lecturers stated that students could overcome their stress and ask questions, which is a positive aspect of online education according to them. A small part of the lecturers views the timesaving aspect of online education as a strength. Another important view voiced by the lecturers was that the content presented through online education could be visualized. Finally, the fact that one can enter online education from anywhere or at any time is another strength of online education.

THEMES, CODES, AND SUB-CODES	N	VIEWS
The weaknesses of online education according to lecturers	4	Sometimes, students write at the same time and this causes confusion.
	2	Since students cannot see the lecturer, the quality of the interaction cannot be decided upon.
	1	Sometimes, I answer questions very late.
- Feedback for questions	1	When effective interaction is not established, students may not be able to express their ideas very clearly.
- Lack of interaction	1	the fact that students connect to the system individually rather than as a whole
- Students attitudes	1	Students may have motivation problems.
- Adverse conditions that may arise in the teaching atmosphere	1	Lecturers may turn out to be passive in establishing the education atmosphere.
	1	Students are devoid of the real atmosphere of a classroom and this hiner the socialization process.
	1	There may be problems due to Internet providers.
	1	Sstudents may face problems related to time as they are watching videos asynchrounously.
	1	The fact that couses are conducted in the evening.

Table 8 indicates that the negative aspects of online education centre around 4 major issues.

These are; (1) feedback for questions, (2) lack of interaction, (3) attitudes of students, and (4) problems: pertaining to the teaching atmosphere. Almost half of the participants (44%) stated that it is difficult to follow the flow of messages and sometimes we fail to see what students write. Another group (22%) stated that the fact that students cannot see the lecturer is a disadvantage. This hinders effective communication.

THEMES, CODES, AND SUB-CODES	N	VIEWS
The strengths of online education according to the lecturers	6	Students can watch courses asynchronously. They can revise.
	3	Students can overcome psychological borders and ask questions.
	2	It saves time and money.
- It is beneficia for lecturers - The versatility of the curriculum	2	It visually provides a rich learning atmosphere.
	1	It is also beneficial for lectuere in terms of using time efficiently.
	1	While we cannot find time to solve tests in face to face education, we can do that in online education.
	1	The learning process in online education is faster.
	1	It enables people to enter lessons form wherever they want.

Table 9. Lecturer views on the positive impact of online education on the teaching atmosphere

Table 9 presents lecturers' views in terms of the positive impact of online elarning. Views in Table 9 were characterized as "factors that affect learning" and "the influence of the system on the individual". It can be seen that 33% of the participants being able the re-watch the lesson videos asynchronously empowers the learning process. The following quotation concisely summarizes the general perspective of lecturers on the positive sides of online learning:

Lecturer: The fact that one can follow lessons live or asynchronously and the fact that one can adjust his or her own pace are important contributions of online education. This way we do not fall behind the current technological developments. Another benefit is that online learning gives you the comfort of your home and has an encouraging effect.

The percentage of the lecturers who believe that it has a positive effect is 33. Another 33% thinks that it has a positive effect, albeit not as much as face-to-face education. 22% of the lecturers stated that exposing students to more than one stimulant would undoubtedly reinforce learning. In sum, the positive sides of online education can be listed as follows:

- With online education, individual learning is ensured.
- Meeting the expectations of students
- The fact that it encourages learning at home
- Visualization as instructional infrastructure and the positive influence of visuals on learning

THEMES, CODES, AND SUB-CODES	N	VIEWS
the effects of online learning on the learning process - Negative effects	1	working with a huge number of students
	1	Learning definitely takes place environment.
	1	Interaction is too weak.

Table 10. Lecturer views on the negative impact of online learning on the learning process

The Table demonstrates that "dealing with a huge number of students" is one of the major issues affecting the learning process negatively. This can be viewed as the underlying reason behind the problems mentioned above. In online education, the participants, both students and lecturers, try to communicate in a different platform; they try to establish a dialogue through online means and this may pose problems. This may cause dissatisfaction on the part of some users.

THEMES, CODES, AND SUB-CODES	N	VIEWS
The positive impact of online education on the teaching atmosphere	3	Since lessons are recorded, it is very easy to watch the lessons asynronously, which renders reinforcement possible.
	3	I believe that it has facilitating effect on learning.
	3	I can say that it has a positive influence on the learning process, although not as much as face to face education.
- Factors that facilitate learning	2	More than one stimulant is at work, which activates students.
- The influence of the system on the individual	1	Individual learning is accentuated through online education.
	1	Complementing the process.
	1	Individuals' own houses have a encouraging effect.
	1	visualization as technical infrastructure and the positive influence of visual on learning

Table 11. Participants views as regards the instructional process in the online curriculum

It can be understood from the table that for the online education to be more successful, 66,7% of the participants stated that student participation should be ensured. Secondly, 33% of the participants suggested that the number of students in online sessions could be reduced. Twenty two percent of the participants put forward suggestions regarding the system itself. They suggested that the curriculum could be much more productive on condition that the problems are eliminated in the system. Finally, 22% of the participants stated that the presentations conducted in courses should be visualized as much as possible.

Discussion and Conclusion

This part of the study presents the results obtained through interview forms and lecturers' views. The findings can be listed as follows.

Majority of the students found the online education satisfactory. It should not be disregarded that technological facilities play a critical role in the affective factors and learner readiness. It is emphasized in literature that access to technology, technological skills, motivation and the usefulness of e-learning environments affect learner readiness (Watkins, Leigh and Triner, 2004, Kırmızı, 2015).

Both students and lecturers found the online education was beneficial and stated that it contributed to the learning process. The content is presented in an easily accessible manner and this enables students to be able to attend lessons from anywhere; this can be seen as an advantage. Since the present study was a qualitative study, the influence of age, gender or previous learning experiences in online education was not investigated. This is because these variables were investigated in previous studies and no statistically significant difference was found between age, gender, or previous online learning experiences and expectations of students, preferences, or satisfaction (Paechter, Maier and Macher 2010).

It was found out that online education has a number of strengths over face to face education. As is indicated in literature, re-watching videos, or the facility to follow asynchronous sessions are among the most important aspects of online education (Kaya, 2002; Akın, 2007). Online education makes it possible to reach all parts of Turkey and thus students in rural areas can also benefit from this education. The fact that students can watch lesson video later and thus reinforce their learning is another advantage of online education over face to face education. It can be asserted that online education has a facilitating effect on learning. The fact that visualization is extensively used in online education makes it an effective means of presentation. Both lecturers and students enjoyed this facility. Another positive finding of the present study was that the participants believe that the learning process was productive. According to Özer (1990), students in online education are generally motivated students. The fact that students attend online courses voluntarily, the facility to follow courses along with business life, and the fact that students will be rewarded with better working conditions contribute to motivation. In addition, the online curriculum is tailored to all levels. Users believe that the way lecturers conducted the lessons was memorable.

The advantages online education confers in terms of time and money make it preferable for students. For most lecturers, online education is not different from face to face education on condition that effective communication is established. This finding is in line with the Schneller ve Holmberg's (2014) study. Their study found that online education is favourable for students since it provides flexibility in course hour, makes it possible to attend courses as they are working, and makes it easier for them to be promoted (Hrastinski, 2007; Simonson, Smaldino, Albright and Zvacek, 2012; Fırat, 2016).

Some problems may arise in online education as people try to communicate through the chat facility at the same time. Since the number of students in online education exceeds those in face to face education, problems arise in communication. Lecturers may not be able to follow the flow and fail

to answer some students' questions. This decreases the satisfaction level of the participants. Since participants cannot see their interlocutors and their gestures or body language, lecturers may have hard times in understanding whether students grasped the content or not. This indicates the relative inefficiency of the communication process. These findings are supported by the study conducted by Özköse, Arı ve Çakır (2013), in which they carried out SWOT analysis to find out the strengths and weaknesses of online education.

Some students may find it hard to concentrate on courses from home. This, in turn, leads to loss of motivation. Some students stated that lecturers were changed from time to time and this led to difficulties in adjusting to new lectures, which is another source of dissatisfaction. If effective interaction is established, students can get rid of their shyness and ask questions. There may be technical problems. Online lessons are not conducted as detailed as face to face courses. Students complained about lack of sufficient time devoted to tests.

In literature, there are studies that point out limitations like these. A study conducted by Kaya (2002) and Çakır (2013) came up with similar results. Bostock's (1997) carried out a study with 285 learners and 12 lecturers and found that the use of technology and Internet in the education process had negative effects on students. Due to these limitations, some researchers developed different online teaching models (Moore and Marra, 2005; Janssen, Erkens, Kanselaar and Jaspers, 2007; Pala and Erdem, 2011).

Suggestions

1. From the results, we can say that one of the most important problems is lack of effective interaction. This can be attributed to not being able to gestures or trying to convey messages through the keyboard. Students may have variable efficiency in keyboard use. This prevents students from asking questions. Therefore, technical issues assume important.
2. Another suggestion can be to reduce the number of students because large classes hinder communication. It becomes difficult for the lectures to follow students' messages and provide answers for their questions on time.
3. Online education makes it possible to follow lessons at the comfort of students' houses. However, some students find it hard to concentrate at home. This can be overcome by providing students the facility of online voice and use of visuals.
4. Some participants complained that some lectures do not have sufficient experience. This problem can be overcome by getting lectures to watch prior videos.
5. Variety should be ensured in the presentation of the content and presentation techniques. Creative and innovative activities or materials can be provided.

Suggestions for Further Research

Out of the results of the present study, a number of suggestion can be made for further research. In the first place, the present study found that technical infrastructure plays an important role in the effectiveness of online education. In a further study, this can be studied in more detail and more suggestions can be drawn. In the present study, the suggestion was to improve voice and visual

quality so that more learner participation can be ensured.

In another study, the impact of both synchronous and asynchronous online curriculum models can be compared and their efficiency can be investigated. In synchronous online education, the impact of class size on success can also be studied. This is because in the present study, it was seen that the number of participants have an impact on a number of issues such as the quality of interaction. Another idea could be to conduct studies that focus on finding out educational activities, instructional games or different interaction facilities and to test their viability so that better social interaction can be provided and courses can become more enjoyable.

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