



## The Effect of Educational Videos Used in History Education on Academic Success

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### Abstract

The purpose of the research is to examine and assess the videos used in history education. In the study, the academic success levels of the students who received their history education through videos that comprise of voice, text, animation and sound components. Also, answers to the question of whether there is any difference in the academic success levels of students who received their education through video components were looked for, via 50 multiple-choice questions. Furthermore, the views and experiences of students on the topic of the education given were researched through 7 semi-structured qualitative questions. In the research; three short videos used in history education that were prepared in different styles were used. Two of these videos were merged due to them sharing the same topic. The study universe consists of about 400 students at high school (9th grade) level in Ağrı province. The sample was chosen by using purposeful sampling method. According to the acquired findings; history education videos were noted to be of vital contribution to motivation and learning. While it may make it easier to determine which topics and styles cause gaps in learning, the results obtained in this research, it may also contribute greatly to improve and solve these.

**Keywords:** History education, History education videos, Ancient history videos, Educational videos, Video-based learning.

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## 1. Introduction

In present day which is the age of digital technology also known as the fourth industrial revolution, multimedia tools are seen to have become part of daily lives of people. Likewise, multimedia tools are used in many disciplines with different interface and Technologies in this age dubbed the digital age (Seixas, 1994; Swan, 1994; Kelly, 2001; Kobrin, 2001; Masterman and Rogers, 2002; Schrum and Hong, 2002; Lee *et al.*, 2006; Mishra and Koehler, 2006; Harding and Ingraham, 2007; Brush and Saye, 2008; Diaz *et al.*, 2008; Swan and Locascio, 2008; Berson and Berson, 2009; Hardy and Jefferies, 2010; Sharpe *et al.*, 2010; Mohamad and Chong, 2011; Beck and Eno, 2012; Krauss and Boss, 2013; Hofer and Swan, 2014; Romrell *et al.*, 2014; Kurihara, 2016; Söylemez, 2016; Marone, 2017; Sarikaya, 2017; Sarikaya, 2018; Söylemez, 2018; Demirel, 2018a; Demirel, 2018b) Stephenson [*Cigar box Projects'i* (Kelly, 2013; Krauss and Boss, 2013)]. Akdemir (2017) the fact that multimedia tools are the focal point of many educators has lead to the widespread research of how the effectiveness of the learning process must be provided with these tools (Schrum, 2001; Weis, 2001; Berson and Balyta, 2004; Kingsley and Boone, 2008; Hammond and Manfra, 2009; Oostveen *et al.*, 2011; Chou *et al.*, 2012; Bates, 2015; Ragland, 2015; Schwab, 2016). Kaya and Akdemir (2016) upon examination of the researches in the literature, it is seen that videos, which are in widespread use among multimedia tools are also becoming widely used in education (Angeli and Tsaggari, 2016; Yazıcı and Kültür, 2016). Especially the fact that it provides multiple multimedia components to learners in the process of effective and rapid learning may be shown among the reasons why the use of these tools are becoming widespread (Crook, 1996; Akkoyunlu and Yilmaz, 2005; Siti *et al.*, 2016; Turan *et al.*, 2016; Gündüz, 2017; Kuzu, 2017).

In history education, we witness that multimedia tools are essential for the improvement of learning, logic, effective and useful citizenship and democratic awareness, the creation of a satisfactory and prospective historical awareness. In this context, videos, which are a part of multimedia tools, can remedy the problems in history education that are mainly caused by rote-learning (Barton and Levstik, 2003). In order for videos to be among the effective learning tools, it is beneficial for the components offered by these tools must be prepared in accordance with multimedia design principles (Mayer and Sims, 1994; Mayer, 2003; Mayer and Moreno, 2003; Moreno and Mayer, 2007; Joseph and Joy-Telu, 2016). In this research, the main focus of the research problem consists of researching the effect of the learning process through videos that were prepared in accordance with multimedia design principles on academic success and cognitive load of the students. The purpose of this study is to research the effect of multimedia components in multimedia tools on the academic success in history education. Accordingly, the research questions are as follows:

- What are the success levels of the students who received history education through voiced and written components?
- What are the success levels of the students who received history education through animation and sound components?
- Is there a significant difference in the success levels of the students who received education through different video components?
- What are the opinions and experiences of the students on the topic of the education given?

## 2. Method

In this research, the use of consecutive descriptive pattern among mixed research methods was preferred. The mixed research method, as much as it is a research pattern in accordance with philosophical principles and propositions, it is also considered as a method. In the mixed method research, qualitative and quantitative data are gathered in the scope of a specific system, and their combined use is facilitated, as it is purposed towards reaching the correct and extensive conclusion in the explanation of the research problem (Creswell and Clark, 2014). In this context, quantitative data was gathered and analyzed first, and then the qualitative data was gathered in order to corroborate the quantitative data (Creswell and Clark, 2014). The quantitative data consists of the data gathered from the academic success test. The qualitative data, on the other hand, consists of the interviews carried out with the study groups (Yıldırım and Şimşek, 2013; Johnson and Christensen, 2014; Patton, 2014; Ekiz, 2015; Miles and Huberman, 2015; Söylemez, 2015; Robson, 2015b; Sarikaya, 2016; Sonmez and Alacapinar, 2016).

### 2.1. Sample

The universe of this study consists of high school (9th grade) students in Ağrı province. The sample was determined by using purposeful sampling method, while it consists of 403 students for test I, 452 for test II, 138 for Control group test I, 58 for Control Group test II and the same rates of students for the permanence test. The decision of which of the study groups would be the control group was made using random methods. Details regarding the demographic information of the study groups are shown in Table 1.

Table-1. Demographic Information of the Study Groups

Study Groups	N	Age Range
Video 1 Test	403	14-16
Video 2 Test	452	14-16
Control G. Test 1	138	14-16
Control G. Test 2	58	14-16
Total	1051	14-16

Source: Data have obtained from author's field study.

### 2.2. The Study Process

First of all, in this research, a preliminary test was applied to check if there is any significant difference between the average points regarding the academic successes of the study groups. Upon examination of the analysis results according to the data gathered from the preliminary test, the data from the study groups show a normal range ( $p=0.120$ ) and as a result of  $t$ -test analysis results [ $t_{100}=1.250$ ,  $p=0.120$ ,  $r^2=0.11$ ] it was determined that there is no significant difference in the average success points of the groups (Field, 2013). Also, the reliability coefficient

*Cronbach Alpha* value of the data gathered from the preliminary test was  $\alpha=0.72$ , wherein the success test was seen to be quite reliable.

Afterward the application process was initiated and the students were provided with individual study after lessons using different video recordings, after theoretical lessons. While the experimental group was applied with two different videos, the control group received their education only through traditional methods. The education given to the study groups was provided by the same educator. Details of the study process regarding the experimental and control group are shown in [Table 2](#).

**Table-2.** Details regarding the study process

Study group	Study week	Video features
Experimental group	1st Week	Voice+Text (Video 1) <sup>1</sup> Video Duration:11 min.* 7 sec**.
	2nd Week	Final test application
	3rd Week	Voice+Animation + Minimal Text (Video 2) Video Duration:16 min. 27 sec.
	4th Week	Final test application
Control group	1st Week	Traditional education
	2nd Week	Traditional education
	3rd Week	Traditional education
	4th Week	Traditional education

<sup>1</sup> Videos were taken from <http://eba.gov.tr>. \*Minutes, \*\*Seconds,

After the application process, a permanence test was applied a month later in order to measure the permanence of the academic successes of the study groups, and the study process was completed. During the study, videos on the same topic (First Age History Topics) but with different content and multimedia components were used for the validity of the permanence test.

### 2.3. Data Gathering Tools

In this study, the academic success test developed by the researcher was used as a quantitative data gathering tool. 25 questions each for Video 1; “*Concepts of Time Used in the Examination of Historical Events-I: Concepts of Time Used in the Examination of Historical Events-II.*” and Video 2: “*Introduction to Ages of History and Anatolia, Cradle of Civilizations*” so 50 multiple-choice questions in total about the application study was prepared and presented to the students. As a tool of qualitative data gathering tool, semi-structured interview form, prepared by the researcher, was developed. This form consists of 7 qualitative questions. In the semi-structured interview, partial editing or editing with the interviewer upon reconsideration with the target of the questions, meaning the answerer, is the case. Moreover, unplanned questions which emerge in the natural course of the interview may also be asked ([Yıldırım and Simşek, 2013](#); [Patton, 2014](#); [Robson, 2015a](#); [Sonmez and Alacapınar, 2016](#)). For the reliability of the academic success test *Cronbach Alpha* value was calculated as  $\alpha=0.72$ . In this context, it can be said that the success test is reliable. The semi-structured interview form was examined by two experts on the subject, re-edited according to the feedback and the meaningfulness levels of the questions were checked with a 4-person pilot application. After the editing, the form was finalized and the process was completed. Finally, those who were quoted were designated with a “px” in order to reflect the views of the students who took part in our study.

### 2.4. Analysis of the Data

The quantitative data was analyzed with the help of a statistics program, and then the qualitative data gathered was analyzed through descriptive analysis method before the research was concluded. In the descriptive analysis method, the findings that were handled and interpreted according to the pre-determined main motive are later organized and presented to the reader ([Yıldırım and Simşek, 2013](#); [Patton, 2014](#)).

### 2.5. Boundaries of the Research

- This research only consists of high school 9th-grade students from the central county of Agri province.
- In this research, different teachers were employed in the different application processes for the experimental and control groups.
- The study was completed in four weeks.

## 3. Findings and Comments

In this chapter, “t” test analysis of the success levels gained by the students as a result of classical instruction and video-aided instruction; the levels of control, success and permanence between two different videos (Test 1-Test 2) was determined with the Anova test.

**Table-3.** Preliminary test, Final test and Permanence T-Test Results of Video 1

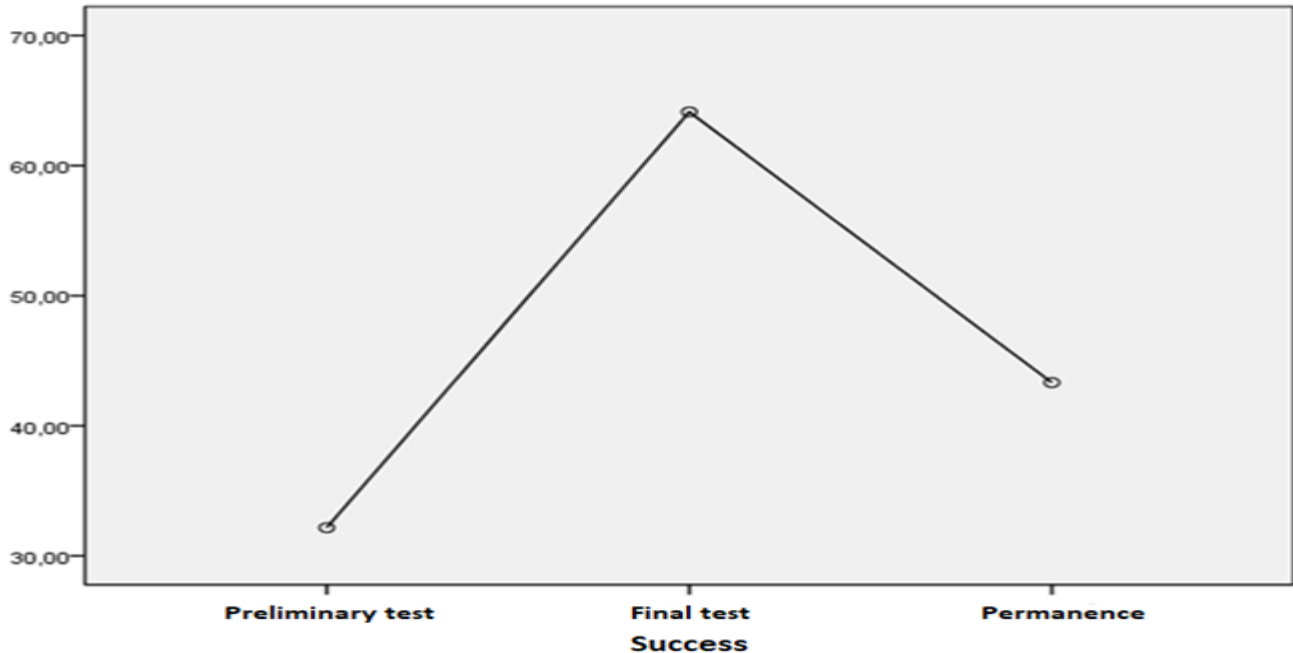
Multimedia Tools	Average	S.D.	N
Video 1 Prel. test	32,1687	11,30013	403
Video 1 Final test	64,1290	13,79679	403
Video 1Permanence	43,3251	15,31432	403

Source: Data have obtained from author's field study.

In [Table 3](#), upon examination of the averages of the preliminary test, final test and permanence test; we witness that in the final test there is an increase compared to the preliminary test, there is decrease compared to the final test, but there is an increase compared to the preliminary test. As it can be seen with the findings in [Table 3](#), the success average between the preliminary test and the final test are approximately 99,35%, and in Permanence, there is an increase rate of 34,67%. Some views of the participants on the subject are as follows:

“The second video was boring, as if we were watching a documentary.” (P 281), “The 1st video was nice, the second was boring.” (P 281). “Because we understand better with video.” (P 361), “The 1st video was more effective.” (P403), “It has been visually more permanent in our brains” (P 403), “Because video is more permanent.” (P 25), “Yes, it is more educative to learn by watching.” (P39), “Because it supports visual memory of students in history class” (P 46), “Because we are both informed and have tested our knowledge. That is why it has been a huge contribution. Thanks a lot. For presenting this knowledge to us in the form of video.” (P 55), “No, because it is not permanent in our minds due to not repeating the knowledge we gained.” (P14).

We can observe this situation in the graphic below.



Graphic-1. Preliminary test, Final test and Permanence T-Test Results of Video 1

Table-4. Video 1 Mauchly's Test of Sphericity

Within-Subjects Effect	Mauchly's W	Approx. Chi Square	df	Sig.	Epsilon <sup>a</sup>			
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound	
1	Success	,971	11,771	2	,003	,972	,977	,500

Upon examination of Mauchly's Test of Sphericity, sphericity hypothesis was achieved due to  $p < 0.05$ .

Table-5. Video 1 Tests of Within-Subjects Contrasts

Success						
Source	Time	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Level 1 vs. Level 2	411648,635	1	411648,635	1280,991	,000
	Level 2 vs. Level 3	174420,486	1	174420,486	411,148	,000
Error (Time)	Level 1 vs. Level 2	129183,365	402	321,352		
	Level 2 vs. Level 3	170539,514	402	424,228		

Source: Data have obtained from author's field study.

Upon examination of Table 5; it is seen that there is significant difference between the preliminary test and the final test, the final test and the permanence test; in other words, the method that was applied has a significant effect on the learning of the students, and yet it was not very effective in achieving permanence of the knowledge gained.

Table-6. The preliminary test, Final test and Permanence T-Test Results of Video 2

Multimedia Tools	Average	S.D.	N
Video 2 Prel. test	24,0354	9,88800	452
Video 2 Final test	37,3451	15,44823	452
Video 2 Permanence test	27,1504	11,96834	452

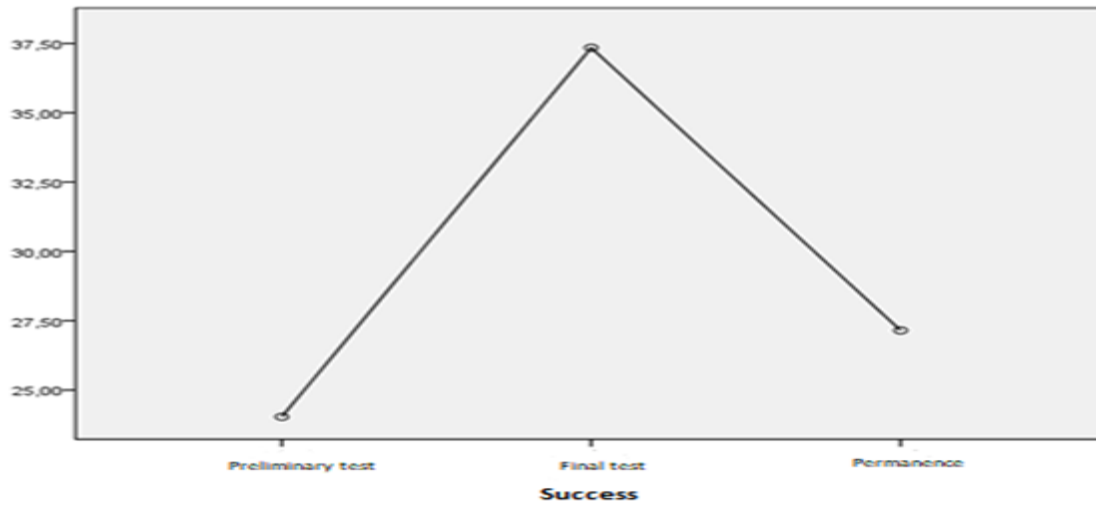
Source: Data have obtained from author's field study.

In Table 6, upon examination of the averages of the preliminary test, the final test and the permanent test; there is an increase in the final test compared to the preliminary test, there is decrease in permanence compared to the final test, but the increase is continuing compared to the preliminary test. As it can be seen with the findings in Table 6, the success average between the preliminary test and the final test is approximately 55,37%, and there is an increase rate of 12,96% in Permanence.

Some of the views of the participants on the topic are as follows:

“But it would be better if the narrators were a bit more lively in their narrations.” (P 171). “Both videos are useful, but the 2nd video is more useful. Because you learn about your past, learn about who lived in these lands.” (P 374), “The last video. Because it made me more curious.” (P 402). “I saw what scientists whom I do not know deal with.” (P 450).

We can also observe this situation in the graphic below.



Graphic-2. Preliminary Test, Final Test and Permanence Test Results of Video 2

Table -7. Video 2 in Mauchly's Test of Sphericity

Within-Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon <sup>a</sup>		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Zaman	,920	37,427	2	,000	,926	,930	,500

When Mauchly's Test of Sphericity was examined, sphericity hypothesis is provided as  $p < 0.05$ .

Table-8. Tests of Within-Subjects Contrasts of Video 2

Source	Time	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Level 1 vs. Level 2	80071,363	1	80071,363	220,680	,000
	Level 2 vs. Level 3	46977,133	1	46977,133	130,051	,000
Error(Time)	Level 1 vs. Level 2	163640,637	451	362,840		
	Level 2 vs. Level 3	162910,867	451	361,221		

Source: Data have obtained from author's field study.

Regarding Table 8, it is inferred that there is a significant difference between preliminary test and final test as well as between final test and permanence test; in other words, that the applied method had a significant effect on learning effectiveness of students, but not very effective in providing permanence of what is learned.

Table-9. In-Group Comparison Results Regarding Control Group (Test 1)

Teacher-Centric Instruction	Average	S.D.	N
Control G. Preliminary test 1	26,3256	10,25721	138
Control G. Final test 1	32,8372	13,27524	138
Control G. Permanence 1	35,2093	12,14531	138

Source: Data have obtained from author's field study.

When the averages of the preliminary test, final test and permanence test on Table 9 are revised, it is understood that there is an increase in the final test with respect to preliminary test, and in permanence with respect to the final test. As it can be observed from the findings in Table 9, an average of success between preliminary test and final test rose by 24.73% and in permanence by 33,74%. When preliminary tests are compared, we observe that Video 1 is 22,19% better. However, it is seen that it is relatively 18,73% lower than the permanence in Video 1. This case also indicates that writing-based instruction is more beneficial. Besides, when the answers to the question "Which video do you think is more beneficial in the lesson that you have taken as video-aided? Why?", which is one of the qualitative questions posed to the students, were revised, it was detected that a conclusion is confirming the above-mentioned result which is by 59,83% in favour of video 1. Moreover, when answers to another important qualitative question related to these findings "Which video attracted your attention more in the lesson that you have taken as video-aided? Why?" were examined, it was observed that the work of video 1 attracted far more student's attention by 60,28%.

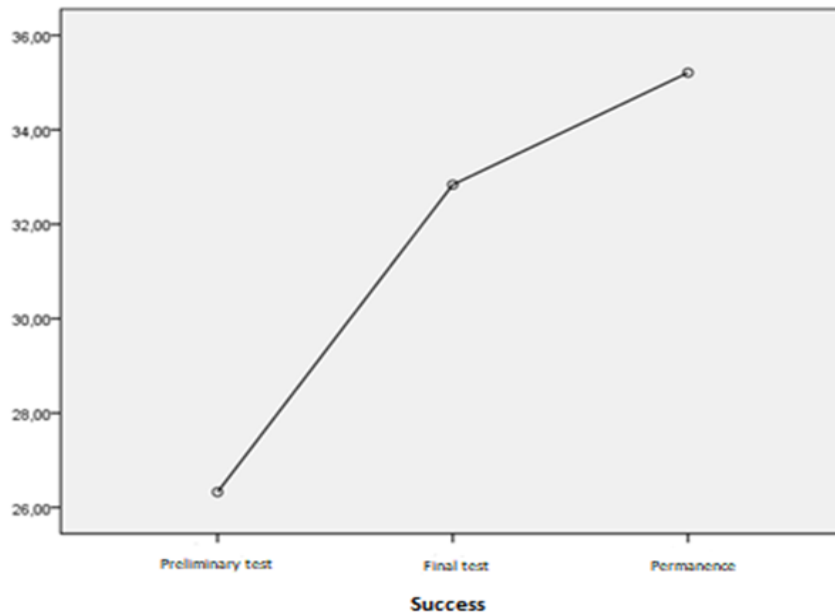
Some participant reviews about this case are as follows:

Views about Video 1; "It wasn't boring." (P5), "There was higher amount of information." (P 387), "Easier to understand." (P 394), "Because it's more related to my field of interest." ( P14), "More enjoyable." (P 33), "It showed some works." (P 38), "Because I have seen civilizations in Video 2. But in Video 1 I have seen topics that I have never seen before, so it was more interesting for me." (P 40), "Video 1 was far more enjoyable." (P 185), "Video 1 embraced simpler topics, others were more intense." (P 30). "Because it used a more understandable language." (P160), "The first video was more striking." (P 288), "It had a better way of instruction." (P 179), "Because it involved more writing." (P 381),

Views about Video 2; "The last video I watched was better." (P 411), "We learned the past of the land we live." (P 374), "It was more explanatory." (P 370). "It was more diverse." (P 49), "It featured more visuals." (P 16), "I have seen what scientists that I don't know are dealing with." (P 451), "Animations were good." (P 131), "It featured more pictures and it was more interesting." (P 172), "It was more colourful." (P 437).

We can see this case in the graphic below:





Graphic-3. Within-Group Comparison Results Regarding Control Group (Test 1)

Table-10. Mauchly's Test of Sphericity of Control 1

Success							
Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon <sup>a</sup> Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	,979	23,812	2	,004	,979	1,000	,500

When Mauchly's Test of Sphericity was examined, sphericity hypothesis is provided as  $p < 0.05$

Table-11. Tests of Within-Subjects Contrasts

Success						
Source	Time	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Level 1 vs. Level 2	3646,512	1	3646,512	15,621	,000
	Level 2 vs. Level 3	483,907	1	483,907	1,706	,195
Error (Time)	Level 1 vs. Level 2	19841,488	85	233,429		
	Level 2 vs. Level 3	24108,093	85	283,625		

Source: Data have obtained from author's field study.

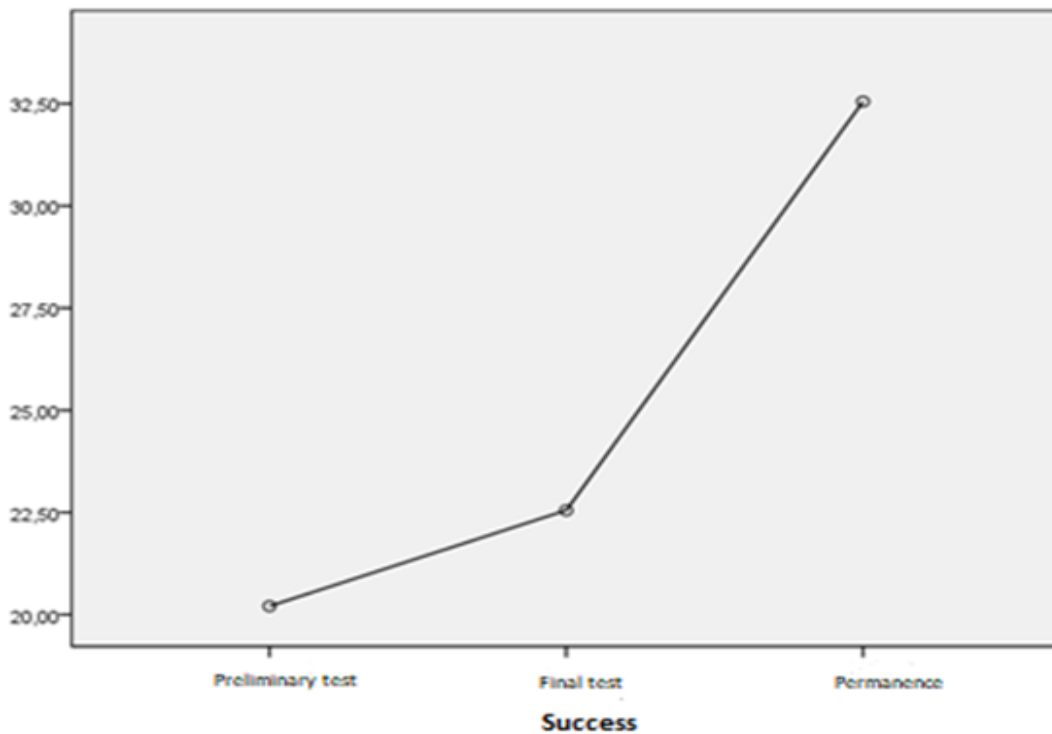
Upon examination of Table 11, it is understood that there is a significant difference between the preliminary test and the final test in countenance of the final test, there is no significant difference between the final test and the permanence test; in other words, the applied method has a significant effect on the learning of the students, and yet it has no significant effect in achieving permanence of the knowledge gained.

Table-12. In-Group Comparison Results of Control 2 Group (Test 2)

Teacher-Centric Instruction	Average	S.D.	N
Control G. Prel. test 2	20,2069	9,15894	58
Control G. Final test 2	22,5517	9,90334	58
Control G. Perm. 2	32,5517	13,86548	58

Source: Data have obtained from author's field study.

In Table 12, upon examination of the preliminary test, the final test and the permanence test averages; it is understood that there is an increase in the final test compared to the preliminary test, and there is an increase in permanence compared to the final test. Moreover, upon considering the data from Video 2, it can be seen that there is a significant increase in the final test of the video study compared to the final test of the control group study. Again as it can be seen in Table 12, there is an approximately 11,60% increase between the preliminary test and the final test, and it is 61,09% in permanence. I think the reason why the continued increase of the permanence rate in Control 2 and its abundance may be due to the low number of students who participated. Also, another important reason why the permanence increased is because when the 9th-grade curriculum is examined; it can be seen that test topics are spread throughout the fall semester. In connection with this, the high repetition of topics may be a reason why the permanence increased.



Graphic-4. In-Group Comparison Results of Control 2 Group (Test 2)

Table-13. Control 2 Mauchly's Test of Sphericity

Success		Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon <sup>a</sup>		
Within-Subjects Effect	Greenhouse-Geisser					Huynh-Feldt	Lower-bound	
dimension1	Time	,847	9,270	2	,010	,868	,892	,500

Upon examination of Mauchly's Test of Sphericity, sphericity hypothesis was achieved due to  $p < 0.05$ .

Table-14. Kontrol 2 Tests of Within-Subjects Contrasts

Success						
Source	Zaman	Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Level 1 vs. Level 2	318,897	1	318,897	2,593	,113
	Level 2 vs. Level 3	5800,000	1	5800,000	23,628	,000
Error (Time)	Level 1 vs. Level 2	7009,103	57	122,967		
	Level 2 vs. Level 3	13992,000	57	245,474		

Source: Data have obtained from author's field study.

Upon examination of Table 14, it was observed that there is no significant difference between the preliminary test and the final test. However, there was a significant difference between the final test and the permanence test in the countenance of the permanence test.

Table-15. a. Comparison Results of Preliminary Test's Average Success Points

Study Groups	N	Average	S.D.
Video 1 Test	403	31,56	11,417
Video 2 Test	452	24,08	9,846
Control G. Test 1	138	25,13	10,010
Control G. Test 2	58	19,91	8,333
Total	1051	26,55	11,127

Source: Data have obtained from author's field study.

Table-15. b. ANOVA

Preliminary Test					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20525,236	3	6841,745	64,070	,000
Within Groups	126326,430	1048	106,785		
Total	146851,666	1051			

Source: Data have obtained from author's field study.

According to the table above, there is a significant difference between groups. Post Hoc analysis was done in order to determine between which groups this significant difference is.

Table-15.c. Multiple Comparisons

Preliminary Test						
(I)Group1	(J) Group1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Video 1 (Test)	Video 2	7,486*	,685	,000	5,72	9,25
	Control G. (Test 1)	6,434*	1,006	,000	3,85	9,02
	Control G. (Test 2)	11,651*	1,003	,000	9,07	14,23
Video 2 (Test)	Video 1	-7,486*	,685	,000	-9,25	-5,72
	Control G. (Test 1)	-1,052	1,003	,721	-3,63	1,53
	Control G. (Test 2)	4,165*	1,000	,000	1,59	6,74
Control (Test 1)	Video 1	-6,434*	1,006	,000	-9,02	-3,85
	Video 2	1,052	1,003	,721	-1,53	3,63
	Control G. (Test 2)	5,217*	1,242	,000	2,02	8,41
Control (Test 1)	Video 1	-11,651*	1,003	,000	-14,23	-9,07
	Video 2	-4,165*	1,000	,000	-6,74	-1,59
	Control G. (Test 1)	-5,217*	1,242	,000	-8,41	-2,02

\*. The mean difference is significant at the 0.05 level.

Looking at the Post Hoc analysis results, it is understood that the preliminary test data of Video 1 is much better than that of Video 1. Additionally, it is observed that the data of control test 1 is much better than that of control test 2. Besides, looking at the results of control 2 test and those of Video 1 test, we observe that there emerge results in favor of video 1. When Video 2 test and control 1 test are compared, it is seen that significant differences favoring control 1 emerge.

Table-16.a. Comparison Results of The Final test's Average Success Points

Study Groups	N	Average	S.D.
Video 1 Test	403	69,98	14,277
Video 2 Test	452	31,25	13,375
Control G. Test 1	138	33,01	13,298
Control G. Test 2	58	19,91	8,333
Total	1051	47,61	22,475

Source: Data have obtained from author's field study.

Table-16.b. ANOVA

Final test					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	261953,969	3	87317,990	502,508	,000
Within Groups	136578,811	783	173,764		
Total	398532,780	789			

Source: Data have obtained from author's field study.

According to the table above, there is a significant difference between groups. Post Hoc analysis was done to determine between which groups this significant difference is:

Table-16.c. Multiple Comparisons

Final test								
	(I) Group2		(J) Group2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
dimension2	Video 1 (Test)	dimension3	Video 2	31,732*	1,391	,000	28,15	35,31
			Control G. (Test 1)	29,971*	1,543	,000	26,00	33,94
			Control G. (Test 2)	43,069*	1,278	,000	39,78	46,36
	Video 2 (Test)	dimension3	Video 1	-31,732*	1,391	,000	-35,31	-28,15
			Control G. (Test 1)	-1,761	1,884	,786	-6,61	3,09
			Control G. (Test 2)	11,336*	1,674	,000	7,03	15,65
	Control (Test1)	dimension3	Video 1 (Test)	-29,971*	1,543	,000	-33,94	-26,00
			Video 2 (Test)	1,761	1,884	,786	-3,09	6,61
			Control G. (Test 2)	13,098*	1,802	,000	8,46	17,74
	Control (Test 2)	dimension3	Video 1 (Test)	-43,069*	1,278	,000	-46,36	-39,78
			Video 2 (Test)	-11,336*	1,674	,000	-15,65	-7,03
			Control G. (Test 1)	-13,098*	1,802	,000	-17,74	-8,46

\*. The mean difference is significant at the 0.05 level.



According to the Post Hoc analysis, the significant difference was determined between these groups: when Video 1 final test data and video 2 final test data are compared, it is seen that significant results favoring Video 1 emerge. Apart from that, when the result between Video test 1 and Control G. Test 1 is carefully examined, it is observed that the data of Video test 1 is much better. Besides, as for the findings between Video 1 and Control Group 2, again we observe that the result in favor of Video 1 emerges. When it comes to the findings between Control Groups, it is determined that the data of Control Group 1 is much better than that of Control Group 2. Lastly, when Control 2 data and Video 2 findings are compared, we observe that results are in favor of Video 2.

**Tabl-17.a.** Comparison Results of Permanence Test Average Success

Study Groups	N	Average	S.D.
Video 1 Test	403	43,34	15,327
Video 2 Test	452	27,15	11,968
Control G. Test 1	138	33,11	12,701
Control G. Test 2	58	29,87	12,277
Total	1051	33,93	15,145

Source: Data have obtained from author's field study.

**Table-17b.** ANOVA

Permanence					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58750,954	3	19583,651	109,644	,000
Within Groups	204332,014	1048	178,612		
Total	263082,969	1051			

Source: Data have obtained from author's field study.

According to the table above, there is a significant difference between groups. Post Hoc analysis was done to determine between which groups this significant difference is:

**Table-17.c.** Multiple Comparisons

Permanence Tukey HSD								
	(I) Group3	(J) Group3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
						Lower Bound	Upper Bound	
dimension2	Video 1 (Test)	dimension3	Video 2	16,191*	,917	,000	13,83	18,55
			Control G. (Test 1)	10,236*	1,273	,000	6,96	13,51
			Control (Test 2)	13,468*	1,302	,000	10,12	16,82
	Video 2 (Test)	dimension3	Video 1	-16,191*	,917	,000	-18,55	-13,83
			Control G. (Test 1)	-5,955*	1,253	,000	-9,18	-2,73
			Control G. (Test 2)	-2,724	1,282	,146	-6,02	,58
	Control G. (Test 1)	dimension3	Video 1 (Test)	-10,236*	1,273	,000	-13,51	-6,96
			Video 2 (Test)	5,955*	1,253	,000	2,73	9,18
			Control G. (Test 2)	3,231	1,557	,162	-,77	7,24
	Control (Test 2)	dimension3	Video 1 (Test)	-13,468*	1,302	,000	-16,82	-10,12
			Video 2 (Test)	2,724	1,282	,146	-,58	6,02
			Control G. (Test 1)	-3,231	1,557	,162	-7,24	,77

Source: Data have obtained from author's field study.

According to the Post Hoc analysis results, it is seen that results of video 1 is much better when Video 1 test and Video 2 test results are compared. Besides, when Video 1 and Control 1 are compared, it is determined that video 1 offers much better data. Apart from that, looking at video 1 and control 2 test results, it is again seen that video 1 is much better. Besides, when Video 2 and control 1 are compared, it is seen that results in favor of Control 1 emerge. Apart from that, again according to Post Hoc analysis results; it is determined that there are no significant differences between Video 2 study and Control 2, and Control 1 and Control 2.

Upon examination of the qualitative questions included in our study, supportive results that encompass the findings above are also seen to have emerged.

Upon examining the answers to the question of "Are you satisfied with the video education you watch in your history classes? Why? Can you explain", which is included among qualitative questions in our study, it is determined that 70 percent of the answers turn out to be "yes", which means they are satisfied. Meanwhile, we mostly come across expressions of "informative, instructive, high visual and expressive quality" in the explanations of students. Apart from that, it is observed that they use a considerable amount of expressions like "enjoyable, supportive, explanatory, understandable, that it has good music, that we understand better with video education, it helped me understand and fluent". Having said that, we observe that among the answers of "no" given to the question aforementioned the expression of "boring" (36%) is mostly used. The reason for this situation is caused by the fact that the instructors in the video

generally prefer the direct instruction. Taking into account the expressions of students, it is determined that a great majority of students are not interested in the direct instruction, on the contrary they often comment on and call for the fact that such studies ought to be more enjoyable and colorful. Therefore, we can state that students find Video 1 much more interesting when we consider the success level of students. Also, we come across participants, who find animation and videos interesting, state that the instructors should be more cheerful and teach more energetically, wish that their own school instructors would teach, state that they are not enjoyable, they are too much detailed, and did not like the videos for no good reason among those who gave the answer of “no”. Starting from this point, we can underline the importance of active learning once more.

Upon examining answers by the participants to the question of “*Do you think that this lesson method (video-aided education) makes your learning easier? Why?*”, which is included in our qualitative study, it is seen that the ratio of “yes” is 77,5%. We observe that 36% of the participants giving positive response state visuals stick in their minds, and again 36% of them state it is a permanent study, 15% of them state the instruction is good, 11% of them state it is enjoyable while 2% of them state it is instructive. When the opinions of those who gave the answer of “no” to the question aforementioned are considered, parallel to the first question, we come across the statement of “*boring*” by 60% ratio. The reason for this situation is again mostly caused by the direct instruction. On the other hand, it is determined that 15% of the participants, who said “no”, state that their instructors teach lessons with the classical methods, which is direct instruction, while again 15% of them state it is useless without no reason. The remaining 10% is observed to use statements like “that it is too long”, “fast”, “I did not like it”, and “I do not know”.

Another important question included in our qualitative study was that “*What kind of positive sides do you think video-aided lesson have? Can you explain?*”

Some of the participant opinions about this subject is as it follows:

“*Visuals are stuck in the mind.*” (P 338), “*Visual and aural intelligence improves*” (P 373), “*It is more enjoyable and catchy.*” (P 420), “*Thanks to its visuals and writings, video manages to stick in the mind.*” (P 392), “*It reminds us things we do not know or we forget.*” (P 340), “*The fluent parts of the video are catchier.*” (P 115), “*It helped me understand the lesson.*” (P 166), “*Thanks to video, we are able to remember to some extent.*” (P 45), “*To know the past is everyone’s duty. We learn better this way how precious our own history is.*” (P 37), “*I think history classes should be taught visually so that we can understand better.*” (P 46), “*It is positive as it remains in memory.*” (P 27), “*It gained us knowledge and it is such a good thing I learned things I had never heard or seen before.*” (P 6), “*I can only picture visual maps and developments in my mind.*” (P 407), “*When look at visuals, we can remember better.*” (P 412), “*We cannot go further only by listening. There should be writing, as well. The palest ink is stronger than the sharpest memory.*” (418).

The other research question sentence significantly prepared as an opposition to the qualitative study question aforementioned is “*What kind of negative sides do you think video-aided lesson have? What do you think about it?*”

Even though we have asked our participants about the negative sides of our video-aided study, it is determined that 67,25 % of them state the positive sides of video study.

Some of the participant opinions about this subject as it follows:

“*Not much*” (P 337), “*I don’t think there is any negative side.*” (P 352), “*There will not be many lectures, besides not-high quality videos could be watched.*” (P 377), “*We cannot remember so long as we do not take notes.*” (P 390), “*It is being told quickly.*” (P 443), “*Eyes and brain get tired due to adaptation.*” (P 417), “*No, but it should not.*” (P436), “*Humans forget what they hear in two days. If they see them alive, they will not. Lectures should only be with videos.*” (P394), “*If we do not do it again, we can forget it very quickly*” (P 407), “*If it is long, the lesson will become boring. Students will not be interested in the lesson.*” (P 432), “*Students can easily adapt.*” (P 420), “*Not really negative, it is boring but more understandable.*” (P 118), “*Its length.*” (P 195), “*If it does not fluently instruct, we won’t understand and time will be wasted.*” (P122), “*Confusion*” (P123), “*I think following the book is better. For, the questions are generally based on the book.*” (P 4), “*It was so dreamy.*” (P 49), “*I do not think there is any negative side, if there is no misinformation. And it shows us what happened in the ancient age. Thus, this lesson is so important*” (P 55), “*It does not instruct any more detailed.*” (P 3), “*They instruct so fast.*” (P 21), “*When that person is talking, this person does not tell us write down the important parts, but if it were the teacher, the teacher would have us write important parts.*” (P 50), “*It could be distracting if you do not watch it individually.*” (P 401).

Lastly, the question included in the qualitative study and aimed about students’ attention was that “*How did this instruction methods (video-aided lesson) affect your attention to the class? Can you explain*”

A great majority of the participants (77,25% ratio) stated as an answer that video-aided lesson has affected their attention positively.

Some of the participant opinions about this subject is as it follows:

“*Some curiosity.*” (P 337), “*I am visually impressed.*” (P 374), “*It has caught my attention.*” (P 392), “*It helped us focus on faster.*” (P 411), “*It has increased the interest towards the class.*” (P 383), “*Our perspective on the class has changed.*” (P 394), “*It was positive since I focused on the video itself.*” (P 387), “*I wish video-aided education would increase.*” (P 342), “*The visuals in the video got me to focus on the lesson.*” (P 166), “*We adapt much better.*” (P 1), “*It has made us love history a lot more.*” (P 34), “*It has created curiosity in me, I will go and buy a book about the events taking place in this video.*” (P 5), “*Curiosity*” (P 14), “*If the visual is interesting, understanding is easier.*” (P 52), “*It has affected me visually.*” (P 55), “*It has affected me positively as it is both catchier and more logical.*” (P 59), “*I liked that it shows the buildings.*” (P 38), “*I do not lose my attention easily.*” (P 421), “*Yes, since it is a video, I watched more curiously, and it caught my attention more.*” (P 418), “*If the instructor teaches us in the lesson after watching the video, we learn the lesson together in an enjoyable way.*” (P 252).

#### 4. Discussion, Conclusion, and Suggestions

The purpose of this study is to conduct a research about the effect of the different contents provided with video on the academic success. Videos are multimedia tools in which pictures and words that could be presented in different ways are brought together in order to make learning easier (Rapp et al., 2016). In literature, it is defended that videos are effective teaching tools (Soucy et al., 2016) and they affect the users’ attitudes positively by increasing their awareness (Orús et al., 2016; Alhawiti and Abdelhamid, 2017; Tam et al., 2017). It is also pointed out the fact that videos which are among digital age’s popular multimedia tools are more effective in the process of learning as opposed to motionless pictures (Rasch and Schnotz, 2009). In this study, quite interesting conclusions

were made about the use different contents in the process of video contents. Especially it was observed that components used with audio and textual expressions do not cause loss of focus and students learn better. Apart from that, it was determined that animations catch attention. Accordingly, it could be argued that multimedia design principles suggested by Mayer (2009) are not valid for every learning process. The conclusions of the study could be listed as it follows below:

- The effect of media elements on process of learning could differ in accordance with learning activity done.
- Even though there are many variables affecting learning success, it is observed that learning activities in which proper media elements and proper subject contents are more successful.
- Videos remain to be effective learning tools.
- The use of audio, textual and animation elements together could not affect much to decrease videos' loss of attention effect.
- In that sense, taking into account the suggestions below could be beneficial:
- Different conclusions could be made by conducting researches with different samples and the effect of videos could be researched in a more detailed way.
- The contents that are to be used with videos (audio, text, animations etc.) could be used in different combinations and by doing so, the effect of multimedia tools on learning process could be tested.

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## Appendices

### Appendix-1. Application-Video-1-Concepts of Time Used in the Examination of Historical Events-I: Concepts of Time Used in the Examination of Historical Events-II. (Test 1)

#### Questions

- 1) Which one of followings below is the science field that History benefits from to determine and put in an order time, calendar science and the events that took place in the past?  
a) Anthropology b) Archeology c) Chronology d) Philology e) Paleography
- 2) Which one of the following is the calendar based on Lunar year used by Turks?  
a) Jalali Calendar b) Rumi Calendar c) Gregorian Calendar d) Turkish Twelve-Year Animal Cycle Calendar e) Muslim Calendar
- 3) Which one of the followings is the first republic to use Gregorian Calendar?  
a) Egypt b) Rome c) Sumerian d) Hittite e) Babel
- 4) Which one of the followings is the date Gregorian Calendar started to be used in our country?  
a) 1923 b) 1926 c) 1928 d) 1931 e) 1934
- 5) Which one of the followings is the start of Muslim Calendar which is based on Muhammad's migration from Mecca to Medina?  
a) 476 b) 571 c) 610 d) 622 e) 632
- 6) Which one of the followings is the number of days in total in Muslim Calendar? (How many days does Muslim Calendar consist of?)  
a) 344 days b) 354 days c) 365 days d) 367 days e) 369 days
- 7) Which one of the followings is the number of days in total in Gregorian Calendar? (How many days does Gregorian Calendar consist of?)  
a) 344 days b) 354 days c) 365 days d) 367 days e) 369 days
- 8) Which one of the followings is generally accepted as the date of start of the Modern Age?  
a) Conquest of Istanbul b) Migration of Tribes c) Fall of Rome d) Fall of Western Rome e) French Revolution
- 9) Which one of the followings is the language from which the word "week" is derived?  
a) Indian b) Hebrew c) English d) Persian e) Arabic
- 10) Which one of the followings is the name of the day which means three, third and is derived from the word "salis"?  
a) Monday b) Tuesday c) Wednesday d) Thursday e) Friday
- 11) Which one of the followings *is not* among the names of the months in Muslim Calendar?  
a) Kanunievvel b) Muharram c) Safar d) Rabi al-awwal e) Rabi al-akhir
- 12) Which one of the following *is not* among the names of the months in Rumi Calendar?  
a) February b) March c) Teşrinievvel d) Teşrinisani e) Shawwal
- 13) Which one of the followings is one of the names of the months derived from Sumerian into our language?  
a) March b) April c) June d) July e) August
- 14) Which one of the followings is the name of the month coming from the title of Roman Emperor Octavius and is used in our language?  
a) March b) April c) June d) July e) August
- 15) Which one of the followings is the name of the month derived from Syriac into our language and means "grape month"?  
a) September b) October c) November d) December e) January
- 16) Which one of the followings is the New Year's Day according to Rumi Calendar?  
a) January 1 b) February 1 c) March 1 d) April 1 e) May 1
- 17) Which one of the followings used to be used as the first month of the calendar based on solar year until 1582?  
a) February b) March c) April d) May e) June
- 18) In which one of the followings' period was the first month accepted as January in the calendar based on solar year (It was changed in 1582)  
a) Caesar b) X. Charles c) XIII. Gregorius d) Uluğ Bey e) Gazan Han
- 19) Which one of the followings is the name of the month, which means hot in Syriac and Latin equivalent is *Junius* "youth, young"?  
a) June b) July c) August d) September e) October
- 20) Which one of the followings are the calendars used in the Ottoman Period?  
a) Muslim-Gregorian b) Gregorian-Rumi c) Jalali-Muslim d) Muslim-Rumi e) Muslim-Jalali
- 21) Which one of the followings is generally accepted as the start of New Age?  
a) Conquest of Istanbul b) Migration of Tribes c) Fall of Rome d) Fall of Western Rome e) French Revolution
- 22) Which one of the followings means "the fourth day" in Persian?  
a) Monday b) Tuesday c) Wednesday d) Thursday e) Friday
- 23) Which one of the followings is the name of the month in the calendar that we use today, which comes from Latin, gets its name from Maia, Mercury's mother, who is also the goddess of spring and fertility who raises the plants in mythology?  
a) January b) February c) March d) April e) May
- 24) Which one of the followings is the name of the month which comes from the Arabic word meaning dividing and parting and the old name of which is Teşrinisani derived from Syriac?  
a) August b) September c) October d) November e) December
- 25) Which one of the followings is the month, old name of which is Kanunisani? (Kanun means "oven" in Syriac.)  
a) December b) January c) February d) March e) April



**Appendix-2.** Application\_Video\_2- Introduction to Ages of History and Anatolia, Cradle of Civilizations (Test 2)  
**Questions**

- 1) Which one of the followings was born in Miletus in B.C.625 and became the first representative of the geometry in Ionia?  
a) Pythagoras b) Hippocrates c) Herodotus d) Diogenes e) Tales
- 2) Which one of the followings is a scientist who lived in Ionia and is accepted as an important scientist?  
a) Pythagoras b) Hippocrates c) Herodotus d) Diogenes e) Tales
- 3) In which one of the followings' period was the King Road built?  
a) Ionia b) Phrygians c) Lydia d) Urartu e) Egypt
- 4) Which one of the followings is the name of the country or the lands which a country conquers and rules outside of its borders due to economic, social and political reasons?  
a) Dominion b) Colony c) Monarchy d) Theocracy e) Oligarchy
- 5) Which one of the followings is an Anatolian old age civilization that emerged Eastern Anatolian Region and came from Hurrians??  
a) Urartu b) Phrygia c) Lydia d) Ionia e) Hittite
- 6) Which one of the followings is the scientist who discovered Ursa Minor?  
a) Pythagoras b) Hippocrates c) Herodotus d) Diogenes e) Tales
- 7) Which one of the followings is the name of the civilization that was founded in Middle Anatolia and its center is Polatlı that is near to Ankara today?  
a) Urartu b) Phrygia c) Lydia d) Ionia e) Hittite
- 8) Which one of the followings is the republic that was founded in the western part of Anatolia and established a great civilization in the region between Little Maeander and Gediz?  
a) Urartu b) Phrygia c) Lydia d) Ionia e) Hittite
- 9) Which one of the followings is accepted as the founder of Phrygia Republic?  
a) Gordius b) Hattusili I. c) Sarduri I. d) Gyges e) Alexander the Great
- 10) Which one of the followings is accepted as the founder of Lydia Republic?  
a) Gordius b) Hattusili I. c) Sarduri I. d) Gyges e) Alexander the Great
- 11) Which one of the following eras is accepted as the era in which fire was found?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 12) Which one of the followings is the name of the transition era between Stone Age and Bronze Age?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 13) Which one of the followings is the name of the era known as Old Stone Era and refers to the longest era in human history?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 14) Which one of the followings is the name of the era known as New Stone Age?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 15) Which one of the followings is the name given to the queen mother?  
a) Labarna b) Antuhsa c) Antuhhil d) Panku e) Tavananna
- 16) Which one of the followings is the name of the council in Hittite?  
a) Labarna b) Antuhsa c) Antuhhil d) Panku e) Tavananna
- 17) In between which one of followings was the Kadesh Treaty signed?  
a) Hittite-Egypt b) Hittite-Urartu c) Hittite-Babel d) Hittite-Phrygia e) Egypt-Lydia
- 18) Which one of the followings is the scientist that lived in Ionia and has a great reputation in history field as he used to write by researching?  
a) Herodotus b) Pythagoras c) Hippocrates d) Diogenes e) Tales
- 19) Which one of the followings are accepted as the first examples of pieces of art in human history?  
a) Dolmens b) Cave Pictures c) Sculptures d) Ceramics e) Relieves
- 20) In which one of the following periods did production economy take place of the consumption economy?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 21) Which one of the followings is accepted as the first city settlement in human history?  
a) Gaziantep/Sakçagözü b) Diyarbakır/Çayönü c) Konya/Çatalhöyük d) Çorum/Alacahöyük  
e) Ankara/Yassihöyük
- 22) Which one of the followings is the other name of Copper Age?  
a) Paleolithic E. b) Mesolithic E. c) Neolithic E. d) Chalcolithic E. e) Protohistory E.
- 23) Which one of the followings is the civilization that went out of the history in Anatolia starting with B.C.2000?  
a) Kaskians b) Hattians c) Hittite d) Urartus e) Ionians
- 24) Which one of the followings is the name of the settlement located in Sakarya Stream bank and near Polatlı?  
a) Gaziantep/Sakçagözü b) Diyarbakır/Çayönü c) Konya/Çatalhöyük d) Çorum/Alacahöyük  
e) Ankara/Yassihöyük
- 25) I. They advanced in trade. They were founded in the West of Anatolia. They lived between B.C.687-B.C.546  
II. Parallel to the mining, metalworking was also developed.  
According to the information above, which one of the following match-ups is correct?  
a) Hittite-Phrygia b) Lydia-Urartu c) Ionia-Urartu d) Hittite-Urartu e) Lydia-Hittite

**Appendix-3 Qualitative Questions**

- 1) Are you satisfied with the video education you watch in your history classes? Why? Can you explain? Yes/No.
- 2) What kind of positive sides do you think video-aided lesson have? Can you explain?
- 3) What kind of **negative** sides do you think video-aided lesson have? What do you think about it?
- 4) Do you think that this lesson method (video-aided education) makes your learning easier? Yes/No Why? Can you explain?
- 5) How did this instruction methods (video-aided lesson) affect your attention to the class? Can you explain?

6) Which video caught your attention more than the other in the lesson that we lectured with video-aid? Why? Can you explain?

Video-1- Concepts of Time Used in the Examination of Historical Events-I: Concepts of Time Used in the Examination of Historical Events-II.

Video-2- Introduction to Ages of History and Anatolia, Cradle of Civilizations

7) Which video in the lesson that we lectured with the video-aid do you think is the more beneficial than the other? Why? Can you Explain?

Video-1- Concepts of Time Used in the Examination of Historical Events-I: Concepts of Time Used in the Examination of Historical Events-II.

Video-2- Introduction to Ages of History and Anatolia, Cradle of Civilizations

**Appendix-4.** Application-Video-1- Concepts of Time Used in the Examination of Historical Events-I;

<http://www.eba.gov.tr/video/izle/82005fee3f8a48ff446daec0d942ee1768262d09c001>

Concepts of Time Used in the Examination of Historical Events-II.

<http://www.eba.gov.tr/video/izle/57775fee3f8a48ff446daec0d942ee1768262d09c001>

**Appendix-5.** Application-Video-2- Introduction to Ages of History and Anatolia, Cradle of Civilizations

<http://www.eba.gov.tr/video/izle/video4f4cdc1f81fb0>

<http://www.eba.gov.tr/> is used for Application Videos