

## Determination of teacher candidates' opinions about the efficiency of virtual classes used in distance education

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### Abstract

This study was aimed to determine the teacher candidates' opinions about the efficiency of virtual classes. Nearly, 173 voluntary teacher candidates who receive distance education at Near East University participated in this research. This research was conducted in the spring semester of 2014–2015 academic year. The results of five-point Likert-type scale which was developed by the researchers were analysed with SPSS program. When the results of the research were analysed, it was revealed that teacher candidates who receive distance education reported that virtual classes are effective in learning, being in the virtual classes at the same time with their teachers increase the students' interests in the lecture, the materials used in the lectures are more effective for students to understand the subject, the students get opinions from their classmates by making their presentations through file sharing in virtual class setting and this leads to a significant contribution to their learning.

**Keywords:** Distance learning, virtual classroom, bigbluebutton.

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## 1. Introduction

Due to the cultural, historical and technological advancements, it is seen that the concept of distance learning has changed over time (Middlehurst & Woodfield, 2004). As a result of these rapid advancements, technology and interactive smart devices, network technologies and internet have become prevalent in the world, therefore, instead of traditional methods in education, new approaches have been developed; since education continues through lifetime, computers, tablets, smart devices and internet as the products of information technologies have become the essential auxiliary elements and the use of these devices does not only contribute to the persistence of education, but also leads to the production of a new education system from the pedagogical perspective (Erturan, Cevik, Gurel & Cagiltay, 2012). Virtual classes are the set of classes and communities present in distance education system. Multiple applications running on virtual classes have been developed. There are some additions in the content management system for students to learn more effectively (Erkan & Altun, 2003). The virtual class program named as Perculus, which is used in Distance Learning Centres' education and strengthened by advancity, provides students the opportunity of organising educations, meetings and seminars via internet (Perculus, 2015). Adobe Connect is a platform which leads to the use of virtual classes, meetings and seminars via internet (AdobeConnect, 2015). Virtual class application is generally the most prevalently used worldwide and preferred by many educational institutions because of its access opportunities among mobile communication devices. Bigbluebutton is the virtual educational program which supports online administration of through vivid image transfer with the use of distance education. Besides, bigbluebutton, which is used by integrating in Moodle freely, is a unique addition for instructors who want tutor and those who benefit by using vivid virtual environments (BigBlueButton, 2015). Many Distance Education systems, which provide the opportunity for teaching via local networks systems, bring facilities in daily life, and provide the possibility of doing virtual meetings, vivid lectures and video conferences (Middlehurst & Woodfield, 2004). Multiple participants receive education with education programs and aims via internet and this has become easier with the communication, information and technological components nowadays (Varol & Turel, 2003). The bigbluebutton virtual class environment was used as an addition to Moodle in this research. It is essential to use distance education prevalently and determine the level of the efficiency of the virtual classes.

## 2. Aim of the research

This research was aimed to determine the teacher candidates' opinions about the efficiency of virtual classes used in the distance education. In order to achieve this aim, a questionnaire consisting of 19 statements has been developed by the researchers.

### 2.1. Participants

Nearly, 173 voluntary teacher candidates who receive distance education at Near East University participated in this research. This research was conducted in the spring semester of 2014–2015 academic year.

#### 2.1.1. Gender

The distribution of students based on gender is provided in Table 1.

**Table 1. Distribution of students' gender**

Gender	f	%
Male	78	45.1
Female	95	54.9
Total	173	100.0

As it can be seen from Table 1, 60% (78 participants) of the students who participated in the research were male and 95% (95 participants) of the students were female. It is seen that distribution of genders are close to each other.

### 2.1.2. Age

The distribution of students based on age is provided in Table 1.

**Table 2. Distribution of students' age**

Age	f	%
18–25	47	27.2
26–35	93	53.8
36–45	24	13.9
46–50	9	5.2
Total	173	100.0

The distribution of students based on their age is demonstrated in Table 2. According to this distribution, ages of 47 (27.2%) teacher candidates who participated in the research were between 18 and 25, ages of 93 participants (53.8%) were between 26 and 35, ages of 24 participants (13.9%) were between 36 and 45 and ages of 9 participants (5.2%) were between 46 and 50.

## 2.2. Instruments

A questionnaire developed by the researchers which is a five-point Likert type scale and includes 19 positive statements was used in this research as data collection tool. The questionnaire was prepared by receiving the opinions of instruction technologies experts.

## 2.3. Data analysis

The collected data were analysed with SPSS IBM 20.0 program. The results of the data analysis were provided with percentage, frequency and descriptive analysis methods.

## 3. Results & discussion

In this section, results and interpretations related with the determination of the teacher candidates' opinions about the efficiency of virtual classes used in distance education and sub-objectives are provided.

### 3.1. Opinions of students about virtual class environment

#### 3.1.1. Determination of the opinions of students about virtual class environment

Results of the descriptive analysis related with the opinions of students about virtual class environment are provided in Table 3.

**Table 3. Determination of the opinions of students about virtual class environment**

Statements	Mean	Std. deviation
1. I think that online lectures conducted in virtual class environments are more effective.	3.95	1.17
2. Receiving lectures in virtual class environments provides me the opportunity of allocating more time for my social life.	4.29	1.06
3. Instant messaging and asking questions to the lecturer who gives lesson in virtual class environment is a really effective method.	4.06	1.08

4. Reaching the record of the lecture done in virtual class environment is more effective for me to consolidate the lecture.	4.38	0.90
5. It is an advantage for me to learn information anywhere and any time I want with distance education.	4.52	0.85
6. In virtual class environment, I do not experience any disconnection during the lecture.	3.86	1.18
7. I find the opportunity of learning how to use information technologies through receiving education in virtual class environment.	4.25	0.93
8. It gives me pleasure to chat with my friends when receiving education in virtual class environments.	3.88	1.13
9. I can watch video records of the lectures in virtual class environments when they are uploaded.	4.27	0.96
10. I can download the contents of the lecture done in virtual class environment from the system anytime I want.	4.34	0.93
11. I find virtual lectures effective and beneficial.	4.25	1.00
12. Being in the system as virtual agent while the lecture is being processed gives me pleasure.	3.78	1.19
13. Virtual board in virtual class environment makes me feel that I am in formal education environment.	4.08	0.96
14. I think that my communication virtual class environment with distance education is really effective.	4.09	1.08
15. I believe that distance education is effective and beneficial for me.	4.41	0.81
16. Being in virtual class environment with my lecturer at the same time increases my interest to the lecture.	4.40	1.08
17. Materials used in virtual class environments make me understand the subject better.	4.07	1.06
18. Sharing files in virtual class environment leads me to receive feedbacks from other students while preparing my lecture presentations.	4.38	1.07
19. Virtual class environment provides a significant contribution to my learning.	4.08	1.08

When Table 3 is examined, for the statements; 'Receiving lectures in virtual class environments provides me the opportunity of allocating more time for my social life' ( $M = 4.29$ ,  $SD = 1.06$ ), 'Reaching the record of the lecture done in virtual class environment is more effective for me to consolidate the lecture' ( $M = 4.38$ ,  $SD = 0.90$ ), 'It is an advantage for me to learn information anywhere and any time I want with distance education' ( $M = 4.52$ ,  $SD = 0.85$ ), 'I find the opportunity of learning how to use information technologies through receiving education in virtual class environment' ( $M = 4.25$ ,  $SD = 0.93$ ), 'I can watch video records of the lectures in virtual class environments when they are uploaded' ( $M = 4.27$ ,  $SD = 0.96$ ), 'I can download the contents of the lecture done in virtual class environment from the system anytime I want' ( $M = 4.34$ ,  $SD = 0.93$ ), 'I find virtual lectures effective and beneficial' ( $M = 4.25$ ,  $SD = 1.00$ ), 'I believe that distance education is effective and beneficial for me' ( $M = 4.41$ ,  $SD = 0.81$ ), 'Being in virtual class environment with my lecturer at the same time increases my interest to the lecture' ( $M = 4.40$ ,  $SD = 1.08$ ), 'Sharing files in virtual class environment leads me to receive feedbacks from other students while preparing my lecture presentations' ( $M = 4.38$ ,  $SD = 1.07$ ); the students answered as 'Strongly Agree'. For the statements; 'I think that online lectures conducted in virtual class environments are more effective' ( $M = 3.95$ ,  $SD = 1.17$ ), 'Instant messaging and asking questions to the lecturer who gives lesson in virtual class environment is a really effective method' ( $M = 4.06$ ,  $SD = 1.08$ ), 'In virtual class environment, I do not experience any disconnection during the lecture' ( $M = 3.86$ ,  $SD = 1.18$ ), 'It gives me pleasure to chat with my friends when receiving education in virtual class environments' ( $M = 3.88$ ,  $SD = 1.13$ ), 'Being in the system as virtual agent while the lecture is being processed gives me pleasure' ( $M = 3.78$ ,  $SD = 1.19$ ), 'Virtual board in virtual class environment makes me feel that I am in formal education environment'

( $M = 4.08$ ,  $SD = 0.96$ ), 'I think that my communication virtual class environment with distance education is really effective' ( $M = 4.09$ ,  $SD = 1.18$ ) 'Materials used in virtual class environments makes me understand the subject better' ( $M = 4.07$ ,  $SD = 1.06$ ), 'Virtual class environment provides a significant contribution to my learning' ( $M = 4.08$ ,  $SD = 1.08$ ), the students answered as 'Agree'.

Furthermore, a research was conducted in 2011 about the comparison of simultaneous virtual devices used in distance education and it was concluded that distance education has gained a great rate and distance education is mostly criticised about the issues that students lose the opportunities of class experiences, academic discussions and natural social interactions (Cinar et al., 2011).

#### 4. Conclusion and future studies

When results of the research are examined, the students indicated that they know how to reach lecture sources in the provided education system, enjoy being virtual agents, do not experience any disconnection during lectures, enjoy messaging with their friends during lectures and also find virtual classes beneficial. Nevertheless, students stated that their effectiveness is high in the virtual class environments; they do not experience any disconnection while watching lecture videos; they can reach any information anywhere and any time they want and they find distance education as really beneficial and efficient. However, as well as these positive statements, it is recommended that application studies should be done for students about the system structure of distance education and material use; and the knowledge should be qualified in terms of leading behavior change in an expected manner.

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