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The Effect of Digital Scenario Supported Learning on the Success of Scientific Ethic and Research and Strategies of Information Inquiry (EDISSUSERESII)

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ABSTRACT In this study, it was aimed to determine the effect of digital scenario supported learning on the success of postgraduate students devoted to scientific ethic and research and strategies of information inquiry. The research was a quantitative study and figured according to experimental and control group pre-test and post-test research model. The courses at both groups were carried out in the way of distance education and face-to-face blended learning. In addition to that, experimental group was supported with digital scenarios. With the effect of simultaneously Big Blue Button virtual class, asynchronously recorded courses may be repeated on request by integrating on the system and with conversation panel. With the findings obtained from this research, it was concluded that there was an increase in the successes devoted to scientific research and ethic and performance grades for research report preparation of both groups but there was a significant difference in the favor of the experimental group supported with digital scenarios devoted to inquiry strategies.

INTRODUCTION

Social anthropology reviews interaction of the individuals with lifestyles and social-physical environment at the levels of individual, community and society. Within this context, one of the most important review areas of the social anthropology having a wide research field is planned and unplanned culture changes (Akgül 2010). From past to present, every society has idiosyncratic moral and ethic rules and culture of the society is affected from so many things. It may be said that there is technology foremost among them. Development of the technology not only affects scientific world but also social life and culture. Although every society has its own moral rules, scientific research ethic is universal. As the technology develops, new and different needs occur in the society (Pfaffenberger 1992).

The main condition of a behavior or education research being humanitarian is to take the moral principles into consideration and acting in accordance with the ethic rules. Within this context, "ethic awareness" is based on how that person perceives other people as a whole with himself/herself. Therefore, an individual who pays attention to ethic and moral values and has this awareness aims that other individuals reveal this and reach this awareness (Koç 2013; Ozder et al. 2014). Along with developing technology, a need for bringing the awareness and importance of scientific research to the notice of the society and application of this has raised. Today, so many educational aimed technology environments are used. Some of these environments are Blogs, Learning Management Systems and Wikis. Change of technology with every passing day of course changes and develops education system of the societies. Surely, it is required that students should completely know the ways for access to information, develop strategies for information inquiry and they are to be able to make the distinction between true information and wrong information, configure their own information and they are open to the new ideas (Bezir 2012; Çaka et al. 2016).

The distance education system that are more enriched by using various educational web 2.0 tools thanks to these fast developments in the technology are used today. The virtual classes also rank among the tools that are used popularly. Along with the effective use of virtual class environments in the distance education, so many virtual class environments have hit the marketplace. In so many studies, comparison of these virtual classes were done and as an opinion, it

was observed that usage of all virtual class environments makes a positive contribution to the general success regardless of whether paid or free of charge (Schaal 2010; Wu et al. 2010; Bicen 2012; Erturan et al. 2012; Tavukcu et al. 2012; Ozdamli and Tugun 2012; Erçag 2013; Tugun and Ozdamli 2015). When these researches were reviewed, it was revealed that the educators experience problems in using these environments during the integration process of these technologies to the classes and most educators do not know how they will manage, use and design new technologies in the teaching process (Inal et al. 2012).

Besides, when these researches were taken into hand, it was seen that students first and generally get benefit from the Internet when they want to access information and they use the Internet specially for completing homework and research. Thanks to the developments in the technology, it is possible to immediately access researched and new information via the Internet. Here, the important point is to know how right information can be accessed.

In their studies, Turan et al. (2015) reviewed "strategies of the teachers for online information inquiries and their sex, daily Internet use and information inquiry experiences". As a conclusion, while there was no difference between online information inquiry strategies of the teachers in terms of sex, there was a difference between purposeful thinking strategies of the teachers as experience increases. Besides that, no significant difference was detected in terms of daily Internet use periods. Besides, advantages of technology are much more, it is a truth that it also has disadvantages.

Along with the fast developments in the technology, there are also changes in the ethic understanding. With the common use of Internet, unethical behaviors such as using the sources not having scientific validity without providing reference such as copy-paste method without providing reference, e-mail, conversation, forum again without providing reference have become a part of irregularity (Odabasi and Kiliçer 2007).

Negative behaviors are also demonstrated in the process of learning technology as well as so many positive developments. In a study that was done in USA, while very few university students (20%) stated that they cheated in the high school at the beginnings of 1900s, today nearly all of the students (75-80%) stated that they cheated (Harris 2009). Copy over technology and Internet may be ranked as follows in the researches, that is, cheating during the exam, making uninformed cooperation at the project studies, using any information in a study without providing reference or providing reference appropriately, showing opinions and views of any other persons as if his/her own opinions/views, copying homework from the websites such as homework website, receiving the course that is the project homework of a friend educated in the previous term and showing it as if his/her own homework, using a project in more than one courses and carrying out the project with cut-copy-paste from different sources are the among the primary behaviors that are very far away from the targeted point of today's education and undesired behaviors (Aysit 2012). In contrast to these behaviors, it is aimed to bring up a person who thinks, does not take information from others but accesses the right information, comes up with creative information, configures information in his/her mind as not based on memorization and focuses on problem (Sügümlü 2009).

Due to these reasons, today the conventional approaches for which the student is at the center and he/she is able to access the information himself/herself, configures the information and uses it when needed is prioritized has been gradually adopted and used instead of the traditional teaching at which teacher is at the center and has the role of transferring the information (Kamaci and Durukan 2012). One of these approaches is scenario based learning. Scenario based learning is referred to as "case review method" or "case based learning method" (Demirel 2009; Sügümlü 2009; Yaman 2005) in the relevant literature.

When the literature is reviewed, it is seen in the studies that scenario based learning method has been used in the education in different fields. One of these was the study that was carried out by Köse (2012) on against environmental problems. In the study of Alakavuklar and Cakar (2012) that they carried out concerning the academicians, they reviewed the subject of "Role of Moral on The Conflict Management Types: A Scenario Based Study".

Along with development of the technology every passing day, it is indispensible that scenario based learning will be transferred to the digital media. When the literature is reviewed, it is seen that the studies done in this subject are

very limited. It was stated in the studies that scenario based or supported learning has positive effects on education in some fields of the education. By taking into consideration that technological developments have positive effect on the academic success, it is thought that combination of two methods is possible.

In the studies that were carried out by using scenario based learning method, it was revealed that use of animated short stories have positive effects. However, it was stated that animated short stories have not been used (Bailey et al. 2005; Kuo et al. 2011). Besides, developing these kinds of animated short stories may require too long a time and effort as well as information and skills, and it may be also so expensive. Besides these positive opinions and views, it is seen in the studies that technological developments have disadvantageous effects as well as positive effects. In addition to that, technological developments have also affected the scientific researches.

The concept of scientific research is defined in so many ways in the literature. Karasar (1994) explains scientific research as the process of data collection, analysis, interpretation, assessment and reporting in a planned and programmed way in order to produce lasting solutions against an existing problem. In order to main the scientific research process effectively, also the researchers have to maintain positive attitudes against scientific research.

There is a necessity for continuity and being aware of what are the previous studies in the nature of the scientific researches. Every scientific research is developed by taking the previous researches into basis. At the stage of developing these studies, it is a basis that some rules are to be obeyed, references are to be determined beforehand and they are to be stated in accordance with worldwide accepted specific rules. As well as that the errors that are done at the stage of making scientific research and spreading the research results on purpose or as unwitting damages reliability of the research, it also damages relevant discipline. During the scientific communication process, "forgery", "piracy/plagiary", "fabricating" and "making repeated publications" are among the behaviors that are generally defined as "unethical".

Today there is an increase in unethical behaviors along with the development of the technology. In order to ascertain that these problems will not be reflected on the scientific studies, competences of the brought up postgraduate students are to be increased. The necessity for reviewing the effect of digital scenario supported learning prepared by getting benefit from these renovations at the technology on successes of postgraduate students devoted to scientific ethic and research and strategies of information inquiry has come in sight.

Aims

The general aim of the research is to determine the effect of digital scenario supported learning on successes of the postgraduate students devoted to scientific ethic and research and strategies for information inquiry. The sub-aims determined in order to reach this general aim are as follows:

1. Is there any difference between pre-test and post-test "scientific ethic and research" achievement test grades of the experimental group who have digital scenario supported blended learning and control group who have had blended learning?
2. Do graded scoring scale of the scientific research reports of experimental and control group that they made in the form of pre-test and post-test become distinct?
3. Do pre-test and post-test online information inquiry strategies of experimental and control group become distinct?

METHODOLOGY

This research was carried out by integrating various web 2.0 tools over Near East University Distance Education System. The research was quantitative and was figured in accordance with pre-test and post-test research model with experimental and control groups.

Study Group

The students having postgraduate education (postgraduate and doctorate) in Near East University form the study group of this research. The persons who were in the study group were formed of different voluntary students from different programs. In addition to that, the students who would participate in the study were to be ones who made scientific research before (thesis, article, notification) and took the course of

Scientific Research Methods. There were 40 postgraduate students from different programs in the experimental and control groups. The students whose latest figures of their school number were uneven were assigned as the control group and the ones whose latest figures of their school number were even were assigned as experimental group. At the beginning of the study, they were homogenous in terms of success and sex at the end of achievement test applied as pre-test.

Seventy percent of the postgraduate students (28 persons) in the experimental group were female and thirty percent (12 persons) were male, and seventy-five percent of the control group (30) was female and twenty-five percent of the group (10 persons) was male. Age average of the experimental group students was 28.90 years and age average of the control group was 29.00 years. Eighty percent of the students in the control group were in the postgraduate program and twenty percent of them were in the doctorate program. 87.5 percent of the students in the control group were in the postgraduate program and twenty-five percent of them were in the doctorate program. When statuses of the students in terms of attending a scenario based/supported learning before were reviewed, it was seen that only 12.5 percent of the students in the experimental group and only 7.5 percent of the students in the control group experienced a scenario based/supported learning before.

Developing Educational Environment

The study was carried out with the Distance Education Center by forming different systems for both groups. The digital scenarios (Fig. 1) prepared devoted to the experimental group as well as the big blue button virtual classroom environment available on the Moodle system, course note share and video share were added for both groups.

Writing the Scenarios

The course content was prepared by setting off from the responses that 50 postgraduate students gave to 11 open-ended questions. The digital scenarios were formed in the direction of the responses that students gave to these questions. While forming the scenarios, the scenarios were formed by exaggerating the events experienced

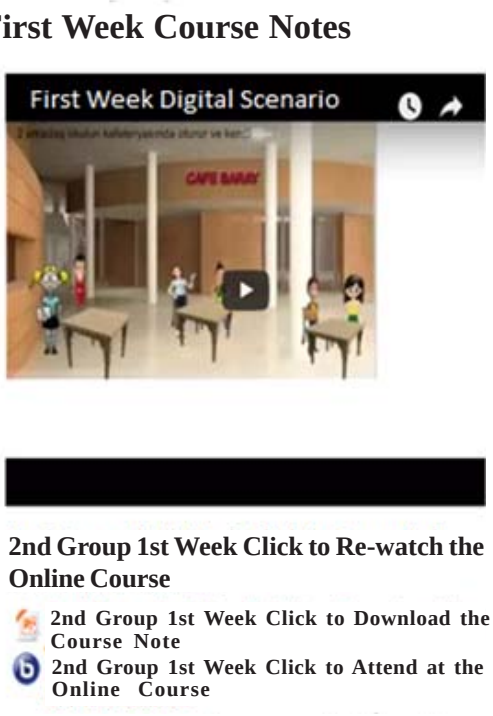

Fig. 1. Share of the digital scenarios at the course system (NEU-DLC, 2015)

by the students but as the events that they may experience in their daily life. In addition to that, attention was paid to make them more attractive and catchier by using the names used in the scenarios were used in relevant to the daily life. Written scenarios took its final form after the expert opinions were received and digital scenarios were integrated into the media.

Application

Before starting the application, the system was introduced and necessary notifications were done. The application took totally 9 weeks. The achievement test was applied by the researcher before the application. Besides that, the performance scale developed by the researcher was applied. In order to make the performance assessments, the project was given before the course. After the course, it was requested from the students to rewrite these projects. The project delivery was done via e-mail. In addition to that the scale for determining the opinions devoted the information inquiry strategies was

applied. All materials relevant to the course was communicated over "Scientific Research in the Education Management and Ethic Rules Course" formed on the system. Environments of the control and experimental groups were separated with different entrance fields and everybody was able to enter his/her own entrance. The statuses of the students in both groups for watching online courses were controlled on Moodle system and entry-exit times of all students were kept under control. Also, entries-exits to the system were kept under control by using the same method for watching the Digital Scenarios applied to the experimental group were kept under control. File share from web 2.0 tools available in the system, Big Blue Button virtual classroom environment, being able to repeat online course videos when desired, share of various video links added on YouTube in the shape of labels and share of the digital scenarios links added on YouTube to experimental group were done. So many characteristics of Big Blue Button virtual classroom environment were used in the online courses. By making file share, the features such as that the students may see these and make emphasizes on these, instant communication with screen share, voice and writing were actively used. Thanks to that, they had the opportunity of asking instant questions to both, the educator and other students. Besides that, online courses were recorded and then added to the system with the aim of being watched when desired. The conversation panel added as simultaneously and messaging and informing features as asynchronously were used.

Analysis and Interpretation of the Data

The achievement test was developed by the researchers with the aim of measuring knowledge of the postgraduate students who participated to the research as covering all the pre-course and post-course subjects. After article hardness analyses were done, the achievement test took its final form and it was decided to form total 60 questions as 40 multiple choice and 20 true-false questions.

At the performance duty prepared within the scope of scientific ethic and research, analytic graded grading key (rubric) was prepared with the aim of determining poor and strong sides of the students in terms of writing the research report. 5 dimensions that may be measurable in the development process and that were appropriate for the course content were determined. Determined dimensions were rearranged by taking the opinions of 10 experts and put into application.

It was developed by Tsai (2009) in order to determine information inquiry strategies of the individuals at the online environments in three main fields such as behavioral, attitudinal and upper cognitive. Adaptation to Turkish was done by Askar and Mazman (2013). The scale was formed from total 25 question and 7 dimensions as evanescing, assessment, purposeful thinking, trial and error, identifying the main ideas, control and problem solving.The Croncbach alpha value of whole of the scale was .910. In this study, alpha value of whole of the scale was .902. The necessary permits for using the scale were taken.

FINDINGS

Scientific Ethic and Research Successes of the Students

Repetitive Measurements Anova Test was applied for determining whether there was a significant difference between pre-test and post-test scientific ethic and research success grades of the students in the experimental group who had digital scenario supported blended learning and in the control group who had digital scenario supported blended learning or not.

When scientific ethic and research successes of the students are reviewed, it is seen that there was an increase in the post-test success grades of the students in both groups but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=11.913, p<0.05) (Table 1).

Table 1: The comparison results of experimental and control group success test

Graded scoring scale			*Experimental group*		*Control group*		*F*	*p*	*Description*
		N	$\overline{X}$	*SS*	$\overline{X}$	*SS*			
	Pre-test	40	53.12	8.96	52.12	7.30	11.913	0.001	P<0.05
	Post-test	40	87.16	3.42	80.76	4.30			

According to obtained findings, it may be said that digital scenarios positively affect success of the student in terms of "Scientific Ethic and Research".

When the literature is reviewed, it is seen that there are studies that are consistent with results of this study. When research works are reviewed, it is seen that benefitting from the renovations in the technology and different computer aided learning methods is emphasized with the aim of making education environments more entertaining, active and attractive (Büyükkara 2011). Within this context, Akkagit and Tekin (2012) concluded in studies that success of the group at which education was done with the developed simulation education tool. Again in the study done by Güven and Sülün in 2012, it was observed that teaching method supported with new technologies increased successes compared to other methods.

Assessment of Scientific Research Reports Done by the Students

Repetitive Measurements Anova Test was applied for determining whether there was a significant difference between pre-test and post-test scientific research reports graded scoring scale performance grades of the students in the experimental group supported with digital scenarios and control group or not in terms of groups. Performance levels of the groups were determined and compared with a graded scoring scale that was applied with the research report requested to be prepared at the beginning of the study as pre-test and with the research report requested to be prepared at the end of the study as post-test.

As seen in Table 2, when scientific research reports performance levels of the students are reviewed, it is seen that there was an increase at the post-test graded scoring scale performance grades of the students in both groups but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=21.667, p<0.05).

According to obtained findings, it may be said that scientific research report writing performances of the students increased. Also it is seen that it was much more increased at the group supported with digital scenarios.

The Opinions of the Students Devoted Online Information Inquiry Strategies

Repetitive Measurements Anova Test was applied with the aim of determining whether there was a significant difference between competences of experiment and control group students in terms of information inquiry strategies after the study or not. The findings obtained from the analysis are given in Table 3.

It was detected that there was a positive change in pre-test and post-test grades of both groups in terms of getting a feeling of that being lost while inquiring the information at online environments but it was detected there was no significant difference between experiment and control group ($F_{1,78}$=3.763, p>0.05). For example, while students stated that they shared the article of "I do not know what I should do while searching on the Internet" in the pre-test in terms of getting the feeling of that being lost while inquiring information in online environments ($\overline{X}$=3.73, SS=.93), they stated that they did not share this opinion in the post-test ($\overline{X}$=1.83, SS=.80).

Ekici and Uçak (2012) stated in their studies that the students made inquiry on the Internet first when they will do homework and research. Also, the students stated that they digress from the subject and are lost among the information while they are inquiring information. The concluded result shows similarity with the result concluded at the beginning of the study.

It was detected that there was a positive increase in pre-test and post-test grades of both groups according to the strategies of assessing the information while searching in online environments but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$= 9.958, p<0.05). For example, the students were undecided about the

Table 2: Graded scoring scale points of experimental and control group

Graded Scoring scale points (Rubric)		*Experimental group*			*Control group*		*F*	*p*	*Description*
	N	$\overline{X}$	*SS*	$\overline{X}$	*SS*				
Pre-test	40	61.00	3.79	59.62	4.14	21.667	0.000	p<0.05	
Post-test	40	88.50	4.11	82.13	4.92				

Table 3: The opinions of experimental and control group students devoted to information inquiry strategies

Information search strategies			*Experimental group*		*Control group*		*F*	*p*	*Description*
		N	$\bar{X}$	*SS*	$\bar{X}$	*SS*			
Disorientation	Pre-test	40	3.12	.57	3.10	.46	3.763	.056	P>0.05
	Post-test	40	2.11	.50	2.37	.49			
Evaluation	Pre-test	40	3.18	.52	3.21	.46	9.958	.002	P<0.05
	Post-test	40	4.25	.51	3.69	.68			
Purposeful	Pre-test	40	3.40	.57	3.41	.53	14.905	.000	P<0.05
Thinking	Post-test	40	4.21	.47	3.54	.76			
Trial & Error	Pre-test	40	3.19	.69	3.22	.51	11.969	.001	P<0.05
	Post-test	40	4.33	.43	4.12	.58			
Select Main	Pre-test	40	3.13	.85	3.15	.75	10.207	.002	P<0.05
Ideas	Post-test	40	4.47	.42	3.87	.43			
Control	Pre-test	40	3.24	.37	3.25	.46	20.129	.000	P<0.05
	Post-test	40	4.45	.40	3.79	.67			
Problem	Pre-test	40	3.16	.69	3.13	.66	13.388	.000	P<0.05
	Post-test	40	4.26	.44	3.90	.68			

expression of, “I always assess the relations between the information that I found on web” in terms of the dimension of assessing the information in the pre-test ($\bar{X}$=3.28, SS=.81) and they absolutely shared this opinion in the post-test and they were undecided about the expression of, “I compare the information that I collected from different websites” in the pre-test ($\bar{X}$=3.15, SS=.79) and they shared this opinion in the post-test ($\bar{X}$=4.00, SS=1.11).

It is seen that there was a positive increase in the pre-test and post-test grades of both groups after the application according to the strategies of purposeful thinking while searching on online environments but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=14.905, p<0.05). For example, while students stated that they were undecided about the article of, “I think how I will get benefit from the information that I search for” in the pre-test in terms of purposeful thinking dimension while inquiring information ($\bar{X}$=3.56, SS=.95), they stated that they shared this opinion in the post-test ($\bar{X}$=4.21, SS=.75).

It is seen that there was a positive increase in post-test grades of both group students after the application according to using trial error strategies while searching on online environments but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=11.969, p<0.05). For example, while students were undecided about article of “I try other search engines when my search is unsuccessful” in the pre-test in terms of accessing information with trial error ($\bar{X}$=3.23, SS=1.10), they stated that they did not share this opinion in the post-test ($\bar{X}$=4.25, SS=.67).

According to obtained findings, it is seen that there was a positive increase in post-test grades of both group students after the application according to identifying the main opinions on the information available at the online environments but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=10.207, p<0.05). For example, while students were undecided about article of “Generally I think the keywords that I may use beforehand” in the pre-test in terms of identifying the main opinions at online search strategies ($\bar{X}_{Ö1}$=3.15, $?_{Ö2}$=3.07), they stated that they shared this opinion in the post-test ($\bar{X}$=4.15$_{S2}$, $?$=4.15$_{S2}$).

According to the findings obtained from the analysis, it is seen that there was a positive increase in post-test grades of both group students after the application according to controlling strategies while making online search but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$= 20.129, p<0.05). While students were undecided about article of “I know using a web scanner such as Internet Explorer or Netscape” in the pre-test in terms of being able to control while making online search ($\bar{X}$=3.06, SS=72), they stated that they shared this opinion in the post-test ($\bar{X}$=4.06, SS=1.16) and while they were undecided about article of “I know how I will use developed search options provid-

ed by search engines" in the pre-test ($\overline{X}$=3.13, SS=.92), they stated that they shared this opinion in the post-test ($\overline{X}$=4.33, SS=.54).

Finally, it is seen that there was a positive increase in post-test grades of both group students after the application according to problem solving strategies while searching online but there was a significant difference in the benefit of experimental group supported with digital scenarios ($F_{1,78}$=14.153, $p<0.05$). While students were undecided about article of "I think new solutions when the problems that occur during searching disappoints me" before the course in terms of problem solving dimension ($\overline{X}$=3.21, SS=.87), but they stated that they absolutely shared this opinion in the post-test ($\overline{X}$=4.20, SS=.73).

The results of this study show similarities with the study of "Determination of online information inquiry strategies of prospect teachers" by Sirakaya and Cakir (2014).

DISCUSSION

As well as that continuous development of the technology affects the societies, it also leads to the changes on the education. While characteristics of the individuals in the societies change in general thanks to these technologies, student profiles also change. Today while the students are digital locals, it will be an advantage if one uses digital media instead of traditional media in the education. Also, in the scientific researches brought along the digitalism, solutions are pursued for the negativities such as ethic breaches and taking the easy way in making research. So many studies have been carried out concerning blended and online learning, and moreover it is known that blended learning is much more effective. In order to increase the efficiency in the blended learning environments, so many studies have been carried out. At this point, this study was carried out with the aim of determining the effect of digital scenarios supported blended learning environments on scientific ethic and research successes of the students and information inquiry strategies of them. Akkagit and Tekin (2012) observed that the group who underwent training with simulation-based educational appliance was much more successful. In addition to that, it can be seen that the education method that was supported with new technologies increases the academic success (Güven and Sülün 2012; Özerbas and Benli 2015; Yesiltas and Öztürk 2015).

Along with further development of the technology every passing day, using new technologies in the education has become indispensible. It is seen from abovementioned explanations that there are so many studies carried out by integrating today's technologies into the education.

CONCLUSION

According to the findings obtained from the study, it was detected that scientific ethic and research successes of the experimental group students educated in the digital scenario supported blended learning environment and control group students educated in the blended learning environment increased. But it was revealed that scientific ethic and research successes of the students working in the experimental group increased much more. According to the obtained finding, it may be said that usage of digital scenarios as a support to blended education may increase student success.

According to the obtained results, it may be said that digital scenario supported scientific ethic and research course supported with digital scenarios positively affects research report writing performances of the students. In this context, it is seen that performances of information access resources information inquiry methods and techniques, not making piracy and showing the right references within the text and at the part of the bibliography of experimental group students educated with digital scenario supported blended learning method compared to the control group educated with blended learning method.

It was concluded that anxiety levels of the students in both groups devoted to feeling of that being lost while making online search decreased but there was no significantly difference between both groups. It was detected that competences of the students in terms of assessing the information that they come across while making online search increased. Also it was detected that competences of the group supported with digital scenarios in terms of assessing the accessed information increased much more. Another result obtained from the study, it was seen that competences of the students in both groups in terms of purposeful thinking while making

online search increased but competences of the ones in the group supported with digital scenarios increased to upper levels. It was detected that competences of the students in the group supported with the digital scenarios in terms of accessing the information with the trial error method while searching online increased much more. It was concluded that competences of the students in both groups in terms of identifying the main ideas while making online search showed increase at the end of the study, and competences of the students in the experimental group supported with digital scenarios in terms of identifying main ideas were higher.

At the end of the study, it was detected that competences of students in the experimental group supported with digital scenarios in terms of controlling while searching online were better compared to the students in the control group. Also it was seen as another result concerning online search strategies those competences of the students in the experimental group in terms of solving problems that they come across increased much more. If the researchers summarize the results concerning online search strategies, it was detected that competences of the students in both groups positively increased. Competences of the students in the experimental group supported with digital scenarios in terms of online search much more increased.

RECOMMENDATIONS

As in every study, this study has some limitations. The first limitation is that only postgraduate students participated in this study. In the future studies, a detailed research may be done by also including the graduate students in the study.

It can be concluded that digital scenario supported blended learning environment approach is useful for anyone interested in choosing digital environment for learning.

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