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Student Attitudes towards Technology Enhanced History Education: Comparison between Turkish and American Students

Öğrencilerin Teknoloji Destekli Tarih Eğitimi Karşısındaki Tutumları: Türk ve Amerikan Öğrencileri Arasında Karşılaştırma

İbrahim Turan[1]

Abstrac*t: Teacher and student attitudes towards the technology enhanced instruction plays a critical role in determining its effectiveness. The purpose of the study is to examine Turkish and American students' attitudes and thoughts toward the use of educational technologies in history courses, and to compare the results to determine whether there are any differences between the attitudes of Turkish and American student. This study was conducted with 197 American students from Upper Saint Claire High school in Pittsburgh, PA, and 214 Turkish students from Konya High school who volutered for this study. The required data for this study were gathered by a 26-item technology questionnaire, which included 7 multiple-choice questions and 19 Likert scale questions. This questionnaire was developed to gather data on five different areas of interest: (1) demographic information, (2) participants' computer- and Internet-usage skills, (3) the level of technology used in history classrooms, (4) participants' attitudes toward technology-enhanced history education, and (5) participants' attitudes toward history. Most of the Turkish and American students rated themselves as being very well experienced on the eight computer- and Internet-usage skills targeted in this study. But the comparison of the data indicated that American students have higher computer- and Internet-usage skills than Turkish students do, and this difference is statistically significant (p = 0.001). Most of the Turkish and American students showed positive attitudes on using educational technologies in history classrooms. A majority of the Turkish and American students stated that they would be able to focus and learn better if more technological materials were used in classroom activities, and this, in turn, would increase their academic achievements.*

Keywords: *secondary education, history education, IT-use, comparative study*

[1] Yard. Doç.Dr., Atatürk Üniversitesi, ituran@atauni.edu.tr

Geniş Özet

Problem Durumu

Bilginin aktarımına (transmission) dayanan geleneksel tarih eğitiminin üstesinden gelmekte zorlandığı "ezbere dayalı olma, günlük hayattan kopukluk ve sıkıcılık" gibi problemlerin aşılması için çağdaş tarih eğitiminde önerilen yöntemlerden biri de teknoloji destekli tarih eğitimidir. Tarih derslerinde kullanılan sesli ve görsel eğitim materyallerinin öğrenilenlerin kalıcılığını, öğrencilerin derse olan ilgisini ve öğrenci başarısını arttırdığı yapılan araştırmalarda ortaya konulmuştur. Ancak her eğitim-öğretim yaklaşımında olduğu gibi teknoloji destekli öğretim yönteminin etkililiğini belirlemede öğretmen ve öğrencilerin bu yöntem karşısında geliştirecekleri olumlu veya olumsuz tutumlar önemli bir rol oynamaktadır. Bu araştırmada teknoloji destekli tarih eğitimininin geleneksel öğretim yöntemleri karşısındaki artılarından ziyade öğrencilerin gerek bilgisayar ve internet kullanma becerileri ve gerekse eğitimde teknoloji kullanımı karşısındaki tutumları incelenerek, öğrencilerin böyle bir öğretim yaklaşımına bilgi ve tutum açısından hazır olup olmadıkları ortaya konulmaya çalışılmıştır.

Araştırmanın Amacı

Bu araştırmanın amacı Türk ve Amerikalı lise öğrencilerinin tarih derslerinde teknolojik materyaller kullanımı konusundaki tutum ve düşünceleri incelemek ve bu tutumu etkileyen faktörleri araştırarak iki ülke öğrencilerinin teknoloji destekli tarih eğitimi konusundaki tutum farklarını ortaya koymaktır.

Araştırmanın Yöntemi

Bu çalışma Amerika Birleşik Devletlerinin Pennslyvania eyaleti, Pittburgh şehrinde bulunan Upper Saint Claire Lisesinde okuyan ve araştırmaya katılmaya gönüllü olan çeşitli sınıflardan toplam 197 lise öğrencisi ve Türkiye'den Konya ili, Konya Lisesinde çeşitli sınıflarda okuyan 214 gönüllü lise öğrencisinin katılımıyla gerçekleştirilmiştir. Araştırma için gerekli olan veriler Likert ölçeğine göre hazırlanmış 19 soru ve çoktan seçmeli 7 sorudan oluşan toplam 26 soruluk "Teknoloji Anketi" kullanılarak toplanmıştır. Teknoloji anketi beş ayrı bölümde araştırma için gerekli verileri toplamak için geliştirilmiştir. Bunlar; demografik bilgiler, bilgisayar ve internet kullanım becerileri, tarih derslerinde teknojik materyallerin kullanım oranları, katılımcıların teknoloji destekli tarih eğitimi konusandaki tutumları ve katılımcıların tarih derslerine karşı tutumları bölümleridir.

Araştırmanın Bulguları

Araştırmaya katılan Türk ve Amerikalı öğrencilerin büyük çoğunluğu bilgisayar ve internet kullanımıyla ilgili becerilerde kendilerini tecrübeli ve deneyimli olarak değerlendirmişlerdir. Ankette sorulan sekiz ayrı bilgisayar ve internet kullanım becerisinde kendini deneyimsiz görenlerin oranı Türk öğrenciler için hiçbir zaman çoğunluğu oluşturmazken Amerikalı öğrenciler arasında bu sekiz beceriden sadece birinde (web sayfası hazırlama) kendini deneyimsiz görenler çoğunluktadır Araştırmada elde edilen bulgular karşılaştırıldığında Amerikalı öğrencilerin bilgisayar ve internet kullanım becerilerinin Türk öğrencilerden daha yüksek olduğu ve bu farklılığın istatistiksel olarak $p= 0.001$ seviyesinde anlamlı olduğu görülmüştür

Araştırmaya katılan öğrencilerin beyanlarına göre her iki ülkede de tarih derslerinde eğitim teknolojilerinin kullanım oranı hayli düşüktür. Yine de Amerikan (USC) lisesinde bu oran Türk (Konya) lisesine göre daha yüksektir. Her iki lisede de televizyon tarih derslerinde en çok kullanılan teknolojik materyal iken sesli materyaller en az kullanılan materyallerdir.

Öğrencilerin teknoloji destekli tarih eğitimine karşı tutumlarını saptamak için ilk olarak eğitimin diğer unsurlarıyla karşılaştırıldığında öğrencilerin eğitim teknolojilerini ne derece önemli gördüğü tespit edilmeye çalışılmıştır. Araştırma bulgularına gore eğitim teknolojileri hem Türk hem de Amerikan öğrencileri için eğitim unsurlarının önemi sıralamasında orta sıralarda yer almaktadır. İki ülke arasındaki eğitim sistemi farklılığına rağmen her iki ülkede de öğretmen ilk sırada ve ders kitabı ikinci sırada yer almıştır.

Teknoloji anketinde ayrıca öğrencilere eğitim teknolojilerinin genel kabul gören faydaları verilerek onlardan bunları kendilerine göre sıralamaları istenmiştir. Yapılan sıralamalara göre Amerikalı öğrenciler eğitim teknolojilerinin en önemli faydası olarak "kaynak bulma"yı gösterirken Türk öğrencilere göre en önemli fayda "öğrenmeyi zevkli hale getirmesi"dir.

Araştırmanın asıl amacı olan eğitim teknolojilerinin tarih derslerinde kullanımı konusundaki görüşleri incelendiğinde Türk ve Amerikan lise öğrencilerinin bu konuda olumlu bir tutum sergilediği görülmektedir. Katılımcı öğrencilerin büyük çoğunluğu derslerde daha çok teknolojik materyale yer verilirse daha iyi öğrenebileceklerine, farklı teknolojik materyallerin derslere daha iyi odaklanmalarınını sağlayacağına, bu sayede okul başarılarının yükseleceğine inandıklarını beyan etmişlerdir. Buradan Türk ve Amerikan öğrencilerinin eğitim teknolojilerine yönelik tutumlarının büyük oranda birbirine yakın olduğunu söylemek mümkündür.

Anketteki "tarih derslerini seviyorum" yargısına Amerikan öğrencilerinin %34'ü katılmazken %49.5'i katıldığını belirtmiş, Türk öğrencilerinin ise %18'i katılmadığını, %56.5'i katıldığını belirtmiştir. Buradan da anlaşıldığı üzere Türk öğrenciler tarih derslerini Amerikalı yaşıtlarına göre daha çok sevmektedir ve aradaki bu fark $p=0.002$ seviyesinde istatistiksel olarak anlamlı bir farktır.

Araştırmanın Sonuçları ve Öneriler

Araştırma sonuçları gösteriyor ki iki toplum arasındaki sosyo-ekonomik ve eğitim sistemi farklılıklarına rağmen öğrencilerin eğitim teknolojilerine bakış açılarında önemli farklılıklar bulunmamaktadır. Her iki ülke öğrencilerinin de eğitim teknolojilerine ve derslerde farklı teknolojik materyal kullanımına karşı tutumları olumludur. Türk ve Amerikan öğrencileri gerek teknoloji kullanım becerileri ve gerekse eğitim teknolojilerine karşı sahip oldukları pozitif tutum nedeniyle teknoloji destekli bir tarih eğitimine hazır görünmektedir. Ancak özellikle ülkemizde tarih derslerinde teknolojik materyallerin kullanım oranı hayli düşüktür. Öğrencilerin eğitim teknolojilerine karşı tutumları ile tarihe karşı tutumları arasındaki farkı göz önünde tutarsak tarih derslerinin teknoloji destekli öğretilmesi öğrencilerin bu derse olan ilgilerini, dolayısıyla motivasyon ve başarılarını artıracaktır.

Araştırmaya katılan Amerikalı öğrencilerin bilgisayar ve internet kullanım becerilerinin Türk öğrencilerden (web sayfası hazırlama hariç) yüksek oluşu ülkemizde okullarda verilen bilgisayar derslerinin

atırılması ve yaygınlaştırlması gereğini ortaya koymaktadır. Araştırmamızda elde ettiğimiz bir başka bulgu teknolojik materyallerin derslerde kullanımı arttıkça öğrencilerin bilgisayar ve internet kullanım becerelerinin arttığını (p=0.01 seviyesinde anlamlı korelasyon bulunmuştur) göstermektedir. Bu nedenle eğitimde teknolojik materyallere daha çok yer verilmesi hem yukarıda bahsedildiği gibi öğrenci ilgi ve başarısını artıracak hem de ülkemizin teknoloji okuryazarlık seviyesini yükselterek bilgi çağını yakalamış bir toplum olmamazı sağlayacaktır.

Anahtar Kelimeler: Ortaöğretim, tarih eğitimi, eğitim teknolojileri, karşılaştırmalı araştırma

Introduction

Throughout the literature, “attitude” is described as a “psychological tendency that is ex-pressed by evaluating a particular entity - object, incident, or person - with some degree of favor or disfavor”(Eagly & Chaiken, 1998) that an individual develops by experience over the course of his or her life. Attitudes can be positive, negative, or neutral. In education, attitudes developed by teachers and students toward any course subject, method, or instrument affect their success levels in the classroom. Research in this area has shown that there is a direct correlation between positive attitudes and student success (Kan and Akbaş, 2006; Munck, 2007).

Students usually list history as one of their least favorite courses. They find it simple, irrelevant, and boring (Loewen, 1995; Parsons, 1999). From the student’s perspective, history courses are limited to reading the textbooks, memorizing facts, paying attention in class, and taking exams (Loewen, 1995). Additionally, students dislike history courses because history curricula are too broad and heavy; the lessons do not relate to their daily lives; and the methods used in history courses involve narration and memorization, leaving them with little or no opportunity for active participation (Safran, 1993; Özbaran, 1994; Demircioğlu, 2002). As a result, numerous studies have recently been conducted on technology-enhanced history education, which is expected to increase student interest, motivation, and active participation in history courses.

Research in this field has shown that technology-enhanced education practices are beneficial in many areas, for example, enriching classroom activities; reaching out to students with different needs, skills, or learning style preferences; and increasing student motivation, active participation, recall rate, and achievement. In particular, using

technology in history courses helps students to gain historical thinking skills and better understanding of historical subjects (Brown, 2001; Haydn, 2002; Taylor, 2003). In addition to these benefits, the way that the current generation is growing-up makes using various technologies essential in their education. For example, in Turkey, by the year 2007, 29% of all households had personal computers and 27% had Internet access (TUİK, 2007). These rates increase rapidly, as can be seen from the 125% increase in household Internet usage between 2005 and 2007 (TUİK, 2005). In 2007, the Turkish student use-of-computer rate reached 87% and their Internet usage reached 82% (TUİK, 2007). Turkish students access to other technological materials was also high (e.g., VCD: 70% and TV: 98%). Higher level of technology access leads to higher student demand for these materials to be used in classroom.

Studies on student attitudes toward educational technologies will affect the level of technology used in education and the ways in which it is used (Sanders & Morrison-Shetlar, 2001). We are seeing more and more studies on technology-enhanced education and student and teacher attitudes toward educational technologies. Several of these studies examined the factors that could affect student and teacher attitudes toward educational technologies, such as age, gender, level of technology access, and technology literacy (Hill, 2000; Sanders & Morrison-Shetlar, 2001; Yildirim, 2007).

The aim of this study was to examine Turkish and American student attitudes and thoughts toward the use of educational technologies in history. The results were compared to determine whether there were any differences between the attitudes of Turkish and American student.

Method

Sample

The purpose of this study was to examine possible differences between Turkish and American student attitudes toward the technology enhanced history education. Schools that have a high level of technology integration and technology use were needed in order to ensure that students could express their opinion on the subject. Therefore, from the United States, the Upper Saint Clair High School (USC) was chosen in Pittsburgh, PA. The

rationale for this selection was that (1) the USC was located in an above-average socioeconomic school district; (2) the student–computer ratio was 5:1, which was higher than American average (6:1); and (3) each classroom in USC has at least four computers, a TV, and a video player. Konya High School (KL) in Turkey was also chosen, as it has the highest technology-use level among 15 previously studied high schools (Turan, 2010). Convenience sampling was used in this study as the sample selection method. Wallen and Sawin (1999) described a convenience sample as "a group of subjects selected not because they are representative of a specific population, but because they are (conveniently) available" (p.36).

Assumptions

1. The survey used in this study is a reliable tool to collect the data required for this study.
2. High school students have proper self-knowledge and are able to identify their own knowledge and skills.
3. The students participating in this study took the survey questions seriously and answered them honestly.

Limitations

1. The schools included in this study do not have same socioeconomic status.
2. Participating students' technology access levels differed based on their family's socioeconomic status.
3. This study was based on students' ability to self-report.

Instrument

The required data for this study were gathered by a 26-item technology questionnaire, which included 7 multiple-choice questions and 19 Likert scale questions. This questionnaire was developed to gather data on five different areas of interest: (1) demographic information, (2) participants' computer- and Internet-usage skills, (3) the level of technology used in history classrooms, (4) participants' attitudes toward technology-enhanced history education, and (5) participants' attitudes toward history.

Cronbach's alpha reliability coefficient method was used to assess the technology questionnaire's subsections for internal reliability. In this method, a scale that has an alpha

above 0.70 is usually considered to be internally consistent (Garson, 2008). Two of the five subsections in technology questionnaire that used multiple-choice questions to obtain data on a specific subject were checked for internal reliability by using Cronbach's alpha reliability coefficient. One of these sections has a high alpha scale (0.91), which can be considered a good scale, and one subsection with alpha score of 0.70, which can be considered an adequate scale (Garson, 2008).

Data Analysis

The participant responses to the multiple-choice questions on the questionnaire were coded into numeric values for each item. These numeric values were entered into SPSS 14.0 to perform descriptive statistics on the data such as frequency, mean, standard deviation, and statistical significance. The alpha level of 0.05 was used as criteria for statistical significance.

Results

Demographic information

A total of 197 American students from USC and 214 Turkish students from KL participated in this study. Of the 197 American students, 48% were female and 52% were male; 2% of them were 10^{th} graders, 96% were 11^{th} graders, and 2% were 12^{th} graders. Of the 214 Turkish students, 32% were female and 68% were male; 64% were 10^{th} graders and 36% were 11^{th} graders.

Computer and the Internet usage competencies

One of the aims of this study was to measure Turkish and American students' computer- and Internet-usage skills based on data that the students self-reported. By using this self-reported data, the study also aimed to determine whether there is a difference between Turkish and American students' computer- and Internet-usage skills, there is a correlation between computer and Internet skills and student attitudes toward educational technologies, and the students are ready for technology-enhanced history education from the point of proficiency and the attitude.

According to related research competency, confidence, attitude, motivation and achievement are closely connected concepts and so they affect each other (Bhattacherjee &

Premkumar, 2004; Cretchley, 2007; Butler & Lumpe, 2008). Therefore, students' level of confidence in their technical abilities affects student attitudes toward technology-enhanced education; increasing positive attitudes toward educational technology would increase student motivation and their relative success in a technology-enhanced education environment. The most important technical knowledge students need to acquire in order to feel proficient in a technology-enhanced educational environment is how to use a computer and the Internet. On the technology questionnaire, eight of the questions asked students to rate (from never tried to expert) their level of computer and Internet knowledge. The following four areas of computer knowledge were examined.

1. Basic computer knowledge: The ability to explore, find, open, and move a file on a Windows-based operating system.
2. MS Word knowledge: Two questions examined the students' expertise with MS Word; the first targeted basic Word skills and the ability to create a document, and the second targeted more complex Word skills such as the ability to create tables and figures and insert images.
3. MS Power Point knowledge: The ability to create a presentation using Power Point.
4. MS Excel knowledge: The ability to create spreadsheets, tables, graphs and build formulas and calculations in Excel.

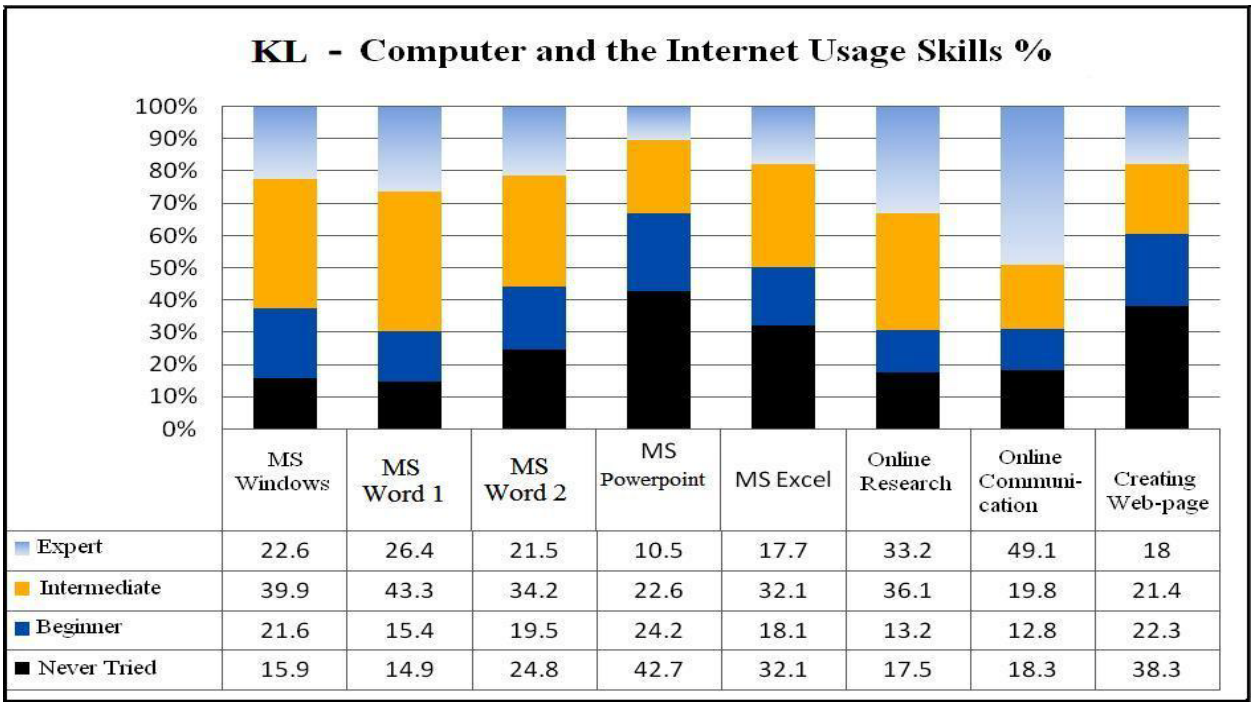
The following three areas of the students' knowledge of the Internet were examined:

1. Research: The ability to search for course-related information on the Internet.
2. Communication: Communicating over the Internet using e-mail and chat programs.
3. The ability to create a web page.

Most of the Turkish and American students rated themselves as being very well experienced on the eight computer- and Internet-usage skills stated above. The majority of the Turkish students rated themselves well experienced across the eight different computer and the Internet skills (see Figure 1); American students also rated themselves as being well

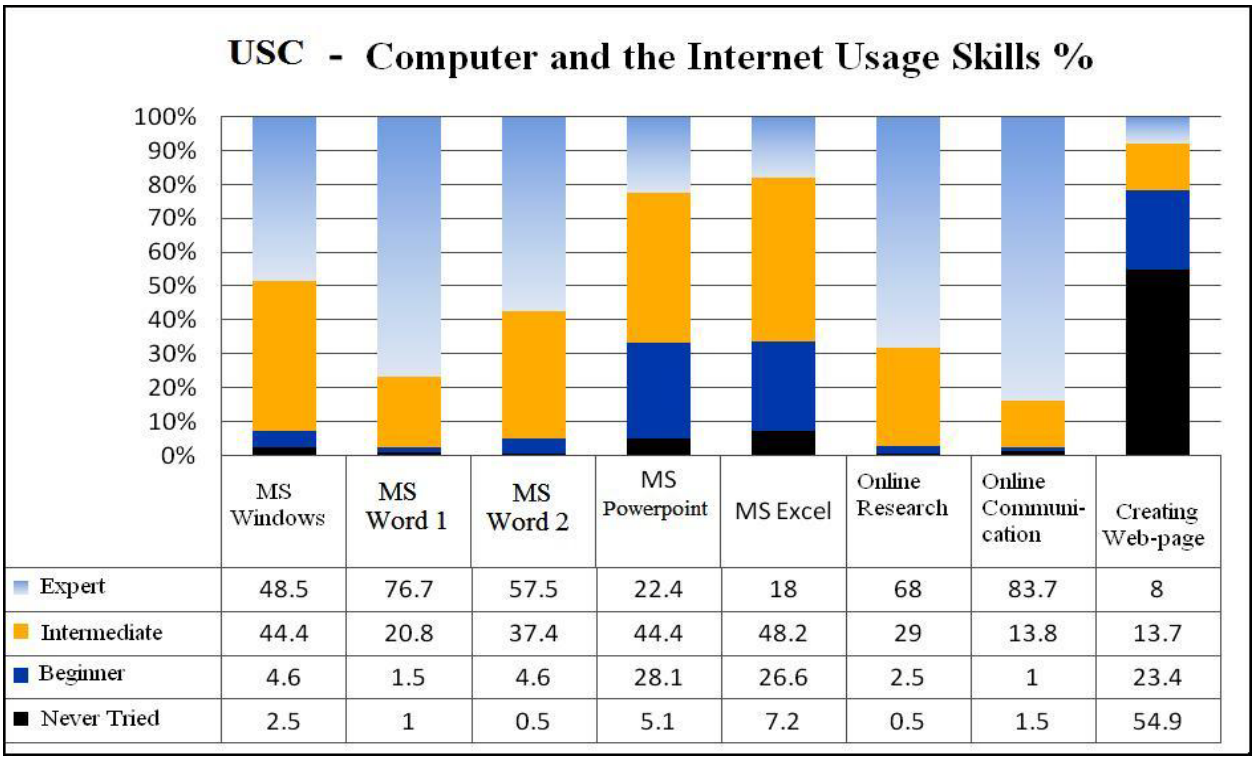
experienced on seven of the eight computer- and Internet-usage skills, except for the ability to create a web page (see Figure 2). The comparison of the data indicated that American students have higher computer- and Internet-usage skills than Turkish students do (see Figures 1 and 2), and this difference is statistically significant ($p = 0.001$).

Figure 1. Turkish Students' Computer and the Internet Usage Skills (%)



	MS Windows	MS Word 1	MS Word 2	MS Powerpoint	MS Excel	Online Research	Online Communi-cation	Creating Web-page
Expert	22.6	26.4	21.5	10.5	17.7	33.2	49.1	18
Intermediate	39.9	43.3	34.2	22.6	32.1	36.1	19.8	21.4
Beginner	21.6	15.4	19.5	24.2	18.1	13.2	12.8	22.3
Never Tried	15.9	14.9	24.8	42.7	32.1	17.5	18.3	38.3

Figure 2. American Student's Computer and the Internet Usage Skills (%)



	MS Windows	MS Word 1	MS Word 2	MS Powerpoint	MS Excel	Online Research	Online Communi-cation	Creating Web-page
Expert	48.5	76.7	57.5	22.4	18	68	83.7	8
Intermediate	44.4	20.8	37.4	44.4	48.2	29	13.8	13.7
Beginner	4.6	1.5	4.6	28.1	26.6	2.5	1	23.4
Never Tried	2.5	1	0.5	5.1	7.2	0.5	1.5	54.9

The level of technology used in history classrooms

Based on student responses to the technology questionnaire, the level of technology used in history classrooms is quite low in both the American and Turkish schools; however, this level is higher at the American school (see Table 1). The comparison shown in Table 1 also indicates that TV is the technology tool that is used most often in both schools; audio materials are the least used.

Table 1

The Level of Technology Use in History Classrooms (over 4)

USC High School				Konya High School			
	N	Mean	Std. Deviation		N	Mean	Std. Deviation
TV	194	2.84	1.087	TV	167	1.31	1.504
VCR	193	2.59	.996	PC	155	1.13	1.449
PC	190	1.37	1.700	CD / DVD	151	.91	1.313
Projector	187	1.11	.989	VCR	156	.87	1.367
CD / DVD	185	.75	.809	Projector	146	.71	1.369
Audio	185	.30	.782	Audio	146	.48	.977

Student attitudes toward technology-enhanced history education

In the technology questionnaire students were asked to rank the seven elements of education (i.e., teacher, textbooks, educational technology materials, school building, library, sports, and social activities) from least important to most important. This question was designed to determine which educational element is the most important from the students' perspective. As you can see in Table 2, both American and Turkish students ranked educational technology somewhere in the middle compared to other elements of education. Despite differences in the two educational systems, both American and Turkish students ranked teachers and textbooks as the first and second most important elements of education. At the p. 0.05 level, no statistical difference was found between Turkish and American students' ranking on six of the seven elements of education, with the exception of their ranking for sport.

Table 2

Students' Ranking of Elements of Education (over 4)

USC High School				Konya High School			
	N	Mean	Std. Deviation		N	Mean	Std. Deviation
Teacher	194	3.75	.625	Teacher	202	3.47	.942
Textbook	193	2.90	.884	Textbook	195	2.96	.913
School Building	194	2.65	1.186	Edu. Technologies	190	2.78	1.264
Edu. Technology	193	2.53	.951	Sport	188	2.71	1.238
Library	191	2.34	.971	School Building	191	2.57	1.367
Social Activities	192	2.22	1.114	Social Activities	187	2.50	1.284
Sport	191	1.86	1.268	Library	189	2.49	1.249

In this study, students were also asked to rank some predefined contributions of technology (i.e., the ability to find resources, reinforce what they had learned in school, or make learning fun) based on how helpful they find these contributions of technology in their daily and school lives. American students ranked "finding resources" as the most helpful contribution of technology to their school and daily lives (see Table 3). On the other

hand, the Turkish students ranked "putting fun in learning" as the most helpful contribution (see Table 3).

Table 3

Contributions of Educational Technology (over 4)

USC High School				Konya High School			
	N	Mean	Std. Deviation		N	Mean	Std. Deviation
Finding resources	194	3.53	.789	Putting fun in learning	204	3.28	1.126
Making students more independent in learning	192	2.53	1.110	Finding resources	192	3.20	1.040
Making learning easier	191	2.48	1.150	Making learning easier	201	2.95	1.048
Putting fun in learning	191	2.45	1.122	Reinforcing the content being taught in the class	197	2.91	1.148
Learning content better	193	2.42	1.043	Learning content better	196	2.87	1.115
Reinforcing the content being taught in the class	194	2.34	1.081	Making students more independent in learning	194	2.54	1.335

As you can see in Table 4, most of the Turkish and American students showed positive attitudes on using educational technologies in history classrooms. A majority of the Turkish and American students stated that they would be able to focus and learn better if more technological materials were used in classroom activities, and this, in turn, would increase their academic achievements. Further, students disagreed with the statement that "educational technology is nothing but a waste of time and money." Both American and Turkish students also disagreed with the assertion that "history can only be learned from books," and they stated that they could learn a historical subject better by watching a movie or documentary than they could by reading a textbook. No statistically significant differences were found between Turkish and American student responses to items given in Table 4 except for the item stating, "History can only be learned from books" ($p = 0.001$). Therefore, it can be concluded from the results of this study that Turkish and American students' attitudes toward educational technology are quite similar.

Table 4

Students' Attitudes toward Educational Technology (%)

	USC High School		Konya High School	
	Disagree	Agree	Disagree	Agree
I can learn better with educational technology	7.2	69	6.3	71.7
Edu. Tech. helps me focus my attention	10.3	66.5	10.7	56.1
Edu. Tech. improves my academic achievement	11.4	62.2	9.5	65.2
Edu. Tech. is noting but wasting time and money	81.9	7.7	75	14.5
I can understand history better with movies and documentaries	14.1	67.5	10.5	79.5
History can be learned only from books	91.7	4.6	43.5	24.5

Students' attitudes toward history

One question on the technology questionnaire was specifically written to determine if the students like history courses or not. Contrary to the research mentioned in the introduction of this paper, which stated that students find history boring and irrelevant, the findings of this study showed that a majority of the Turkish and American students do like history. Among the Turkish students, 56.5% of them agreed with the statement "I like history courses," 18.0% disagreed, and the rest stated that they were not sure. Among the American students, 49.5% of them agreed with the "I like history courses" statement and 34.0% disagreed. The results also showed that Turkish students like history more than American students do, and this difference is statistically significant ($p = 0.002$).

Conclusion

The results of this study have shown that, despite the socioeconomic and educational system differences between the two societies, Turkish and American students' attitudes toward educational technology are quite similar. Students from both countries have positive attitudes toward the use of various technological materials in history courses. Their computer- and Internet-usage skills and positive attitudes toward technology show that both Turkish and American students are ready for a technology-enhanced education. Yet the current level of technology use in history courses is quite low, especially in Turkey. Although the level of technology is not as high as they may wish, students from both countries have positive attitudes toward history. Therefore, considering students' expectations to see more educational technology materials to be used in history classrooms,

it is reasonable to assume that higher levels of technology use in history classrooms would lead to higher levels of student motivation and academic achievement in history.

Participating American students had a higher level of computer- and Internet-usage skills than their Turkish counterparts, except for the ability to create web page skills. This shows that the quantity and the quality of the technology courses and the level of technology used should be increased in the Turkish schooling system in order to better prepare Turkish youths for the information age. Results of this study show that the higher technology used in classrooms leads to higher computer- and Internet-usage skills of the students, and this correlation is statistically significant ($p = 0.01$). Therefore, if we can better integrate technology into our education system and increase the level of technology used in classrooms, students' motivation, academic achievement, and technology intelligence will increase. This, in turn, will help the Turkish society to keep up with the information era.

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