

The Impact of Edmodo Assisted Education on Project Evaluation Achievement Scores and Determination of Opinions for use in Education

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Abstract - In this study, the aim was to determine the effects of pre-school 4th grade teacher candidates who have been studying in blended education supported by Edmodo on the project evaluation success scores and their opinions about the use of Edmodo in education. The research is based on a semi-experimental model, designed according to two groups of experimental and control models.

In the experiment group, lessons were given face to face in both online and classroom environment supported by Edmodo. The control group was only face-to-face in the classroom environment. Both groups consisted of 53 participants who were 4th grade teacher candidates from Near East University Preschool Teaching Department. Systematic sampling selection method was applied when students were assigned to groups. Students with an odd number, as the last digit of their school number, made up the control group while the students with an even number, at the end of their school number, created the experimental group. As a result of the findings obtained from this research, both groups were found to be statistically significant in favor of the experimental group supported by Edmodo between the project evaluation success scores at the end of the study, and also the results of the experiment group students' opinions on the use of Edmodo in education were found to be positive.

Keywords - Blended education, social networking, Edmodo, Online.

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1. Introduction

The 21st century technological and economic developments have led to changes in the field of communication as well as the emergence of new modes of communication such as internet [5]. Internet, which provides the opportunity to interact with the individuals in different places, has made an important place among the means of communication. Changes and developments in the field of information and communication technologies together with the information age have not only made the individuals easier to live their lives, they also eliminated communication obstacles and enabled interactive communication [15, 29].

Rapid development of the Internet and technology has led to the emergence of social networks with the progress. Web 2.0, which is one of the leading technologies in the formation of social networks, has taken its place among the most important and widely used technologies that facilitate communication and interaction between individuals through means such as social interaction, cooperation and sharing [31]. One of the emerging environments with Web 2.0 technologies are the social networking sites. [27, 14, 16].

Today, many social networking sites have emerged and these sites have reshaped the communication, interaction, collaboration, cooperation and even the learning process of individuals.

Today, millions of users are online on social networks with their real identities. Social networks have features that enable students and teachers to develop communication skills, expand participation, empower peer support, and enable collaborative learning [17, 21].

Using social networking sites constantly have become everyday activities for digital native students[12]. In the research "The use of social networking sites in the in-service training of teachers, "Facebook and Wiziq virtual classroom" study, has shown that social networks can be used for

educational purposes and that the new technologies used have resulted in a significant increase in the positive level of success [3].

The research on educational use of social networks puts forward that social networks that are created by university students enable online social network users to communicate and interact with different learners, educators and learning groups, enable online participation, contribute to information and resource sharing, and come up with technological applications and developments which provide vital benefits to educational environments [1, 2, 6, 18]. In addition, studies on university students in different fields have shown that their views on the use of social networks (such as Edmodo, Facebook) in education are positive [19, 20, 22]. In addition, another study on primary school students has reached the conclusion that Edmodo is a social network that has a positive effect on their learning in general [23].

Social networking sites can be used more frequently than other teaching management systems because they are easy and convenient for users. Many educators and researchers create simple groups by following simple steps without difficulty, providing interactions among themselves, facilitating communication and feedback.

Social networking sites are also beneficial to educational organizations as it makes blended learning more efficient and contributes to the teaching and evaluation process. [7, 10].

With the constant change and development of technology, it has become compulsory to implement these developing technologies in the field of education [30]. For this reason, it is obvious that social learning networks are widely used when the results of the researches made in recent years are examined. For this reason, it is necessary to provide an effective educational service in order to use social learning network effectively in the teaching-learning process for online education students. That is why social learning networks should be used together with the blended education methods to determine the positive or negative effects on student achievement and interaction. Looking at the literature, it seems that the number of studies done in Turkey and Northern Cyprus has been low in recent years in order to determine this.

Therefore, the general aim of the research is to determine the opinions of Edmodo's teacher candidates for the "Project Development II" course and the impact on project evaluation achievement scores. The sub-goals to achieve the overall goal are:

1) Is there a difference between the project evaluation achievement scores of the experimental group who have been studying in blended education supported by Edmodo and the control group with the traditional learning method?

2) What are the opinions of the experimental group of Edmodo students who had blended education with Edmodo?

2. Method

This research was designed according to a two-group experimental and control model in order to determine the opinions of Edmodo, a social learning network in the Project Development II course, on the effects of the preschool teaching department teacher candidates on project evaluation achievements and their use in education through the blended learning method.

3. Study Group

Fourth grade students from the Preschool Teaching Department participated in this study. Systematic sampling selection method was applied when students were assigned to groups. The experimental group (53 people) supported by blended learning method and the control group (53 people) were formed for the study by traditional learning method. Students with an odd number as the last digit of their school number made up the control group while the students with an even number at the end of their school number created the experimental group. 86.8% (46 people) of the students in the experimental group were female, 13.2% (7 people) were male and for the control group 81.1% were female and 18.9% (10 people) were male. Of the students in the experiment group, 11.3% (6 people) stated that they spend less than 1 hour on internet, 34% (18 people) 1-2 hours, 28.3% (15 people) 3-4 hours and 26.4% (14 people) said they spend more than 4 hours. 13.2% (7 people) in the control group had less than 1 hour, 32.1% (17 people) 1-2 hours, 24.5% (13 people) 3-4 hours and 30.2% (16 people) have said that they spend more than 4 hours on the internet.

4. Developing Educational Environment

To become a member of Edmodo, you must first register at www.edmodo.com. After the main screen is displayed, the language option can be selected in English depending on your preference. Edmodo should register by entering personal information about e-mail and password from the registration section as a teacher and clicking on the "Register" button to go to the profile update page. After the registration is made, you can add the desired items from the vehicles in Edmodo (Note, Homework, Quiz, Questionnaire, Library, Members etc.) and make the media ready for customization.

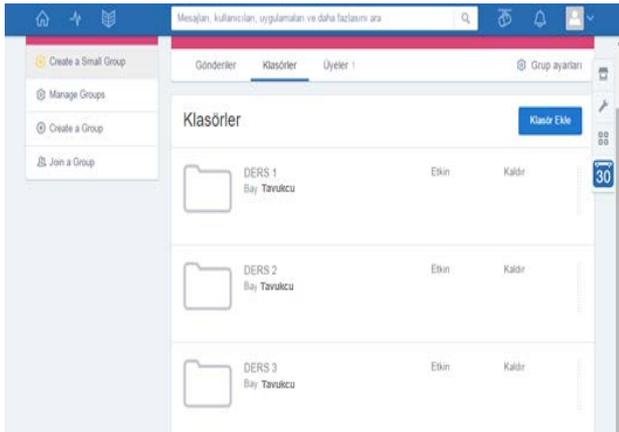


Figure 1. Preparation of Edmodo media

5. Application

Implementation was carried out in 9 weeks with students taking Pre-School Teacher Project Development II course. As a result of the implementation, students from both groups were asked to develop projects related to their choice. The experiment group lessons were held in Edmodo with a face-to-face and also closed classroom system with 53 students from pairs of school numbers in the Preschool Teaching Department. In the control group, face-to-face lessons with 53 students were conducted in the classroom environment. All the materials prepared for the students in the experiment group were shared from the closed class environment created through Edmodo. The notes, homework, quiz, questionnaire, library extensions from Edmodo extensions are actively used. Teacher-student and student-student communication are provided in two ways in the note section. While being spoken privately among members, whenever requested, contact was made through the note section so that other students could see the questions asked. In addition to this, quizzes were also held on the weekly homework assignments, which consist of short answer questions and multiple choice questions. Questionnaire data required for the study were answered by the students responding to the questions generated from the questionnaire section.

Another feature that is actively used is the Library feature. Here, all the materials related to the lesson are shared. Documents such as Powerpoint, Word are shared, and video and picture materials are shared when requested. In addition, these materials have been shared thanks to other Web 2.0 tools (such as Slideshare, YouTube) integrated into Edmodo. The face-to-face courses were held at Near East University's Atatürk Faculty of Education. The control group also provided face-to-face training in the classroom environment as a traditional training.

These courses were also held at the Near East University Atatürk Education Faculty.

6. Data Collection Tool

An analytical grade scoring key (Rubrik) was prepared to determine the strengths and weaknesses of the students in the performance of the Project Development II course. Five dimensions that can be measured during the development process and fit the course content have been determined. Specified dimensions were re-arranged and put into practice by taking the opinion of 10 experts. In this research, "Edmodo's Educational Usability" scale was used to measure "Facebook's Educational Usability" in order to measure the scale of "Facebook's Educational Usability" that was developed for doctoral thesis by [3].

The Cronbach alpha value of the scale in the study conducted was 0.975. If we look at the dimensions; the cronbach alpha value of the first dimension "education use" was 0.931, the second dimension "material use" was 0.949, and the third dimension "sharing educational activities" had a cronbach alpha value of 0.934. The researcher has been given permission to adapt the scale.

7. Findings

In Table 1., the independent t-test was applied to determine whether there was a significant difference in the Rubrik (graded scoring scale) performance scores of the students with the Edmodo-supported blended education method and the students with the traditional learning method.

Table 1. Comparison of results for scoring scale scores of the experimental and control groups

	N	\bar{x}	SS	df	t	p
Experimental Group	53	89.72	6.46	104	12.84 2	0.000
Control Group	53	73.49	6.55			

According to the findings, it was determined that there was a meaningful difference between the students of the experimental group using Edmodo and the results of the project development performance of the control group students ($p < 0.05$). A significant difference was observed between the scores of the students of the experimental group ($\bar{x} = 89.72$) and the scores of the students ($\bar{x} = 73.49$) who were educated by the generalized learning method as a result of the performance evaluation after the courses conducted with Edmodo supported Karma learning method. According to these findings, we can say that the use of Edmodo in education affects the success in the positive direction. It was

observed that the students of the experimental group using social network-based application were more successful than the students who were academically traditionally trained [8]. It was found out that instant messaging services and social networking sites were preferred using Web 2.0 technologies, and that the skills of the students were higher in these technologies [26]. It was observed that the academic averages of users of social networking users were significantly lower than those of non-social networking users [11]. [9] have expressed many benefits of social networking like knowledge management, educational discussion, cooperative learning, sharing environments in their studies of the integration of educational social networks through benefits and anxieties. These studies support the findings.

The second sub-objective of the study was to determine the opinions of the experimental group, which had been blended with Edmodo, for the use of Edmodo in education after the study. Findings obtained from the analyzes in this direction are presented in Table.

Table 2. Student views on the use of Edmodo in education

Dimensions	N	□	SS
Use in Education	53	4.38	.92
Material Usage	53	4.35	.84
Planning of Educational Activities	53	4.30	.87
General	53	4.36	.86

As shown above, the experimental group was given mean and standard deviations according to the dimensions of the view scale for the use of Edmodo in education, which is applied after the study and consists of 3 dimensions.

Table 3. Edmodo's Educational Usability

	N	□	SS
Edmodo is the most reliable tool, especially designed for educational purposes	53	4.42	.89
Edmodo is a tool that can be used as a support for lessons in terms of insertable materials	53	4.38	.95
Lessons in Edmodo improve collaborative learning skills	53	4.40	.91
Teaching in Edmodo contributes to the development of the individual	53	4.39	.90
Using Edmodo in lessons enhances the success of students	53	4.36	1.0
It is useful to use Edmodo as a support in their own branch	53	4.37	.94

This sharing environment allows us to exchange information with colleagues and other teachers	53	4.37	.95
The homework of the students increases their interest in the lesson that their opinions are taken in this environment for their projects	53	4.37	.94
Edmodo makes learning more enjoyable	53	4.35	1.0
I contribute to their learning by influencing colleagues and other teachers in useful connections	53	4.37	.95
Sharing additional resources on assignments and projects in Edmodo enhances the motivation of students	53	4.39	.90
Rewarding students with badges in Edmodo enhances the motivation of students	53	4.39	.90
Edmodo's mobile application contributes to continuous and active knowledge by students and teachers	53	4.37	.95

Table 4.

	N	□	SS
Students who are physically unable to attend classes can increase their motivation by sharing their thoughts in Edmodo	53	4.41	.89
Edmodo contributes to the learning of the students by making quizzes before and after courses	53	4.32	.93
Easy access to course materials using Edmodo	53	4.37	.94
Adding course materials to Edmodo increases the interest of students in the course	53	4.43	.88
When I share educational materials in Edmodo, I attach importance to teachers' views	53	4.37	.89
The fact that Edmodon is similar to facebook makes the use of students easier	53	4.35	.94
Sharing course materials in Edmodo increases the interest of students in class	53	4.33	.93
Using the announcement panel in Edmodo is useful for informing students and teachers	53	4.37	.90
Using the library section in Edmodo allows for regular use of lecture notes	53	4.39	.88
Using an activity tool in Edmodo enriches the sharing environment	53	4.28	1.0

Using the survey tool in Edmodo allows students to improve the course by receiving feedback	53	4.30	.88
Using web 2.0 tools in Edmodo makes the course more interesting	53	4.28	1.04
Using video, audio, powerpoint and so on., in Edmodo enriches the environment	53	4.39	.86
Evaluating students before and after course with the quiz panel helps to measure the attitudes of the students to the course	53	4.32	.95

Table 5.

	N	\bar{x}	SS
Chatting in Edmodo strengthens social relationships	53	4.32	93
Organizing educational activities with my colleagues allows me to improve myself	53	4.28	94
Using events tools to organize out-of-class events increases student participation	53	4.35	90
Activities enhance the social activity and organizational skills of intermediary students	53	4.16	1.05
Badge tool increases the motivation of students and teachers	53	4.20	1.05
Increase the motivation of the students to share about project and assignment delivery dates with the announcement panel	53	4.28	1.04
Following up on my friends' activities in Edmodo allows me to keep up to date information	53	4.33	.33
Activities increase communication with intermediary students	53	4.37	94

Edmodo expressed a positive opinion that the most reliable tool, especially for educational purposes, was $\bar{x} = 4.42$ ($SD = .89$). Students who were unable to participate in the classroom physically were able to share their thoughts in Edmodo $\bar{x} = 4.41$ ($SS = .88$) and $\bar{x} = 4.40$ ($SS = .91$), who developed cooperative learning skills in Edmodo to improve their motivation. In addition, students who participated in the application seem to have decreased according to other expressions, despite the fact that "Activities increase the social activity and organizational skills of the students" $\bar{x} = 4.20$ ($SD = 1.04$). With [28] social networks, it has been observed that the instructor's support and mentoring of students over the Internet has enhanced the student's working experience. In the study of the attitudes of prospective teacher candidates towards computer and internet usage were investigated [13].

The attitudes of prospective teachers towards computer and internet usage were positive, teacher candidates used computers and internet mostly for homework, They are also aware of their disadvantages. These studies support the findings. According to these findings, more positive results were obtained in the experimental group supported by Edmodo (blended learning) than in the control group (general learning).

8. Conclusion and Discussion

Edmodo, a social learning network, has conducted pre-school teacher education with blended learning to determine the impact of prospective teachers on project evaluation success in the Project Development II class and their views on the use of Edmodo in education.

This study is a semi-experimental study with two groups. The blended learning method supported by Edmodo was held to the experimental group whereas the traditional learning method was held to the control group. 106 fourth year students from the Near East University, Preschool Teaching Department participated in the study. The t-test was used to determine whether there was a meaningful difference between the experimental group and the control group students according to their grade scoring scale scores. In addition, mean and standard deviation values were determined to determine the opinions of the experimental group students regarding the use of Edmodo in education.

There is a significant difference between the results of the project evaluation success scores of the experimental group teacher candidates who were educated by the blended education and the control group teacher candidates who were educated by the traditional group. Besides, when the average of the results of project evaluation achievement scores are examined, it is determined that the experimental group is higher than the control group. With this result, it is concluded that the experimental group is more successful than the control group.

In general, when the results of the t-test of the experimental group are examined, it is seen that the experimental group students who are co-edited with Edmodo enriched with various means and the control group who is educated by the traditional method have higher academic achievement levels. This may be due to the fact that the interest and environment of the new orientation has created several interesting areas of the Edmodo learning network. It can be said that the interactions between the students and the student-teacher interaction are at a high level during the lesson by using the Edmodo site's attachments. In this way, students can feel free to ask questions both to their teachers and friends without fearing, and they

can also have different thoughts by seeing the questions of other friends. Thus, students can better reinforce topics by showing more interest in lessons. This can be interpreted as an indication that Edmodo's educational use will be advantageous for prospective teachers.

It has been determined that the students' views on the use of Edmodo social network in education are positive. It can be considered that most of the students have to be active in social networks and that social networks are used as educational environment for the students to contribute to the course content and course related sharing in the social network sites with the progress of the technology. Looking at the literature, it can be seen that there are some studies that have similar conclusions with this study. Similarly, it was found out that students' general attitude toward social media was positive and high [4]. It can be seen that Edmodo can be used effectively, and has a positive effect on improving reading, writing, critical and creative thinking abilities and on academic performances of the students [32]. In addition, the study has shown that students have a positive view on blended learning that is supported by Edmodo, and also students emphasized that the environment is very effective, helpful and useful [24].

Students are positive that Edmodo is one of the most reliable tools that was prepared and that it is a tool to be used as a support to the classes. The reason for this can be thought of as having the opportunity to access the materials that they share when they want, and to repeat them at their own learning speeds.

The students in the experiment group have a positive view on Edmodo's use of materials. It can be said that reliable file sharing, instant access to files in library section, video, audio, PowerPoint etc. making use of materials, making situation assessments with quizzes and questionnaires, similarity with facebook and ease of use are useful for students. The conclusion can be drawn up that students views' on Edmodo's usability are positive [25]. It can be seen that as Edmodo's interface is similar with Facebook social network website and Moodle systems, students have no difficulties in terms of usability.

In Edmodo, the opinions of students in the experimental group on "Planning of Educational Activities" are positive. The reason for this may be that conversation in Edmodo allows them to improve themselves with educational activities, organize class activities, increase social skills and organizational skills of students, and share information about badges, lessons, and deadlines, and keep up-to-date information.

As with every work, there are some limitations to this work. A limitation of the work is that the practice was carried out at a time (in the spring). Further work can be carried out for longer periods. Another limitation of the study was that only pre-school teacher candidates participated in the study and only applied in the project development course. Further studies should be carried out in other departments and in different courses.

Reference

- [1]. Ajjan, H. ve Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *The internet and higher education*, 11(2), 71-80.
- [2]. Bektas, C. & Fayad, R. (2017). Learning framework using social media networks. *Global Journal of Information Technology: Emerging Technologies*, 7(1), 8-13.
- [3]. Bicen, H. (2012). *Öğretmenlerin hizmet içi eğitiminde sosyal paylaşım sitelerinin kullanımı: facebook ve wiziq sanal sınıf örneği* (Unpublished Doctorate Thesis). Near East University, Nicosia, Cyprus.
- [4]. Bulu, S., Numanoglu, M. & Keser, H. (2016). Examination of the attitudes of middle school students towards social media. *Cypriot Journal of Educational Sciences*, 11(1), 37-42.
- [5]. Cavus, N. & Mohammed, A. K. (2017). Investigating faculty members' awareness on social media usage in teaching and learning. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 3(3), 227-234.
- [6]. Demir, E. B. K., & Akbulut, Y. (2017). Çevrimiçi Sosyal Ağların Öğretim Amaçlı Kabul ve Kullanımı Ölçeğinin Geliştirilmesi 1. *Turkish Journal of Computer and Mathematics Education*, 8(1), 52-82.
- [7]. Durak, G., Çankaya, S., & Yüncül, E. (2014). Using educational social networking sites in education: Edmodo. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi/Dumlupınar University Journal of Social Sciences*, 41, 309-316.
- [8]. Ekici, M. ve Kıyıcı, M. (2012). Using social networks in educational context. *Uşak Üniversitesi Sosyal Bilimler Dergisi*. 5(2), 156-167.
- [9]. Goldfarb, A., Pregibon, N., Shrem, J., & Zyko, E. (2011). Informational brief on social networking in education. *Emerging Teaching & Learning Technologies Initiative, New York Comprehensive Center*, Retrieved April, 26, 2013.
- [10]. Jones, N., Blackey, H., Fitzgibbon, K. Ve Chew, E. (2010). Get out of MySpace!. *Computers & Education*, 54(3), 776-782.
- [11]. Kirschner, P. A., & Karpinski, A. C. (2010). Facebook® and academic performance. *Computers in human behavior*, 26(6), 1237-1245.
- [12]. Lester, J., & Perini, M. (2010). Potential of social networking sites for distance education student engagement. *New directions for community colleges*, 2010(150), 67-77.

- [13]. Mumcu, H. Y., & Usta, N. D. (2015). Prospective teachers' attitudes towards the use of computers and internet. *Journal of Instructional Technologies & Teacher Education*, 3(3), 44-55.
- [14]. Ozdamli, F. (2013). Effectiveness of cloud systems and social networks in improving self-directed learning abilities and developing positive seamless learning perceptions. *J. UCS*, 19(5), 602-618.
- [15]. Özgür, H. (2013). Analyzing the relationship between social networking addiction, interaction anxiousness and levels of loneliness of pre-service teachers. *International Journal of Human Sciences*, 10(2), 667-690.
- [16]. Gursakal, N. & Bozkurt, A. (2017). Identifying gatekeepers in online learning networks. *World Journal on Educational Technology: Current Issues*, 9(2), 75-88.
- [17]. Öztürk, M. F. Ve Talas, M. (2015). Interaction of social media and education. *Zeitschrift für die Welt der Türken/Journal of World of Turks*, 7(1), 101-120.
- [18]. Sarsar, F., Başbay, M., & Başbay, A. (2015). Use of social media in learning and teaching process. *Mersin University Journal of the Faculty of Education*, 11(2), 418-431.
- [19]. İşman, A., & Albayrak, E. (2014). Effectiveness of Facebook as a Social Network in Education. *Trakya University Journal of Education*, 4(1), 129-138.
- [20]. Kurt, A., & Özer, Ö. (2015). Views of teacher candidates towards using Facebook in instructional technologies and material design course. *SDU International Journal of Educational Studies*, 2(2), 80-91.
- [21]. Sevinc, O., Askerbeyli, I. & Guzel, S.M. (2017). Discovering future of the social trends using social media tools. *Global Journal of Computer Sciences: Theory and Research*, 7(3),153-159.
- [22]. Sucu, F., Akbay, M., & Akbulut, Y. (2015). Content Management System in Medical Education: EDMODO. *Journal of Medical Education and Informatics*, 1(1), 24-32.
- [23]. Dere, E., Yücel, Ü. A., & Yalçınalp, S. (2016). Opinions of K-12 Students about an Online Social Learning Environment: Edmodo. *Elementary Education Online*, 15(3), 804-819.
- [24]. Çobanoğlu, A.A, Uzunboylar, O., & Altun, E. (2017). Investigating online learning readiness, attitudes and perceived online sociability in a collaborative blended course. *Electronic Journal of Social Sciences*, 16(63), 1218-1229.
- [25]. Kuzgun, H., & Özdiç, F. (2017). Investigating Usability of Edmodo as an Educational Social Network Environment. *Journal of Theoretical Educational Science*, 10(2), 274-297.
- [26]. Ata, F. ve Baran, B. (2013). University Students' Web 2.0 Technologies Usage, Skill Levels and Educational Usage. *Education and Science*, 38(169), 192-208.
- [27]. Bozkurt, A. (2013). Açık ve Uzaktan Öğretim: Web 2.0 ve Sosyal Ağların Etkileri. *Akademik Bilişim 2013*, (s.689-694). Akdeniz Üniversitesi, 23-25 Ocak, Antalya.
- [28]. Dabner, N. (2011, March). Design to support distance teacher education communities: A case study of a student-student e-mentoring initiative. In *Society for Information Technology & Teacher Education International Conference* (pp. 218-223). Association for the Advancement of Computing in Education (AACE).
- [29]. Uygarer, R., & Uzunboylu, H. (2017). An investigation of the digital teaching book compared to traditional books in distance education of teacher education programs. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(8), 5365-5377.
- [30]. Uzunboylu, H. & Karagozlu, D. (2017). The emerging trend of the flipped classroom: A content analysis of published articles between 2010 and 2015. *Revista de Educación a Distancia*, 4(54), 1-13.
- [31]. Yilmaz, K. & Naci, S. (2017). Teachers' perspectives on using smart boards and tablet pc in teaching. *International Journal of Innovative Research in Education*, 4(1), 17-27.
- [32]. Hamutoğlu, N. & Kiyici, M. (2017). An Exploration of University Students' Views Regarding the Use of Edmodo as an Educational Social Network. *Trakya University Journal of Education*, 7(2), 322-343.