6TH, 7TH AND 8TH GRADERS' ATTITUDES TOWARDS ONLINE HOMEWORK ASSIGNMENT SITES

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ABSTRACT
This study has pedagogical implications in view of rapidly growing technological development and widespread use of the Internet in instruction. The spread of online homework sites with highly commercial aims has opened a new research area regarding the structure, aim and the significant role of homework in education. Particularly, the changes in students' preparing homework behaviours have caused new educational, ethical and financial problems for educational policy makers, teachers and parents. The main purpose of this study was to discern the 6th, 7th and 8th grade students' attitudes towards Online Homework Sites (OHS). A scale was administered to 737 students in Aegean region of Turkey.

The results of the study indicated that 86.7% of the students used the OHS and these students had positive attitudes towards OHS. Gender, school, grade, age, computer use proficiency and frequency, Internet use frequency, and education levels of parents appeared to have a statistically significant effect on the attitudes towards OHS.
Key Words:Online homework sites, Homework, Assignments, Primary students, Primary education, Internet

INTRODUCTION

Homework assignments which have been defined in different aspects have a crucial role in education since they reinforce learning. Homework is defined as written/oral individual or group tasks assigned to students by the teacher to be done out of school time with the purpose of getting prepared for a new learning material or reinforcing, expanding, practicing or completing newly learned material (Cooper, 1989:7; Corno, 1996: 27). According to Yücel (2004: 148), assignments are mental or physical tasks related to a particular topic or unit for students to cover. Generally, assignments which provide instruction to continue outside of the classroom are one of the means to gain new abilities, experiences, skills and benefit from the previous learning activities. They assist students to understand what is learnt at school better and improve their retention levels and help them to improve their study skills, especially time management, during non-school hours. Assignments also promote students' self-discipline, independence and responsibility characteristics (McPherson, 2005). Hence, the aim of an assignment is to teach students studying independently, planning efficiently, getting organized in group assignments and thinking individually (Sgouros & Martin, 2005). Beside positive effects of homework described as immediate achievement and learning, long-term academic and nonacademic benefits, there are also some negative effects such as satiation (loss of interest in academic material, physical and emotional fatigue), denial of access to leisure time and community activities (parental interference, pressure to complete and perform well, confusion of instructional techniques), and cheating (copying from other students, help beyond tutoring) (Cooper, 1994).

Research evidence shows that regardless of students' ability or prior coursework academic achievement is positively related to homework completion (Keith & Cool, 1992; Cooper, Lindsey, Nye, & Greathouse, 1998). In addition, homework exerts its greatest influence in higher rather than lower grades (Cooper, Valentine, Nye, & Lindsey, 1999). Especially, in middle and high school (Grades 6-10), there is a positive correlation between the amount of homework completed by students and their grades. In the lower grades (Grades 2-4), however, this relationship is negative. This finding, coupled with research showing that students' emotions are depressed when they are engaged in homework (Leone & Richards, 1989), has led some to argue that homework can indeed be detrimental in elementary school.

Researchers have also found that, because of their limited cognitive capacity, younger children tend to have less effective study habits and are less able to focus and avoid distraction than older children (Hoover-Dempsey et al., 2001). Furthermore, elementary school teachers believe more strongly in homework's value for the purpose of training students on how to study and use their time well. This implies that for elementary level teachers, the content of homework may be less important than the opportunity it provides to foster long-term time management skills, the effects of which would not be evident in younger children's school grades (Muhlenbruck, Cooper, Nye, & Lindsey, 2000).

There are mainly four assignment types, namely; creative, extensive, preparation and practice. In addition to these types, there are integrated assignments such as book reports, creative essays and scientific projects which require students to use several skills in a particular task. Besides, the changes in the roles of teachers and students because of the use of information technologies in education and instruction should not be ignored. Teachers' roles have changed from "assignment giver and organizer" to "facilitator and supporter". Teachers provide students to utilize their skills and practice what they learn by using technology instead of giving all students the same assignment (Zisow, 2002).

The claims that utilizing Internet technologies in education improves learning and increases motivation have caused several arguments. Some think that since technology has details causing loss of attention, it prevents students from getting important information and from constructing knowledge, and it also affects students' perceptions. As anyone may present anything on open global information nets, students have to check the accuracy of information and this task appears to be difficult for them (Braten & Stromso, 2006: 1027-1042). However, it has been known that the Internet is a powerful mean to access sources since only a mouse click is needed to access sources which used to be very hard to find in the past. Nevertheless, students have to distinguish between reliable and unreliable information sources (Sgouros & Martin, 2005).

The increase of internet-based information sources has led to development of various online assignment sites serving several purposes. These sites contain different studies such as online courses and assignments written by other students. There are different sites serving according to their price, scope and different ages. Packhard and Holmes (2001) state that there are seven types of assignment sites. *a) Portal sites:* These introductory sites provide links to other information sources. *b) Information sites:* These sites are rare compared to introductory sites, and they present their own articles or information.. *c) Article sites:* Almost one third of assignment sites provide buying, selling or sharing articles and term assignments. Some sites let students download fulltext ready-made homework assignments. Students hand in these assignments as if they themselves had done them. Some of these sites are free to access while some of them require fees. In addition, there are essay sites requiring subscription to access libraries and information services. Subscription may require fees as well as it may require an assignment to be sent to the site. However, there are studies showing that students' grades decrease because of the poor quality of such ready-made assignments downloaded from the Internet. *d) Ask someone who knows sites:* These sites provide on-line courses. In this service teachers or other volunteers answer students' questions online via chatting, e-mail or spontaneous messages. Although most of these sites are free, some online courses require fees or subscription. *e) Sites containing various book or site summaries:* Users may download some studies for free or after paying a fee. These sites present summaries of books or other studies. *f) Online encyclopedias or libraries:* Britannica or World Book sites provide fulltext encyclopedias on-line to their subscribers. In addition, there are a few free articles and free short-time subscriptions to introduce the site to its users. *g) Course service sites:* Most presentations are on-line and some of these sites provide interactive courses.

It has been argued whether students benefiting from OHS are negatively affected. Researchers claim that such sites (usually) give no indications as to why a problem might be wrong; multiple submissions could lead students to adapt a trial-and-error strategy instead of carefully thinking through the problem; and simply grading a number tends to put even more emphasis on getting the final answer right by any means without actually understanding the process (Bonham & Beichner, 2001). Depending on country, there are different sites serving according to their price, scope and age groups. In developing countries like Turkey, ironically OHS are usually managed by non-educationalist people who have commercial aims. It should also be noted that the OHS managed by non-educationalist people are not organized systematically as described by Packhard and Holmes (2001) in previous paragraphs. Some sites let students download assignments based on subscription and varying amounts of monthly or annual charges. Students hand in these assignments to their teachers as if they themselves had done/prepared them. It is thought that use of OHS which have become widespread with the development of technology may affect students negatively since they find information so easily and this may lead them to copy or buy information and avoid doing the homework on their own. However, it may also be claimed that developing technologies cause changes in education and instruction, and increase student interest in school, lessons and assignments because the reflection of Internet technology on education and instruction enables easier access to information resources and help students to do the assignments in relatively shorter periods of time. OHS are also a dimension of distance learning. Thus, spread of assignment sites has caused a new area of research. Also in traditional instruction, stale assignments cause problems for students and their families. However, one of the benefits of information technologies that require parents to contribute to their children's assignments has been a problem for some families. In their study, Reach and Cooper (2004) stated that most families did not understand the assignments of their children and they needed support and assistance. Students' attitudes towards assignment may have a negative effect on their achievement since teachers give a lot of assignments which are mostly stale, causing waste of time and boring students.

It could be emphasized that homework assignments may increase students' interest in school and/or course topics and improve their academic development. Thus, they must exist in education. Therefore, it is very crucial to describe, investigate and offer solutions to the problems of one of the recent outcomes of the Internet technology; OHS. The importance of researching / studying possible impacts of such sites on educational system and students cannot be ignored as non-ethical aspect of using OHS causes problems for parents, educational policy-makers and teachers. The spread of commercial assignment sites and their unethical use by students was also in the news of some highly circulated Turkish newspapers (Milliyet, 18.10. 2003; Sabah, 14.09.2003, 23.10.2005; Radikal, 14.08.2006) There are a few studies in literature about the use and reasons of use of online assignment sites but no studies measuring attitudes of primary level students towards these sites. In this study, students' attitudes towards OHS are investigated and effect of OHS on education is examined in terms of effectiveness, ethics and practicability dimensions.

AIM OF THE STUDY

The purpose of this study was to examine primary school students' (6^{th}, 7^{th} and 8th graders) use of OHS available on the Internet and reveal the variables affecting their attitudes towards these sites. The reasons for using OHS and suggestions for accurate and efficient use of OHS were also examined. The study is considered to be significant since not only does it describe the use of OHS in the sample of primary schools but also offers some suggestions for pedagogical implications. Students' inclining towards OHS and learners' opinions about the use of these sites may redirect education and instruction. This study is needed in the field since primary school considered being the basic step for education and instruction, and students' opinions related to developing technologies gain importance.

Research Questions

The main question of the study was "What are the students' opinions and attitudes towards the use of OHS and what do they suggest for the accurate and efficient use of these sites?". Sub-questions were set as;

a) What is the present status of participants' use of OHS?
b) What are the participants' attitude levels towards OHS?
c) Is there a significant relation between participants' individual characteristics and their attitude levels towards OHS?
d) What are the opinions of participants related to the reasons for using OHS?
e) What are the suggestions of participants related to the accurate and efficient use of OHS?
f) Are there any interactions among independent variables (gender, school, grade, age, proficiency and computer use frequency, Internet use frequency, and education levels of parents) and attitudes of students?

METHODOLOGY

Method

A general survey design was used in this study. Data related to the individual characteristics of primary school students, reasons and suggestions for using OHS were collected in the second half of 2007.

Participants

A total of 737 students in a primary school in a city located in Aegean region of Turkey participated in this study. The distribution of participants according to their grades and gender is close to each other and the participants ranged in age from 11 to 15 (Table 1). In addition, 57.9% of the participants had personal computers; 25.9% of them rated their computer use proficiency as average, 46.9% of them as advanced. 67.4% of the participants use computer several times a week, 46.8% of them go to Internet cafes; 42.6% of them rated their Internet using skills as good and 26.9% of them as advanced. 64.6% of the participants reported that they use the Internet several times a week. 33.6% of the participants' mothers were graduates of primary school and 31.2% of them were high school graduates. 32.8 % of participants' fathers were high school graduates and 24,8% of them were university graduates. Family income of 36% ranged between 501-1000 Turkish Lira (approx. 400-800 US Dollars) per month.

Table 1. *Demographics*

Characteristics		f	%
Grade	6	231	31.3
	7	261	35.4
	8	245	33.2
Age	11	7	0.9
	12	214	29.0
	13	260	35.3
	14	226	30.7
	15	30	4.1
Gender	Female	356	48.3
	Male	381	51.7

Instruments

Attitudes Towards Online Homework Sites Scale developed by Arıkan and Altun (2007) was used in the study. The scale had four parts including personal information, reasons for using OHS, attitudes towards OHS, and suggestions for OHS. In personal information part, participants were asked "yes-no" questions for the reasons of using the OHS and suggestions for using them. A five-point likert scale was used for attitudes towards OHS. There were 24 statements to which participants indicated their opinions by marking "strongly agree", "agree", "no idea", "disagree", and "strongly disagree". The attitude scale had three subscales as "effectiveness", "ethics", and "practicability" subscales. These subscales defined 42.74% of the total variance. Table 2 summarizes factor and reliability analysis of the scale.

Table 2. *Reliability and factor analysis of attitudes towards OHS scale*

Subscale	**K**	$\bar{x}$	**Sd**	***α***	**rjx**	**Variance %**	**n**
Effectiveness	9	32.02	8.28	0.85	5.67	23.6	737
Ethics	8	30.75	6.77	0.79	2.77	1.53	737
Practicability	7	23.08	5.97	0.70	1.83	7.61	737
Total Scale	*24*	*85.64*	*15.29*	***0.84***			*737*

RESULTS

1. The state of participants' use of OHS

Table 3 shows that 35.4% of the participants used OHS 10 or less than 10 times a month, 51,3% used OHS over 10 times a month.

Tablo 3. *The frequency and percentage of students' use of OHS*

State		**f**	**%**
State of using OHS	User	639	86.7
	Non-user	98	13.3
Frequency of using OHS in a month	1- 5 times	134	18.2
	6- 10 times	127	17.2
	11- 15 times	103	14
	16- 20 times	70	9.5
	Over 20 times	205	27.8

Online homework sites which have Turkish content were used by 62.8% of the participants for Science and Technology. 62.4% for Social Sciences, 42.2% for Turkish, 42.1% for Math, 17.9% for Theology, 15.3% for English, 15% for Computer, 13.7% for Technology and Design, 11.3% for Introduction to Citizenship. 9.9% for Physical Education, and 9.9% for Art courses. The students used 14 different OHS of which 85% are payment/membership based, 15% with no charge to use.

2. Attitude levels of the participants towards OHS

The total attitude level of students towards OHS ranged between 24 to 120 points (Table 4).. As a result, 15.2% of the students had low, 68.2% had average and 16.6% had high level of attitude towards OHS. Students' scores for the effectiveness subscale ranged between 9 to 45 points. 14.2% of the participants had low, 69.9% had average and 15.9% had high level of attitudes towards OHS for the effectiveness subscale. Students' scores related to the ethics subscale ranged between 8 to 40 points. As a result, 13.6% of the participants had low, 72.4% had average, and 14% had high level of attitudes towards OHS for the ethics subscale. Students' scores

related to the practicability subscale ranged between 7 to 35 points. 16.3% of the participants had low, 70% had average, and 13.7% had high level of attitudes towards OHS for the practicability subscale.

Table 4. *Students' attitude levels towards OHS*

	K	$\bar{x}$	sd
Effectiveness	9	32.02	8.28
Ethics	8	30.75	6.77
Practicability	7	23.08	5.97
Total Scale	*24*	*85.64*	*15.29*

3. Participants' individual characteristics and their attitude levels towards OHS

According to the t-test results significant differences were found between the participants' gender, owning a personal computer, visiting Internet cafes and utilizing OHS in independent groups (Table 5, 6 and 7).

Table 5. *t-test results related to OHS according to gender and subscales*

		n	$\bar{x}$	S_x	df	t
Total Scale	Female	356	85.38	15.04	735	0.44
	Male	381	85.88	15.53		
Effectiveness	Female	356	31.40	7.75	735	2.06*
	Male	381	32.63	8.39		
Ethics	Female	356	31.74	6.26	735	4.44***
	Male	381	29.55	7.03		
Practicability	Female	356	22.24	5.63	735	3.47**
	Male	381	23.69	5.73		

***p<0.001. **p<0.01. *p<0.05.

As is evident in Table 5, there was no significant difference between females and males in terms of their general attitudes towards OHS. There were significant differences in favour of males ($p<0.05$) at "effectiveness" subscale, in favour of females ($p<0.01$) at "ethics" subscale, and in favour of males ($p=0.001$) at "practicability" subscale.

There was a significant difference ($p<0.05$) between participants' attitudes towards OHS in favor of ones owning a computer (Table 6). A significant difference ($p<0.001$) was also found between participants favoring the owners at subscale "ethics".

Table 6. *Analysis related to students' owning a computer*

		n	$\bar{x}$	S_x	df	t
Total Scale	have	427	86.73	15.81	7235	2.52*
	have not	298	83.81	14.53		
Effectiveness	have	427	32.36	8.61	723	1.52
	have not	298	31.43	7.37		
Ethics	have	427	31.32	6.65	723	3.61**
	have not	298	29.49	6.85		
Practicability	have	427	23.05	6.09	723	0.35
	have not	298	22.89	5.21		

***p<0.001 **p<0.01 *p<0.05.

A significant difference ($p<0.05$) was found between participants favoring the participants who do not visit Internet cafes at subscale "ethics" (Table 7).

Table 7. Analysis related to students' visiting Internet cafes

		n	$\bar{x}$	S_x	df	t
Total Scale	Visit	345	85.50	15.52	726	0.21
	Do not visit	383	85.73	15.05		

Effectiveness	Visit	345	32.37	8.34	726	1.10
	Do not visit	383	31.71	7.88		
Ethics	Visit	345	30.06	6.88	726	2.15*
	Do not visit	383	31.13	6.59		
Practicability	Visit	345	23.07	5.76	726	0.41
	Do not visit	383	22.89	5.73		

*p<0.05

As shown in Table 8, the attitude levels of the users of assignment sites were higher compared to the non-users in terms of all subscales (p<0.001). Findings in Tables 6 and 7 show that computer ownership and having opportunity to visiting internet cafes lead students to more positive attitudes towards OHS than have nots. This may result from income level of parents as some researchers believe that students from higher-income families have more resources (such as computers and internet) and receive more assistance with homework, while low-income family students may have fewer resources and less assistance and are therefore less likely to complete the homework and reap any related benefits (McDermott, et al., 1984; Scott-Jones, 1984 cited in Edvantia for the Center for Public Education, 2008).

Table 8. *T-test results related to the state of utilizing OHS*

		n	$\bar{x}$	S_x	**df**	**t**
Total Scale	User	639	87.18	14.45	735	6.63**
	Non-user	98	76.46	17.45		
Effectiveness	User	639	32.59	7.95	735	4.67**
	Non-user	98	28.52	8.52		
Ethics	User	639	31.20	6.38	735	5.57**
	Non-user	98	27.20	7.93		
Practicability	User	639	23.39	5.50	735	4.32**
	Non-user	98	20.734	6.54		

**p<0.001

According to One-Way ANOVA test results (Table 9), significant differences were found between participants in terms of their computer use proficiency. Tukey's test of additivity revealed that (Table 10) there were significant differences (p<0.05) between the participants having weak computer proficiency and participants having average computer proficiency favoring average ones; between participants having good proficiency and participants having weak proficiency favoring good ones; between participants having advanced proficiency and participants having weak proficiency favoring advanced ones; and between participants having advanced proficiency and participants having average proficiency favoring advanced ones.

Table 9. *One-Way ANOVA results related to computer proficiency*

Subscale		**Sum of squares**	**Df**	**Mean squares**	**F**
Effectiveness	Between groups	1126.22	4	281.56	4.38**
	Within groups	46770.23	727	64.33	
	Total	47896.45	731		
Ethics	Between groups	769.61	4	192.40	4.27**
	Within groups	32724.40	727	45.01	
	Total	33494.01	731		
Practicability	Between groups	497.31	4	124.33	3.85**
	Within groups	23509.69	727	32.34	
	Total	24006.10	731		
Total Scale	Between groups	4993.13	4	1248.28	5.44*
	Within groups	166693.00	727	229.29	
	Total	171686.14	731		

*p<0.001, **p<0.01

As seen in Table 10, higher perceived computer proficiency of participants lead them to show more positive attitudes towards OHS. Having confidence and feeling comfortable in using computers, copying, editing, saving, summarizing and printing a work in a word processor may be the reasons of such positive attitudes.

Table 10. *Post Hoc results related to computer use proficiency*

		Low	Average	Good	Advanced	Significance
Effectiveness	Weak	-0.18	0.16	-1.40	-3.41	
	Low		0.34	-1.22	-3.23	
	Average			-1.56	-3.57*	Adv>Avg
	Good				-2.01	
Ethics	Weak	-6.24*	-6.16*	-6.62*	-6.64*	Adv>Weak Good>Weak Avg>Weak Low>Weak
	Low		0.01	-0.37	-0.40	
	Average			-0.46	-0.49	
	Good				-0.00	
Practicability	Weak	-4.41	-4.45*	-5.01*	-5.32*	Adv>Weak Good>Weak Avg>Weak
	Low		-0.00	-0.60	-0.91	
	Average			-0.56	-0.87	
	Good				-0.31	
Total Scale	Weak	-10.84	-10.45*	-13.03*	-15.37*	Adv>Weak Good>Weak Avg>Weak
	Low		0.40	-2.19	-4.53	
	Average			-2.58	-4.93*	Adv>Avg
	Good				-2.35	

*p<0.05

As can be seen in Table 11 and 12, significant differences (p<0.001) were found between the participants having 'weak' and 'advanced' Internet use proficiency favoring advanced ones; between participants having 'low' proficiency and 'advanced' proficiency favoring advanced ones; between participants having advanced proficiency and good proficiency favoring good ones; and between participants having low proficiency and good proficiency favoring good ones.

Table 11. *One-Way ANOVA results related to Internet use proficiency*

Subscale		**Sum of squares**	**df**	**Mean squares**	**F**
Effectiveness	Between groups	1819.44	4	454.86	
	Within groups	46039.86	721	63.86	7.12**
	Total	47859.30	725		
Ethics	Between groups	973.46	4	243.37	
	Within groups	32136.99	721	44.57	5.46**
	Total	33110.45	725		
Practicability	Between groups	680.63	4	170.16	
	Within groups	23026.97	721	31.94	5.33**
	Total	23707.60	725		
Total Scale	Between groups	8396.25	4	2099.06	
	Within groups	160736.54	721	222.94	9.42**
	Total	169132.79	725		

**p<0.001

Table 12. *Post Hoc results related to Internet use proficiency*

		Low	Average	Good	Advanced	Significance
Effectiveness	Weak	2.60	1.76	-0.37	-2.35	
	Low		-0.84	-2.98	-4.95*	Adv>Low
	Average			-2.13	-4.11*	Adv>Avg
	Good				-1.98	
Ethics	Weak	-2.03	-4.27*	-4.75*	-5.64*	Adv>Weak Avg>Weak Good>Weak
	Low		-2.24	-2.72	-3.60*	Adv>Low
	Average			-0.48	-1.37	
	Good				-0.89	
Practicability	Weak	-2.03	-3.00	-3.31	-4.68*	Adv>Weak
	Low		-0.96	-1.29	-2.65*	Adv>Low
	Average			-0.32	-1.69*	Adv>Avg
	Good				-1.36	
Total Scale	Weak	-1.46	-5.50	-8.43	-12.67*	Adv>Weak
	Low		-4.05	-6.98*	-11.21*	Adv>Low
	Average			-2.93	-7.16*	Adv>Avg
	Good				-4.23*	Adv>Good

*p<0.05

As seen in Table 12, at all subscales significant differences were obtained mostly in favor of advanced Internet users' attitudes towards OHS. The higher Internet usage skills participants have, the more they are able to benefit from OHS. It is considered that easy access to intended homework assignment, previous experiences of using such web sites, feeling comfortable to download work belongs to someone else can be possible reasons.

Table 13 demonstrates significant differences at p<0.001, and p<0.05 levels between the participants' attitudes towards OHS at all subscales in terms of their Internet use frequency.

Table 13. *One-Way ANOVA results related to Internet use frequency of students*

Subscale		**Sum of squares**	**df**	**Mean squares**	**F**
Effectiveness	Between groups	1567.54	2	783.77	
	Within groups	46274.92	724	63.92	12.26**
	Total	47842.46	726		
Ethics	Between groups	339.96	2	169.98	
	Within groups	32728.29	724	45.21	3.76*
	Total	33068.24	726		
Practicability	Between groups	511.23	2	255.61	
	Within groups	23538.73	724	32.51	7.86**
	Total	24049.95	726		
Total Scale	Between groups	5790.69	2	2895.35	12.70**
	Within groups	165087.27	724	228.02	
	Total	170877.97	726		

*p<0.05, **p<0.01

Further analysis showed significant differences between the participants' Internet usage frequency mainly in favour of a few times a week and every day users (Table 14). It is clear that the more frequently participants use Internet, the more positive attitudes towards OHS they have.

Table 14. *Post Hoc results related to Internet use frequency*

	Frequency of Internet use	A few times a week	Every day
Effectiveness	A few times a month	-4.08*	-3.52*
	A few times a week		0.56
Ethics	A few times a month	-1.83*	-1.94

	A few times a week		-0.11
Practicability	A few times a month	-1.92*	-0.32
	A few times a week		1.60*
Total Scale	A few times a month	-7.83*	-5.79*
	A few times a week		2.05

*p<0.05

Regarding education levels of students' mothers, there was a significant difference at the subscale "practicability" (Table 15). Further analysis revealed that the participants whose mothers were university graduates significantly have less positive attitudes (p<0.05) from those whose mothers were graduates of secondary or high school (Table 16)..

Table 15. *One-Way ANOVA results related to education levels of students' mothers*

Subscale		**Sum of squares**	**df**	**Mean squares**	**F**
Effectiveness	Between groups	644.65	5	128.93	
	Within groups	47705.39	730	65.35	1.97
	Total	48350.04	735		
Ethics	Between groups	484.26	5	96.85	
	Within groups	33094.33	730	45.34	2.14
	Total	33578.59	735		
Practicability	Between groups	406.53	5	81.31	
	Within groups	23646.24	730	32.39	2.51*
	Total	24052.77	735		
Total Scale	Between groups	2511.02	5	502.20	
	Within groups	169448.96	730	232.12	2.16
	Total	171959.98	735		

*p<0.05

Table 16. *Post Hoc test results related to education levels of students' mothers*

		Primary	Secondary	High School	Under graduate	Graduate
Practicability	Illiterate	0.176	-0.619	-0.40	1.61	0.69
	Primary		-0.795	-0.59	1.44	0.52
	Secondary			0.21	2.23*	1.31
	High School				2.02*	1.10
	Undergrad.					-0.92

*p<0.05

Regarding education levels of fathers, there was a significant difference (p<0.001) at the subscale "ethics" (Table 17). According to the Post Hoc tests results (Table 18), the participants whose fathers were university graduates showed significantly different attitudes from those whose fathers were graduates of primary and secondary schools. There was also a significant difference between the participants whose fathers were secondary school graduates and the participants whose fathers were graduates of high school in favor of the latter one.

Table 17. *One-Way ANOVA test results related to education levels of students' fathers*

Subscale		**Sum of squares**	**df**	**Mean squares**	**F**
Effectiveness	Between groups	209.84	4	52.46	0.80
	Within groups	47907.94	727	65.90	
	Total	48117.78	731		
Ethics	Between groups	942.79	4	235.70	5.28**
	Within groups	32464.54	727	44.66	
	Total	33407.33	731		
Practicability	Between groups	62.49	4	15.62	.48
	Within groups	23812.02	727	32.75	

	Total	23874.51	731		
Total Scale	Between groups	1221.89	4	305.47	1.31
	Within groups	169882.93	727	233.68	
	Total	171104.82	731		

** p<0.001

Table 18. *Post Hoc test results related to education levels of students' fathers*

		Secondary	High School	Undergraduate	Graduate
	Primary	0.46	-1.63	-2.59*	-1.16
	Secondary		-2.08*	-3.04*	-1.61
Practicability	High School			-0.96	0.47
	Undergraduate				1.43

*p<0.05

As above findings revealed, the higher parents' education level it gets, the less students have positive attitudes towards OHS. Perkins and Milgram (1996) reported that when parents have an understanding of their child's learning style, students have significantly more positive attitudes towards homework. Students' attitudes towards doing homework are related to the role of parental facilitation with homework tasks (Cooper, 2001). Highly educated parents are able to guide and convince their children do homework by themselves and make them aware of the importance of homework tasks. Therefore, making use of OHS could be considered to be unethical by highly educated parents, and they may try to prevent their children from such web sites.

One-Way ANOVA test results showed (Table 19) that there were significant differences (p<0.001) between the participants' attitudes towards OHS in terms of frequency of utilizing OHS at all subscales.

Table 19. *ANOVA test results related to frequency of utilizing the OHS*

Subscale		**Sum of squares**	**df**	**Mean squares**	**F**
Effectiveness	Between groups	2204.42	4	551.10	
	Within groups	37967.03	634	59.89	9.20**
	Total	40171.45	638		
Ethics	Between groups	1048.98	4	262.25	6.40**
	Within groups	25986.18	634	40.99	
	Total	27035.17	638		
Practicability	Between groups	887.27	4	221.82	7.53**
	Within groups	18680.34	634	29.46	
	Total	19567.61	638		
Total Scale	Between groups	11215.20	4	2803.80	14.36**
	Within groups	123793.88	634	195.26	
	Total	135009.08	638		

**p<0.01

As demonstrated in Table 20, students who used OHS more frequently (21 and over in a month) tend to show more positive attitudes at all subscales than the other users (up to 15 times in a month). This may be due to completing their homework in a relatively short time therefore saving time for other activities as stated by students in Table 21,

Table 20. *Post Hoc test results related to frequency of utilizing the OHS*

		6-10	**11-15**	**16-20**	**21 and over**
Effectiveness	1-5	-0.79	-3.48*	-1.51	-4.53*
	6-10		-2.68	-0.72	-3.74*
	11-15			1.97	-1.06
	16-20				-3.03*
Ethics	1-5	-0.96	-1.93	-2.39	-3.36*
	6-10		-0.97	-1.43	-2.40*
	11-15			-0.46	-1.43
	16-20				-0.96
	1-5	-0.47	-0.63	-1.18	-2.90*

Practicability	6-10		-0.17	-0.71	-2.434*
	11-15			-0.54	-2.27*
	16-20				-1.73
Total Scale	1-5	-2.22	-6.04*	-5.07	-10.80*
	6-10		-3.82	-2.85	-8.58*
	11-15			0.97	-4.76*
	16-20				-5.72*

*p<0.05

Multiple comparisons were also utilized in order to find out existence of any interaction between all variables (the states of utilizing OHS, gender, grades, age, computer use proficiency, Internet use proficiency, education levels of parents..), but no interactions were obtained. This may be due to the participants characteristics, culture, and/or research environment.

4. Participants' reasons for using the OHS

In the second part of the OHS scale, 737 participants were asked to state their opinions as 'yes' or 'no' for 13 statements asking their reasons for using the OHS. As seen in the Table 21, major reason for using OHS for doing homework is saving time. More than half of the students reported that bringing enjoyment to the process, spread of the OHS, teachers' suggestions, assignments loading, lack of sufficient information resources, navigations from other sites, parents' suggestions were among the reasons that related to their use of OHS. Cooper (1994) reported that elementary students' performance did not improve when they spent more time on homework. However, it seems that elementary school teachers in this sample in Turkey, may be unaware of this fact or do not really think about it. In addition, students stated that they used OHS because finding books in libraries was difficult. Possible reasons for enjoyment in using OHS could be easy access to ready and original assignments on OHS, using computer and surfing on the Net, completing assignments in a relatively short time easily and using assignments as an excuse to get permission from parents to go to internet cafes.

Table 21. *Participants' reasons for using OHS*

	Reasons	f	%
1	Saving time in doing assignments	655	88.9
2	Brings enjoyment to the process	520	70.6
3	Spread of the OHS	500	67.8
4	Teachers' suggestions	494	67.0
5	Assignments loading	383	52.0
6	Parents' suggestions	372	50.5
7	Lack of sufficient information resources	369	50.1
8	Friend's suggestions	355	48.2
9	Not doing the assignment until the deadline.	287	38.9
10	Navigations from other sites	246	33.4
11	Facilities in Internet cafes (access, consultations, friends etc.)	212	28.8
12	Teachers' giving same type of assignments	201	27.3
13	Dislike of doing assignments	175	23.7

5. Participants' suggestions related to OHS

In the fourth part of the OHS Scale; the participants were asked to state their opinions as "yes" or "no" for 11 statements asking their suggestions related to using the OHS.

Table 22. *Participants' suggestions related to OHS*

	Suggestions	f	%
1	The content of OHS should be examined by experts	629	85.3
2	The spread of OHS should be supported	587	79.6
3	OHS should direct students instead of presenting assignments	529	71.8
4	The use of OHS should be supervised by teachers	533	72.3
5	Teachers should give creative assignments to prevent use of OHS	471	63.9
6	Resource centers such as libraries should be supported to prevent the use of OHS	475	64.5
7	A different assessment should be used for students using	297	40.3

	OHS		
8	To prevent the use of OHS teachers should not give assignments	213	28.9
9	Access to OHS in Internet cafes should be banned	174	23.6
10	OHS should be banned by the authorities	84	12.8
11	Students who use the OHS should be punished	55	7.5

As is evident in Table 22, the students suggested that (1) the content of OHS should be examined by the experts, (2) the spread of OHS should be supported, (3) the use of OHS should be supervised by teachers, (4) OHS in Turkey should direct students instead of presenting assignments, (5) resource centers such as libraries should be supported to prevent the use of OHS, (6) teachers should give creative assignments to prevent use of OHS. In addition, participants also stated that OHS should include references in assignments. They also stated that teachers should give practical assignments instead of theoretical ones. They expected the sites to be more organized, free, have updated information, and links to other sites. Finally, they indicated that teachers should give fewer assignments requiring creative solutions for problems.

Above suggestions reveal that making use of OHS effectively requires them to be reviewed and policies for using such sites should be developed. Therefore, educators should be responsible for moderation of OHS including membership system, uploading or downloading assignments and other regulations.

CONCLUSIONS

Findings show that 70% of students had positive attitudes towards OHS. Males tend to use OHS more effectively and practically than females, however, in terms of ethical issues female students are more careful. Computer ownership and increasing proficiency in computer and internet use affects students' attitudes towards OHS positively. Mothers' and fathers' educational background appears to have an effect on students' attitudes in terms of practicability and ethics. Furthermore, the differences between the states of utilizing OHS, grades, and age, had an effect on the attitudes towards OHS. Finally, the use of internet and OHS frequency seem to have positive impact on students' attitudes.

It could be argued that giving low level assignments would not prevent students from using OHS. Teachers should rather give original assignments requiring creative solutions to problems, develop critical thinking skills, support use of OHS, and they should not punish students for using them. OHS should be supervised by teachers, researchers and experts and these sites should direct students to investigate, to explore, to search instead of providing them ready assignments. Hence, while giving technology based assignments teachers should pay attention to some points such as students' access to Internet facilities, computer use skills, competence in using on-line systems. While doing assignments before or after school, students should be assigned tasks which do not require using extra programs. Homework should be brief, should involve materials commonly found in the home, and should not be too demanding (Cooper, 1994; Zisow, 2002). Since, student achievement is found to be unrelated to the frequency of setting homework or time spent on homework (De Jong et al., 2000). Moreover, parents', students' and teachers' ideas regarding homework and homework practices alter significantly between early childhood and high school (Epstein et al., 1997). Giving meaningful assignments which meet students' needs and helping them to improve their technology use skills and presenting assignments in an enjoyable way are among the most important factors for using technology while doing assignments at home.

Electronic assignment method which meets the needs of teachers requires a wide organization. The most important point is that students and their parents should be informed about teachers' assignment systems and also the delivery and grading of assignments. In addition, alternative ways to do assignments should be found for those who do not have e-mail or Internet access. Since assignments are under the control of teachers, the ones who did or did not do their assignments should be known via filtering e-mails (Zisow, 2002:6-9).

It seems that assignments increase student motivation and academic achievement and should continue to take a part in educational process. Students using Internet technologies at home should do their assignments under control of their parents. Since information is limitless and there is freedom of choice on the Internet, students may be led to unrelated sites and may show inclination towards unethical behaviors in order to gain more time for leisure activities. Assignment sites developing parallel with technology should take into consideration all these possible problems. There have been changes in giving, doing, and assessing assignments as a result of technological developments. Technology promotes facilities for education and instruction and increases learner motivation. However, technology should be used appropriately and assignment process should be observed. As a result, assignments should be chosen according to the needs, conditions, homework preferences and interests of students. Developing countries should set clear legislation and policies and/or guidelines in order to provide

guidance to schools on homework. In these policies; types of homework activities, the amount of time to be set per week and for each educational level, purpose and principles of homework, expectations and roles of students, teachers, and parents, marking of homework and provision of feedback, time allocations for different subjects, strategies to follow up on homework should be clarified. Some strategies such as parental communication and involvement, short and relevant tasks, homework planners/diaries across a period of time and teaching students self-monitoring techniques may help to reduce the problems related homework (The State of Queensland, 2004). Students' facilities to access resources should be taken into consideration while giving technology based assignments. The quality of sources in assignment sites and their operation should be supervised by experts and teachers.

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