THE EXAMINATION OF ONLINE SELF-REGULATED LEARNING SKILLS IN WEB-BASED LEARNING ENVIRONMENTS IN TERMS OF DIFFERENT VARIABLES

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ABSTRACT
The purpose of this research is to determine whether online self-regulated learning skills differentiate student attitudes towards the internet and web-based education in web-based learning environments. Following survey method of research, the results were presented in descriptive manner. 169 university students participated in the study group. The data of this research were collected by using the Online Self-Regulated Learning Scale (α=0.94), Attitudes toward the Internet Scale (α=0.77), Web-Based Learning Attitude Scale (α=0.86) and Computer Attitude Scale (α=0.97). Percentage, frequency, arithmetic average, t and the Pearson's r correlation statistics were employed on the collected data. The results suggested three major findings (1) online self-regulated learning skill levels affect attitudes of students towards the internet, (2) online self-regulated learning skill levels differentiate student attitudes towards web-based education in terms of the factor of the "Effectiveness of Web-Based Instruction", and (3) online self-regulated learning skill levels differentiate attitudes of students towards computer.
keywords: Web-based learning, self-regulated learning, computer, internet, attitude

INTRODUCTION

It can be argued that rapidly starting to use information and communication technologies in education, as it brings along different concepts, brings about people to need more skills to be able to keep up with developing technology and in this case, computer use leads to an inevitable necessity in terms of both individual and social rationales. Besides the fact that computers motivate students effectively, support life-long learning and increase flexibility in education programs can be said as principle reasons of computer usage (Keser, 1988; Alkan, 1997). On the other hand, today, learning is regarded as a concept that can emerge not only in schools and specific centers but also in all kind of environments and every phase of life (Reigeluth, 1999).

One of the most fundamental ways to gain these skills to people that they need in the name of increasing their quality of life not only in schools but also in any place or time is of course web-based education, which is the fastest proliferating type of distance education (Imel, 1997; Perraton, 1998). Web-based education presents many opportunities to students such as being able to access course material when and where they can access internet and to communicate with other students synchronous and asynchronous modes (Aase, 2000). The use of online communication devices in educational environments gained quite significance with the increase of internet use and the usage of computer and internet-supported communication channels became important in increasing level of interaction. These communication channels can present environments to instructors and students, where both synchronous and asynchronous technologies can be used.

There may be plenty of factors for web-based education to be able to become successful. One of them is self-regulated learning skills. Self-regulated learning, which refers to an active and constructive process when individuals attempt to adjust their behaviors, supra-cognitive competency and motivation towards learning goals they introduce, limit their goals by guiding with respect to environmental influences, can be said to possess an important function in developing life-long learning skills (Pintrich, 2000; Zimmerman, 2002; Wirth & Leutner, 2008). Many studies conducted on self-regulated learning put forward that there is a positive significant relationship between students' motivation levels and learning strategies that they use and academic accomplishments (Pintrich & De Groot, 1990; Zimmerman & Martinez-Ponz, 1990; Butler & Winne, 1995; Ley & Young, 1998; Chung, 2000). These findings led to the concept of self-regulation to be on the rise and politicians, who guides education in distinct countries, and educational psychologists to regard self-regulation as a key to success (Boekaerts, 1999).

According to Zimmerman (1994), students who use self-regulated learning skills effectively possess three significant qualities. The first one is that they use various cognitive strategies that will assist to configure knowledge and keep it in mind. The second one is that they actively control their own learning by employing supra-cognitive strategies such as planning and observation to control their progress. The last one is that they concentrate on their lessons by self-motivating and solve emotional adversities reasonably (Miltiadou & Savenye, 2003). Online learning environments considerably decreasing the restrictions of place, time and

physical materials give students control regarding when, how and what they study (Cunningham & Billingsley, 2003). Considering attributes of students possessing self-regulated learning skills and student autonomy, which is one of the distinguishing characteristics of online learning environments, self-regulated learning is seen to be an important variable in terms of success in online learning environments (Ally, 2004; Hodges, 2005; Fisher & Baird, 2005; Kitsantas & Dabbagh, 2010). The positive correlation between self-regulated learning and academic accomplishment in online and blended learning environments emerged in conducted studies displays this importance (McManus, 2000; Lynch & Dembo, 2004; Chang, 2007).

In terms of web-based education to be able to provide sufficient contribution to academic accomplishment, in addition to self-regulated skills, it can be said that students' attitudes directed to web-based education, computer and internet are important. Attitude is defined as "considerably organized long-term sensation, faith and behavior tendency" (Cuceloglu, 1998). Khine (2001) describes attitude as a mental preparation condition that affects people's stances against a situation and formed as a result of their lives. Ozgur and Tosun (2010) denote that attitudes directly affect success in web-based education and it is quite important to appropriately meet student expectations and requirements in time in terms of their accomplishments.

The purpose of this research is to determine whether online self-regulated learning skills differentiate students' attitudes towards computer, internet and web-based education. In this context, questions below were sought an answer:

1. How are the self-regulated learning skill levels of students in online environments?
2. Is there a correlation between students' online self-regulated learning skills and attitudes toward internet?
3. Is there a correlation between students' online self-regulated learning skills and attitudes toward web-based education?
4. Is there a correlation between students' online self-regulated learning skills and attitudes toward computer?
5. What kind of a relationship exists between student attitudes towards web-based education and computer and internet?

METHOD

Research is of a descriptive character. It was conducted in the survey model. In this context, online self-regulated learning skills of students in web-based learning environments were attempted to be determined within the framework of their attitudes towards internet and web-based education.

Working Group

169 students in total in five departments receiving the course of Computer II in the form of web-based instruction practice in the Departments of Elementary Education, Science, and Social Studies Teaching in the Faculty of Education of Ahi Evran University during 2010-2011 spring semester constitute the working group of this research. The distribution of students with respect to gender and groups is summarized in Table 1.

Table 1. The distribution of Students with Respect to Gender and Groups

Groups	Female	Male	Total
Science Education	70	36	106
Social Science Education	41	22	63
Total	**111**	**58**	**169**

Data Collection Instruments

The data of this research were gathered using Online Self-Regulated Learning Scale, Attitudes toward Internet Scale, Web-Based Learning Attitude Scale and Computer Attitude Scale. The details concerning scales are as follows:

a. Online Self-Regulated Learning Scale: Self-regulated learning skills of students in online environments were collected by using Online Self-Regulated Learning Scale designed by Barnard et al. (2009) and whose original name is "Online Self-Regulated Learning Questionnaire (OSLQ)". The scale developed by Barnard et al. (2009) consists of six factors and 24 items in total. The validity and reliability study of the scale was performed separately in two distinct study groups as consisting of students, who received education in both blended learning and online learning environments. Confirmatory factor analysis was carried out to determine structure validity in both applications. Parameters in both applications point to its acceptable fit for this structure with 6

factors. Turkish adaptation of the scale was made by Korkmaz and Kaya (in press). Researchers employed confirmatory factor analysis to test structure validity of the scale in Turkish culture. Accordingly, model goodness of fit values of the scale were found as [$\chi 2$ (d=227, N=222) = 327, 28, p<.01, RMSEA= 0.045, S-RMR= 0.047, GFI= 0.89, AGFI= 0.85, CFI= 0.99, NNFI= 0.99, IFI= 0.99]. Accordingly, other observed values of model except GFI and AGFI indicate that the data is perfect and for these two values, it exhibits acceptable fit. Internal consistency coefficient of the scale was tested by Cronbach's alpha reliability coefficient and designated as 0.948. On the other hand, Cronbach's alpha values regarding factors are seen to vary between 0.632 and 0.941.

b. Attitudes toward Internet Scale: "Attitudes toward Internet Scale", whose reliability and validity studies were performed developed by Tavsancil and Keser (2001), was employed to measure student attitudes toward internet. The scale, which is 5-point Likert scale, consists of 25 items and 5 factors. Five factors explain 55.381% of total variance. The first 10 items in the scale are negative and the rest 15 are positive. Negative items were coded inversely. According to analyses conducted by Tavsancil and Keser (2001), the internal consistency coefficient (Cronbach α) of the first factor denominated as "Denying Internet" is 0.87, the internal consistency coefficient of the second factor consisting of 4 items and denominated as "Trust Internet" is 0.72, the internal consistency coefficient of the third factor consisting of 4 items and denominated as "Believing Internet's Benefits" is 0.72, the internal consistency coefficient of the fourth factor consisting 4 items and named as "Believing the Benefit of Internet" is 0.71 and the internal consistency coefficient of the last factor consisting of 3 items and named as "Enjoying Possibilities that Internet Offers" is 0.77. The internal consistency coefficient for the whole scale was estimated as 0.79.

c. Web-Based Learning Attitude Scale: "Web-Based Learning Attitude Scale", whose reliability and validity studies were performed developed by Erdogan, Bayram and Deniz (2007), was employed to measure student attitudes toward web-based education in this research. The scale, which is 5-point Likert scale, consists of 26 items and 2 factors. These two factors explain 47.308% of total variance. According to factor analysis conducted by Erdogan, Bayram and Deniz (2007), while the first factor consisting of 17 items was denominated as "The Efficacy of Web-Based Instruction", the second factor comprising 9 factors was denominated as "Resistance Against Web-Based Education". The first factor comprises positive items and the second factor comprises negative items. Negative items were coded inversely. The internal consistency coefficient for the whole scale was calculated as 0.861.

d. Computer Attitude Scale: "Computer Attitude Scale", which was developed by Janes and Clarke (1994) and adapted into Turkish by Uzunboylu (1995), was used to measure student attitudes toward computer. The scale, which is 5-point Likert-type, consists of 40 items and it has one factor. The internal consistency coefficient of the scale was calculated as 0.97. Positive items in the scale were graded from 5 to 1 and negative items were inversely graded from 1 to 5 in options of "Strongly Agree – Strongly Disagree".

Web-Based Instruction Practice

To be able to mention online self-regulated learning skills of students and their attitudes towards web-based education, of course, they should experience web-based learning. In this context, 6-week portion of the course of Computer II was applied in the form of web-based instruction. The course content incorporates the subjects of basic concepts regarding internet-based education, internet-based education in Turkey and the world, content design in internet-based education and learning and motivation. 3-week part of web-supported instruction practices lasting 6 weeks was performed in the normal hour of the course in the program; in the rest 3-week part, students were provided flexibility to resume their practices in anywhere. Computer laboratories were kept open in hours with no course under the supervision of department assistants for students to be able to easily access computer and internet. Student-student, student-instructor and student-content interaction were provided for students as both synchronous and asynchronous. Student questions related to content were provided synchronous or asynchronous feedback and correction within the context of chat and forum. Face-to-face interaction with students was abstained in the part of practice within the course, it was elaborated that all interaction was realized in chat platform. Asynchronous feedback was provided by using an online discussion forum in the part of practice outside the course.

A web site was prepared incorporating the subject of the basic concepts regarding internet-based education, internet-based education in Turkey and the world, content design in internet-based education and learning and motivation in accordance with web-based learning approach within the scope of research. In this web site, explanations of topics were supported by various videos. Dreamweaver software was used for visual design of the site, Articulate software was used for content design and Ms-Sql and PHP softwares were employed for learning management system. A student management system, where informations such as study durations of

students, what topics are studied, answers given to exercises etc. are kept, is situated on the designed web site. Students can access topics via their own passwords. Necessary interventions were carried out aimed at ensuring students to use the system in accordance with records in learning management system.

Analyzing Data

Each item on scales was scaled as never (1), rarely (2), sometimes (3), usually (4), and always (5). Converting the scores that students provided for answers they gave to 5-point Likert type scale into standard scores in a way that the lowest one will be 20 and the highest will be 100 is appropriate. The following formula is utilized for converting raw scores to standard score:

$$X_{\text{standard score}} = \frac{X_{\text{rawscore}}}{NumberofScaleItems} x20$$

When students are grouped with respect to online self-regulated learning skill levels, students with the average score being 66 and below were designated as sub-group and students with the average score being 67 and above were designated as upper-group. Frequency, percentage, arithmetic average, t and Pearson's r correlation statistics were used on the collected data. Significance level of 0.05 was predicated on for testing of difference and correlations.

RESULTS

1. Self-Regulated Learning Skill Levels in Online Environments:

Online self-regulated learning levels of students, who participated in web-based learning practices, are summarized in Table 2.

Table 2. Online Self-Regulated Learning Levels of Students

Variables	N	$\bar{X}$	Sd	Min	Max
Goal Setting	169	70,65	14,22	32,00	100,00
Structuring the Environment		77,57	17,21	20,00	100,00
Task Strategies		65,98	13,19	30,00	95,00
Time Management		65,16	13,12	20,00	100,00
Help Seeking		71,63	14,30	25,00	100,00
Self-Regulation		71,41	14,23	30,00	100,00
Total		**70,56**	**11,19**	**35,00**	**95,00**

As seen in Table 2, online self-regulated learning skill scores of students vary between 35.00 and 95.00; their average is $\bar{X}$=70.56. Accordingly, it can be argued that self-regulated learning skills of students in online environments are high. When looking at in terms of scores regarding factors one by one, it is seen that the factor with the highest average is "Organizing Environment" ($\bar{X}$=77.57) and the factor with the lowest average is "Time Management" ($\bar{X}$=65.16). So, it can be uttered that the highest level student skills in terms of their online self-regulated learning levels is "Organizing Environment" and the lowest level is "Time Management".

2. The Relationship between Their Online Self-Regulated Learning Skills and Attitudes towards Internet

Online self-regulated learning skills of students were allotted into two groups as sub-level and upper-level. Students with the total score of online self regulated learning skills being 66 and below comprised sub-group and students with the total score of online self regulated learning skills being 67 and above constituted upper-group. Findings related to the relationship between online self-regulated learning skills and attitudes towards internet are summarized in Table 3.

Table 3. The Relationship between Online Self-Regulated Learning Skills and Attitudes towards Internet

	Goal Setting	Structuring the Environment	Task Strategies	Time Management	Help Seeking	Self-Regulation	**Total**
Internet Denial	,240(**)	,237(**)	,071	,153(*)	,179(*)	,214(**)	,246(**)
Internet Trust	,079	,124	-,021	-,011	,017	,136	,081
Belief in Internet's	,100	,133	-,064	-,013	,050	,102	,080

Benefits							
Enjoying Internet	,117	,111	,004	,027	,112	,120	,113
Enjoying Internet's benefits	,095	,136	,002	,157(*)	,134	,271(**)	,173(*)
Total	,195(*)	,216(**)	,017	,097	,149	,226(**)	,207(**)

N:169; ** p< 0.01; * p<0.05.

It is observed in Table 3 that there is a positive and significant relationship (r=.207) between the total score of online self-regulated learning skill and the total score of attitude towards internet. Besides, there is a positive and significant relationship between the total score of attitude towards internet and "Goal Setting", "Organizing Environment" and "Self-Evaluation"; between the total score of online self-regulated learning and the factor of "Denying Internet". Accordingly, it can be said that as positive attitudes of students towards internet increase, their online self-regulated learning skill levels also increase. Besides, as their attitudes toward internet increase, their skill levels of "Goal Setting", "Organizing Environment" and "Self-Evaluation" accordingly increase; as "Denying Internet" increases, their total scores of online self-regulated learning accordingly increase.

Considering in terms of factors, there is a significant positive relationship between total scores for online self-regulated skills and "Enjoying Possibilities that Internet Offers" and "Time Management", "Self-Evaluation" among other skills except the factor of "Denying Internet" and "Duty Strategies" among self-regulated learning skills. Accordingly, it can be argued that as student levels for getting accustomed to internet go up, their skill levels of "Goal Setting", "Organizing Environment", "Time Management", "Seeking Help" and "Self-Evaluation" also increase. On the other hand, it can be said that as their attitudes of "Enjoying Possibilities that Internet Offers" increase, their "Time Management" and "Self-Evaluation" skill levels also go up. Findings related to differentiation in student attitudes towards internet with respect to their online self-regulated learning skills are summarized on Table 4.

Table 4. Differentiation among Student Attitudes towards Internet with respect to Their Online Self-Regulated Learning Skill Levels

Variables		**N**	$\bar{X}$	**Sd**	**t**	**Df**	**P**
Internet Denial (reverse coded)	Subgroup	53	77,89	13,27	-2,557	167	,011
	Topgroup	116	83,29	12,51			
Internet Trust	Subgroup	53	75,28	18,15	-1,026	167	,306
	Topgroup	116	78,10	15,82			
Belief in Internet's Benefits	Subgroup	53	77,83	15,86	-,679	167	,498
	Topgroup	116	79,57	15,25			
Enjoying Internet	Subgroup	53	78,49	14,79	-1,414	167	,159
	Topgroup	116	83,49	23,71			
Enjoying Internet's benefits	Subgroup	53	73,36	16,74	-1,952	167	,046
	Topgroup	116	78,26	15,60			
Total	Subgroup	53	76,96	11,57	-2,228	167	,027
	Topgroup	116	81,28	11,73			

As seen in Table 4, there is a significant differentiation among student total scores for attitude towards internet according to their online self-regulated learning skill levels ($t_{(2-167)}$ =-2,228; p<,05). When looking at attitude toward internet in terms of factors, it is seen that there is a significant differentiation between factors of "Denying Internet" ($t_{(2-167)}$=-2,557; p<,05) and "Enjoying Possibilities that Internet Offers" ($t_{(2-167)}$=-1,952; p<,05), as for other factors, there is not a significant differentiation with respect to online self-regulated learning skills. When averages examined, it is seen that differentiation is in favor of upper group. Accordingly, it can be asserted that the total score of online self-regulated learning skill levels differentiate student attitudes towards internet in terms of factors of "Denying Internet" and "Enjoying Possibilities that Internet Offers". In other words, online self-regulated skills affect student attitudes towards internet.

3. The Relationship between Online Self-Regulated Learning Skills and Attitudes towards Web-Based Education

Findings pertaining to the relationship between online self-regulated learning skills and attitudes toward web-based learning are summarized on Table 5.

Table 5. The Relationship between Online Self-Regulated Learning Skills and Attitudes towards Web-Based Education

	Goal Setting	Structuring the Environment	Task Strategies	Time Management	Help Seeking	Self-Regulation	**Total**
Effectivity of WEB Based Teaching	,082	,140	,064	,105	,229(**)	,148	,169(*)
Resistance against Web Based Teaching	,223(**)	,207(**)	,303(**)	,181(*)	,204(**)	,163(*)	,274(**)
Total	,046	,015	,098	,003	,092	,045	,005

N:169; ** p< 0.01; * p<0.05.

It is seen in Table 5 that there is no relationship between the total score for online self-regulated learning skill and total scores for attitude towards web-based learning. So, it can be argued that an increase or a decrease in total scores of student attitudes towards web-based learning do not affect total scores for online self-regulated learning skill. Considering in terms of factors, it is observed that there is a significant positive relationship between the factor of "The Efficacy of Web-Based Instruction" and "Seeking Help" and total scores for online self-regulated learning skill. Additionally, it is seen that there is a significant positive relationship between all factors and total scores concerning online self-regulation skills and the factor of "Resistance Against Web-Based Education". Accordingly, it can be uttered that as attitudes towards the factor of "The Efficacy of Web-Based Instruction" rise, all factors and total scores of students regarding "Seeking Help" and total scores of online self-regulated learning skills also go up accordingly. Besides, it can be said that as their attitudes for "Resistance Against Web-Based Education" rise, all factors and total scores of students regarding online self-regulation skills also increase accordingly. Findings related to differentiation in student attitudes towards web-based learning with respect to their online self-regulated learning skills are summarized in Table 6.

Table 6. Differentiation among Student Attitudes towards Web-Based Instruction with respect to Their Online Self-Regulated Learning Skill Levels

Variables		**N**	$\bar{X}$	**Sd**	**t**	**Df**	**P**
Effectivity of WEB Based Teaching	Subgroup	53	67,94	13,65	-2,762	167	,006
	Topgroup	116	74,04	13,17			
Resistance against Web Based Teaching	Subgroup	53	66,70	14,35	1,879	167	,062
	Topgroup	116	61,89	15,91			
Total	Subgroup	53	67,53	10,74	-1,378	167	,170
	Topgroup	116	69,84	9,86			

As seen in Table 6, there is a differentiation only in terms of the factor of "The Efficacy of Web-Based Instruction" in student attitudes towards web-based learning with regard to online self-regulated learning skill levels of students ($t_{(2-167)}$=-2,762; p<,05). When averages examined, it is seen that this differentiation is in favor of upper group. It is observed that there is no significant differentiation between groups in terms of total score and the factor of "Resistance Against Web-Based Education". Accordingly, online self-regulated learning skill levels can be said to differentiate student attitudes towards web-based education in terms of the factor of "The Efficacy of Web-Based Instruction".

4. The Relationship between Online Self-Regulated Learning Skills and Attitudes towards Computer

Findings pertinent to the relation between online self-regulated learning skills and attitudes towards computer are summarized in Table 7.

Table 7. The Relationship between Online Self-Regulated Learning Skills and Attitudes towards Computer

	Goal Setting	Structuring the Environment	Task Strategies	Time Management	Help Seeking	Self-Regulation	**Total**
Attitude toward computer	,213(**)	,270(**)	,070	,148	,237(**)	,178(*)	,254(**)

N:169; ** p< 0.01; * p<0.05.

It is seen in Table 7 that there exists a significant positive relationship between the total score of online self-regulated learning skill and the factors of "Goal Setting", "Organizing Environment", "Seeking Help" and "Self-Evaluation" and student attitudes towards computer. Accordingly, it can be said that as attitudes of students

toward computer increase, correspondingly "Goal Setting", "Organizing Environment", "Seeking Help" and "Self-Evaluation" increase as well. Findings related to differentiation in student attitudes towards computer with respect to online self-regulated learning skills of students are summarized in Table 7.

Table 8. The Affect of Online Self-Regulated Learning Skill Levels on Student Attitudes towards Computer

Variables		N	$\bar{x}$	sd	t	df	P
Attitude toward computer	Subgroup	53	66,83	9,08	-	16	,000
	Topgroup	116	72,74	8,37	4,144	7	

As seen in Table8, there is a significant differentiation in student attitudes towards computer with respect to their online self-regulated learning skill levels ($t_{(2-167)}$=-4,144; p<,01). When averages examined, this differentiation is in favor of upper-group. So, online self-regulated learning skill levels differentiate attitudes of students towards computer.

5. The Relationship between Attitudes toward Web-Based Education, Computer and Internet

Findings pertaining to the relationship between attitudes of students towards web-based education, computer and internet are summarized on Table 9.

Table 9. The Relationship between Attitudes toward Web-Based Education, Computer and Internet

	Effectivity of WEB Based Teaching	Resistance against Web Based Teaching	Total	Attitude toward computer
Internet Denial	,395(**)	,034	,364(**)	,529(**)
Internet Trust	,366(**)	,084	,368(**)	,350(**)
Belief in Internet's Benefits	,532(**)	,053	,496(**)	,402(**)
Enjoying Internet	,271(**)	,056	,271(**)	,234(**)
Enjoying Internet's benefits	,503(**)	,042	,462(**)	,407(**)
Total	,528(**)	,068	,501(**)	,531(**)

N:169; ** p< 0.01; * p<0.05.

It is observed in Table 9 that there exists a significant and positive relationship between student attitudes towards computer and internet in terms of both total score and factors. On the other hand, it is seen that there exists a significant positive relation between attitudes of students towards computer and total scores of student attitudes towards web-based learning and factor scores for "the Efficacy of Web-Based Instruction". Accordingly, as attitudes of students towards internet rise, it can be said that their attitudes toward computer also rise accordingly. Furthermore, it can be uttered that as student attitudes towards internet increase, total scores of attitudes towards web-based learning and factor scores of "the Efficacy of Web-Based Instruction" go up accordingly.

DISCUSSION AND CONCLUSION

1. Self-regulated learning skill levels of students in online learning environments are high. While the highest level skills of students are "Organizing Environment" in terms of their online self-regulated learning levels, their lowest skill is "Time Management". Even though online learning environments are popular today, students receiving education in the college where this research was conducted generally have gotten to know online learning environments recently. High scores of students in the sub-factor of "organizing environment" should not be perceived as contradictory with this situation since students are unfamiliar with the online learning environment, not online environment. Put it differently, online experiences that students attained before assisted them while organizing online learning environment during the learning process realized throughout research. On the other hand, their low scores in the sub-factor of "time management" is a situation frequently emphasized in the literature. Howland and Moore (2002) stated the difficulty for students to follow a specific work schedule in a learning environment and organizing time is a critical requirement for student achievement.

2. Online self-regulated learning skill levels differentiate student attitudes towards internet in terms of the total score for attitude toward internet, the factors of "Denying Internet" and "Enjoying Possibilities that Internet Offers". In other words, online self-regulation skill levels affect attitudes of students towards internet. Students with high level of self-regulation approach activities for learning more willingly, spend a great deal of effort in this respect and use more effective strategies by striving against adversities for a long time (Eggen and Kauchak, 1999). Today, if one of these strategies is considered to resort to internet directly for reaching information and solving any problem encountered, it can be asserted that students with high online self-regulation levels have high attitudes towards internet. In fact, by determining their academic goals, students with high self-regulation skill choose required learning strategies to reach these goals and constantly follow the goal period. Students, who exhibit their goals, make effective planning and constantly follow the goal period, display higher accomplishment academically than the other students, who do not perform these activities (Kovach, 2000). Looking at the literature, self-regulation strategies, when they are used effectively, affect academic accomplishment of students and it was put forward that there exists a positive correlation between the use of learning strategies by self-regulating and academic accomplishment scores (Volters, 1998; Cited by Ergul, 2006). As positive attitudes of students toward internet increase, their online self-regulated learning skill levels also increase. Besides, as their attitudes towards internet go up, their skill levels for "Goal Setting", "Organizing Environment" and "Self-Evaluation" increase; as "Denying Internet" increases, total scores for online self-regulated learning soar accordingly. On the other hand, as student levels for getting accustomed to internet rise, their skill levels for "Goal Setting", "Organizing Environment", "Time Management", "Seeking Help" and "Self-Evaluation" also go up; as their attitudes for "Enjoying Possibilities that Internet Offers" go up, their skill levels for "Time Management" and "Self-Evaluation" go up as well.

3. Online self-regulated learning skill levels differentiate student attitudes toward web-based education in terms of the factor of "the Efficacy of Web-Based Instruction". An increase or a decrease in total scores of student attitudes towards web-based learning does not affect total scores of online self-regulated learning skills. Nevertheless, as their attitudes regarding the factor of "the Efficacy of Web-Based Instruction" rise, total scores of online self-regulated learning skills of students and "Seeking Help" rise accordingly. Furthermore, as their attitudes of "Resistance against Web-Based Education" go up, all factors and total scores concerning online self-regulation skills of students rise accordingly.

4. Online self-regulated learning skill levels differentiate student attitudes toward computer. As student attitudes towards computer increase, accordingly, "Goal Setting", Organizing Environment", "Seeking Help", "Self-Evaluation" and total skill levels soar as well.

5. As student attitudes towards internet go up, their attitudes towards computer go up correspondingly. Besides, as attitudes of students directed to internet rise, total scores of attitudes directed to web-based learning and factor scores of "the Efficacy of Web-Based Instruction" go up correspondingly.

As a conclusion, further research is needed aimed at how their online self-regulated learning skills affect attitudes of students directed to computer, internet and web-based education and additionally, how these variables affect academic success. Educational institutions, instructors and instructional designers obtaining more pre-information about perception, motivation and attitudes of students before performing a course will serve them to increase interaction diversity in online environments, to better understand problems that students might face and as a result, to effectively fulfill educational goals of students.

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