A STUDY OF 8th GRADERS' PERCEPTIONS OF SOCIO-CULTURAL PERSPECTIVE OF CREATIVITY BY USING INFORMATION TECHNOLOGY TOOLS IN REALISATION OF HOMEWORK GOALS

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ABSTRACT
The study aims at evaluating the perceptions of 8th graders towards the use of information technologies ranging from the internet and multimedia tools in socio-cultural perspective of creativity while they are doing their homework in the light of the National Education Ministry's regulation related to elementary and secondary school students' extra-curricular activities. The population of the research that was realised by data collected through survey method consists of 8th grade students in elementary and secondary schools in Istanbul. Randomly chosen 435 students from five schools in Istanbul make the sample of the research. In terms of students' perceptions, results of the study show that regardless of gender, students enjoy discovering and exploiting online and offline resources through problem solving skills especially when they have the opportunity to do this on their own, which also shows that they think they feel more confident, mobile and creative in cyber but socio-cultural reality.
Keywords: homework, creativity, information technologies, multimedia

INTRODUCTION

Technological advances make us reconsider and ascertain whether new instructional methods modify or even magnify children's learning styles. Some studies report change in learning style as a function of computer-assisted learning. As the internet and other computer-based communication tools become prevalent in homes and schools, students' use of these tools for their homework will rise. As a result, the new trend in doing homework has also been under great changes and influences from past to present. The issue bears essential focal points to study in terms of students' changing perceptions and attitudes towards homework along with the importance attached to it. In this respect, style of new homework trends especially with young learners would be of greater concern to examine.

In addition, homework is a powerful tool that can contribute to the advancement of children's education and knowledge. Homework is a kind of out-of-school learning that has not yet received the serious attention that it merits in the research literature. School systems need to give serious attention both to increasing awareness of homework motivation and preferences in children and in parents and to providing them with the information and techniques required to accommodate homework assignments to these preferences as well as their motivation levels and sources (Milgram, 2000). Schools that can meet similar needs are more likely to promote a better understanding of homework.

When we talk about homework, we assume that homework should reflect a productive and participatory aspect of learning in which learners' involvement is the most significant element. Using today's technological instruments as facilitators, a well-assigned homework is meant to stimulate students' creativity and the need to communicate and share with his or her peers in rich learning environment. In this respect, creativity is conceived as a product of two different types of mental processes. First, some processes are used in the generation of cognitive structures (memory retrieval, association, mental synthesis, mental transformation, analogical transfer and categorical reduction). The second type of processes cover those used to explore the creative implications of the structures (attribute finding, conceptual interpretation, functional inference, contextual shifting, hypothesis testing and searching for limitations). According to the socio-cultural perspective, understanding creative people and objects demonstrates that artistic innovations emerge from joint thinking, exchanges among people, which emphasizes the role of social dimension of creativity. In the socio-cultural perspective, creativity relies on experience, needs and interests in which needs are expressed (Decortis & Lentini, 2009).

Creative individuals are generally very good problem solvers and enjoy a variety of experiences. They have an ability to read a book or look at a situation and each time the book or situation is revisited, a new idea or approach is developed. Creativity thrives on emotion and is process driven rather than focusing on the end result. School is very goal oriented. Although we may like to think that students should learn 'for the sake of learning, the reality is that the goal of most schools is to have the students perform well on the exam. For a student to do well in this system, the student needs to be driven by wanting to complete a goal. Students should view assignments as part of a process and not as end result (Weiner, 2010).

Thus, an educational system that is based on creativity encourages the creativity and works for achieving creativity. It is too necessary to educate and train the people who can develop the society towards the best, who can use their creative capabilities and take the responsibilities of competitive changing world on the national and international basis. The doubling of knowledge is taking place in less time while we are advancing forward. This cumulative knowledge only can be learned just by an educational system that depends on aiming creativity and using methods of creativity. The basis of development and improvement is formulated by advanced technology. Technology is a product of creative works and is a very wide and fertilized area for creativity **(**Rıza, 2001). By using technological aids in homework preparation process, it should not be wrong to look for the ways of improving and reinforcing creativity with other personality traits from socio-cultural perspectives.

However, it should be kept in mind that for every kind of innovation, overuse in informational technology and its negative results leading to computer addiction are the risks which should not be missed. Computer teachers are in a position that they may realize the behaviors of the students like excessive use of computer and the internet and can decide on which behaviors worth to convey to school consultants as well. As a result, it is important that the teachers have knowledge on this subject (Yılmaz, 2008).

LITERATURE REVIEW

The use of technology in the classroom to enhance student achievement is a timely topic that pervades educational literature today. However, the literature is practically devoid of evidence for the uses of technologies to enhance both short- and long-term homework assignments. Teachers often assign homework to provide extra practice to students without regard to individualized needs for such practice. In turn, homework is often viewed by students as nothing more than "busy work" and therefore inconsequential to their learning. Technology can be used to change these three types of homework from paper-and-pencil "chores" or "busy work" to motivating learning opportunities that extend classroom learning into the home. Emphasizing a student's individual abilities and interests with regard to homework has been a daunting task in the past. Not many teachers had the time or energy to assign individualized homework assignments to meet student needs. In fact, the same assignment—one that all students could complete—was often given to all students regardless of their individual instructional needs, thus resulting in the "busy work" perception. Using technology, teachers can now move from the role of "assigner and designer" of the homework assignment to "facilitator" for the homework reinforcement process. Rather than requesting that all students complete a specified generic assignment, the teacher can ask students to use technology to practice the skills or display the knowledge learned. Extending the use of technology to the home by assigning meaningful homework accomplishes three goals. First, it encourages meaningful homework assignments designed to meet the individual reinforcement needs of students. Second, it provides practice of valuable technology skills that will serve students well beyond the completion of the homework itself. And third, it provides students with homework activities that are engaging and fun (Zisow, 2000). So homework can be considered as a fruitful tree with numerous branches to hold on.

Homework is intended to be a positive experience that encourages children to learn; assignments should not be viewed as punishment. Research on homework during the last decade began to focus on the relationship between homework and student achievement, and has greatly strengthened the case for assigning homework. Although there are mixed findings about whether homework actually increases students' academic achievement, many teachers and parents agree that homework develops students' initiative and responsibility, and fulfils the expectations of students, parents, and the public (Milbourne & David, 2000). On the other hand, how to realizes this still remains to be an issue of various discussions in the literature.

Homework, without any support and guidance especially for young learners, can go no further than being just a "mission impossible" for both learners and families. For that reason, traditional understanding of homework and its prerequisites need revision or second thoughts so that a more creative, collaborative and supportive approach can be developed to enhance learners' performance and enthusiasm. Smolira (2008) examined student perceptions concerning online homework assignments in an introductory finance class. In general, students felt that online homework was preferable to traditional homework assignments that are turned in to the instructor. In addition, students reported that the homework assignments increased their understanding of the material and the

time they spent in preparing for the class. In that sense, technology and learners' perceptions of role of homework are issues that have different reflections on the tasks and responsibilities taken up during the learning process. Human beings as social creatures blended with culture are forced to state a purpose and take a position in this very digital age. Learners are no exception to this rule; neither can they be exempted from it.

METHOD

The study aims at measuring the relationship between the perceptions of socio-cultural perspective of creativity of 8th graders and the use of information technologies while doing homework. In addition, variables such sharing, cooperation, researching, problem solving, entertainment, self-confidence and communication were studied within students' socio-cultural creativity while organizing their homework in the light of the Turkish Ministry of National Education's regulation related to elementary and secondary school students' extra-curricular activities. For data analysis, frequency analysis and t-test were used.

FINDINGS

Frequency Analysis

In the study, 48,7 % of participants were male and 51,3% were female. The character traits (CT) question regarding which aspect they think doing homework by using the internet and computer tools reinforce had six choices: 1) Sharing 2) Cooperation 3) Researching 4) Self-confidence 5) Creativity 6) Communication. The frequency data for each choice has the following results:

92,2 % of the students think that using the internet and computer tools while doing homework helps them regain self-confidence followed by 88,7 % for cooperation, 82,1 % for communication, 78,4% for sharing, 75,9 % for creativity. 16,1 % of students reported that the internet and computer tools did not help them develop their research skills.

As to whether students discuss the homework topic online, 59,1 % reported they did so. While 58,6 % of students discussed it with their friends, 25,4 % with family members and 16 % with their teachers.

Concerning the most frequent tool they used for discussing homework topics was chat programs by 56,1 %, which was followed by e-mail (20%), face to face (17,8 %) and telephone (5,3%).

While doing their homework on the internet and computer, by 43,9 %, students stated that they preferred to do it on their own and 34,7 % with their friends.

Finally, as to the question whether they benefited from the internet and computer tools about experiments, observations and inventions included in their homework, by 85,5 % students responded " Yes" and by 14,3 % " No"

t-Test

As a result of the t-test that was applied to see whether there is a significant difference among female and male students related to the answers given to the questions as to whether they think that they gain problem solving skills (PS) research opportunities (R) and they entertain themselves (E) while doing homework by using the internet and computer tools, following findings were obtained:

Table 1: Descriptive Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
PS	Male	211	2,2512	1,10774	,07626
	Female	222	2,1712	1,00112	,06719
R	Male	212	1,8349	1,01930	,07001
	Female	222	1,9099	1,00271	,06730
E	Male	212	1,6557	1,15579	,07938
	Female	221	1,5294	1,00240	,06743

The above Table shows that there is no significant difference between the averages and standard deviations of the related answers given to the three questions (PS, R and E) by 211 male and 222 female students.

As a result of the t- test that was applied to see whether there is a significant difference between female and male students related to the answers given to the questions PS, R and E, no significant difference was found at 5% significance level. (Significance values > 0,05 were highlighted).

Table 2: t-Test for Differences between the Genders

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PS	Equal variances assumed	2,317	,129	,789	431	**,430**	,08001	,10138
	Equal variances not assumed			,787	421,328	,432	,08001	,10164
R	Equal variances assumed	,166	,684	-,773	432	**,440**	-,07500	,09707
	Equal variances not assumed			-,772	430,314	,440	-,07500	,09711
E	Equal variances assumed	4,331	,038	1,216	431	,225	,12625	,10385
	Equal variances not assumed			1,212	417,084	**,226**	,12625	,10415

As a result of the t- test applied to see whether there is a significant difference between the answers given to the questions PS, R and E and the answers given to the questions whether they benefit from a single source (SS) or multiple sources (MS) while doing their homework on the internet and computer, following results were obtained:

Table 3: Descriptive Statistics

	SS and MS	N	Mean	Std. Deviation	Std. Error Mean
PS	From a single source	53	2,3019	1,15334	,15842
	From multiple sources	380	2,1974	1,04034	,05337
R	From a single source	53	2,1111	1,16013	,15787
	From multiple sources	380	1,8395	,98432	,05049
E	From a single source	53	2,0000	1,35873	,18664
	From multiple sources	380	1,5342	1,02547	,05261

The above Table shows that while 53 students benefited from a single source, 380 students benefited from multiple sources while doing homework on the internet and computer. No significant difference was found between the averages and standard deviations of the answers given to the three questions by students in both groups.

Table 4: t-Test for difference between SS and MS

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PS	Equal variances assumed	1,880	,171	,676	431	**,499**	,10452	,15464
	Equal variances not assumed			,625	64,358	,534	,10452	,16717
R	Equal variances assumed	1,168	,280	1,854	432	**,064**	,27164	,14653
	Equal variances not assumed			1,639	64,304	,106	,27164	,16575
E	Equal variances assumed	12,141	,001	2,966	431	,003	,46579	,15707
	Equal variances not assumed			2,402	60,538	**,019**	,46579	,19391

As a result of the t-test applied to see whether there is a significant difference between " benefiting from a single source" and " benefiting from multiple sources" related to the questions PS, R and E, no significant difference was found for questions PS and R at 5% significance level and similarly for the students in both groups (sig. values>0,05). On the other hand, in parallel with the answers given to question E, a significant difference at 5% significance level was found between the students in two groups. (Sig. value <0,05).

Related to the answers given to the questions PS, R and E, in order to find whether there is a significant difference regarding the question whether students discuss (D) the homework topic or not while doing their homework, following results were founds as a result of the t-test applied.

Table 5: Descriptive Statistics

	D	N	Mean	Std. Deviation	Std. Error Mean
PS	Yes	257	2,0817	,99860	,06229
	No	170	2,4000	1,10620	,08484
R	Yes	257	1,8288	,97721	,06096
	No	170	1,9474	1,06419	,08138
E	Yes	257	1,5798	1,06912	,06669
	No	170	1,6000	1,10083	,08443

The above Table shows that while 257 students discussed the homework topic, 257 of them did not so. While there is no significant difference between the averages and standard deviations of the answers given to the questions R and E by the students in two groups, it was observed that the averages differentiated in question PS (yes:2,08 no:2,4)

Table 6: t-Test for D

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
PS	Equal variances assumed	6,608	,010	-3,088	425	,002	-,31829	,10308
	Equal variances not assumed			-3,024	335,879	**,003**	-,31829	,10525
R	Equal variances assumed	,720	,397	-1,186	426	**,236**	-,11857	,09995
	Equal variances not assumed			-1,166	342,645	,244	-,11857	,10168
E	Equal variances assumed	,213	,645	-,189	425	**,850**	-,02023	,10695
	Equal variances not assumed			-,188	354,557	,851	-,02023	,10759

Related to the answers given to the questions PS, R and E, as a result of the t-test applied in order to find if there is a significant difference between whether students "discuss the homework topic" and "not discuss it" (question D), no significant difference was found between the two groups of students for questions R and E at 5% significance level (sig. values>0,05). On the other hand, in parallel with the answers given to the question PS, a significant difference at 5% significance level was found between the two groups of students.

CONCLUSION

As specified in the related parts of the National Education Ministry's regulation related to elementary and secondary school students' extra-curricular activities, homework, an essential tool in education, is meant to serve as a basic socio-cultural educational medium that helps student develop and improve personal and academic skills. Our results regarding socio-cultural perceptions of 8th graders' creativity show that young learners feel freer, more confident and secure while they are using the internet and computer tools while doing homework. Although most children like participants in our study feel more comfortable with the use of online and offline tools in their engagements, it should be kept in mind that apart from their enhanced efficiency, computer technologies alone should not be prescribed as a unique cure for extra-curricular educational activities such as homework. Our study is meant to shed light on how students in the study perceive computer mediated homework performance and preparation techniques in terms of socio-cultural creativity in comparison to what is stated in the school regulation. Obtained results in general put forward a positive but still attentive approach concerning students' use of computers and the internet tools in doing homework. The line between education

and homework is so delicate that objectives and tools stated in the Ministry's regulation regarding homework can change lines depending on how computers and the internet enter the scene. We hope that this study has managed to draw attention to highlighted theory and changing practice of students' productivity and creativity perceptions from both social and cultural perspectives for the present and future applications.

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