The Journal of Educational Reflections ISSN: 2587-0068	Vol 4, Issue: 2, Year: 2020 http://dergipark.org.tr/pub/eduref	Article history Received: 6 September 2020 Received in revised form: 18 December 2020 Accepted: 22 December 2020 Available online: 25 December 2020

The Effects of Educational Internet Use of University Students' Self-Efficacy Beliefs on Vocabulary Learning Strategies in Foreign Language

Üniversite Öğrencilerinin Eğitsel İnternet Kullanımı Öz-Yeterlik İnançlarının Yabancı Dilde Kelime Öğrenme Stratejilerine Etkisi

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Özet

Bu çalışmanın genel amacı, üniversite öğrencilerinin eğitsel amaçlı internet kullanım özyeterlik inançlarının yabancı dilde kelime öğrenme stratejileri üzerindeki etkisini incelemektir. Araştırma ilişkisel tarama modeline göre yürütülmüştür. Araştırmanın evrenini İnönü Üniversitesinde öğrenim gören öğrenciler oluşturmaktadır. Örneklemini ise belirlenen evren içerisinden basit tesadüfi yöntemle seçilen 184 öğrenci oluşturmaktadır. Araştırmada veri toplama amacıyla Kocaman ve Kızılkaya Cumaoğlu (2014) tarafından geliştirilen Yabancı Dilde Kelime Öğrenme Stratejileri Ölçeği ile Şahin (2009) tarafından geliştirilen Eğitsel İnternet Kullanımı Özyeterlik İnançları Ölçeği kullanılmıştır. Araştırmanın bulguları incelendiğinde, eğitsel internet kullanımı özyeterlik inancı ile yabancı dilde kelime öğrenme stratejisi arasından anlamlı düzeyde zayıf korelasyon olduğu görülmüştür. Belirlenen ilişkinin niteliğini daha iyi açıklamak amacıyla regresyon analizi yapılmıştır. Analiz sonucuna göre eğitsel internet kullanım özyeterlik inançları ölçeğinin yabancı dilde kelime öğrenme stratejilerine ait varyansın yaklaşık %16'sını açıkladığı tespit edilmiştir.

Keywords: Eğitsel Amaçlı İnternet Kullanımı, Yabancı Dilde Kelime Öğrenme Stratejileri, İlişkisel Analiz

Abstract

The general aim of this study is to investigate the effects of internet-based self-efficacy beliefs of university students on vocabulary learning strategies in foreign language. The research was conducted according to the relational survey research. The universe of the research was the individuals who studying in İnönü University. The sample of the study consisted of 184 students who were chosen by simple random method from the determined universe. In order to collect data, the Scale for Vocabulary Learning Strategies in Foreign Language developed by Kocaman and Kızılkaya Cumaoğlu (2014) and the Educational Internet Use Self-Efficacy Beliefs Scale developed by Şahin (2009) were used. When the findings of the study were examined, it was seen that there was a significant weak correlation between educational internet use of university students' self-efficacy beliefs and vocabulary learning strategies in foreign language. Regression analysis was performed to explain better the quality of the relationship. According to the results of the analysis, it was found that the educational internet usage self-efficacy beliefs scale accounted for approximately 16% of the variance of the vocabulary learning strategies in the foreign language.

Keywords: Educational Internet Use, Foreign Language Learning Strategies, Relational Analysis

Introduction

The most valuable and important components of the era we live in is science and knowledge. The countries which have reached and created them have promoted their situation beyond the boundaries together with their welfare however, the ones which have fallen behind this situation either remained undeveloped or moved no further anymore (Selvi, 2012). The increasing population and the curiosity sense that already existed, and is raising in them have caused them to search and develop the field of communication and technology, in the end, it has grounded a great place in our daily life. Moreover, technology has succeeded to become an indispensable constituent part of our life in the past couple of decades. There is no day in which we contact with gadgets of technology either at home, in the office, or even with a friend while chatting (Özteke-Kozan, 2020).

Science and knowledge as two new aspects have taken a significant role in inciting globalization, because technology is one of the most crucial tools for globalization (Tural, 2004). Similarly, two important factors that have impacted contemporary educational system, to a certain extends, are also technology and knowledge (Üstün & Demirbağ, 2003). For example, internet and smartphones are

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the most important devices of technology that have remained a great impact on our life in depth. Someone who lives on one end of the world may get the same knowledge with ones who lives on the other end of the world. Especially, with increase in WIFI and 4G-LTE (ubiquitous) wireless extensions access in anytime and anywhere, has caused an evolutionary period to begin (Gubbi et al., 2013).

Technology and science have had the most enormously contribution to fields is education. Reviewing the domain, you realize that many terminologies have taken their places related to the distance internet based education; such as internet supporting-education, on-line education, web-based education, and e-learning. Of those educational system, online is the one in which individuals are interacting with the knowledge source at the same time, the offline education is the one in which you don't have to be in front of the PC at the same time of interaction but may get the contribution from later on (Yılmaz & Horzum, 2005). English learning / teaching in education is one of the most common field where technology is used most enormously and effectively. Many universities in Turkey have started on-line education but English Language learning /teaching is the most commonly field that technology is used.

One of the most effective components of learning for a foreign language is vocabulary. Occurring of thoughts and conveying them is done by the words belonging to the language and culture you want to use in daily life. Words are the means by which we express our thoughts and feelings. Lack of words in mind defects the development of thoughts comparing. Word is the main source of creating thoughts. "Words don't only help us to narrate but also help to comprehend the thoughts as well. Without knowing the meaning of the words seems almost impossible to understand the text or a conversation while reading and speaking. When a reader doesn't know the meaning of the words in large in a text while reading, hardly ever he/she will be able to understand it entirely" (Özbay, 2008: 32). How ontology and senses completes each other, how lexical and semantics completes one another as there is a strong tie between. As a result, the broader the ones vocabulary capacity the deeper thoughts he/she owns. Because a word retains in one's mind as an aspect. Because of this, a person thinks by means of aspects, that is to say, by words" (Karatay, 2007:143; Özkırımlı, 1994).

Though knowing how crucial is to obtain and insight the beneficial of vocabulary learning in the comprehension of reading a text and one's speaking in frames of theoretical aspects, still there are a lot of other components to consider to integrate into educational processes in order to enhance the quality and the improvement of them. The ones who are pervasive and active mostly in the classrooms are obviously teachers. They know much better than anyone else about the sufficiency and insufficiencies of students regarding materials, pedagogical requirements, and other factors necessarily that affect the development of learning words and likely, a language. Thus, it was a good idea to apply to the study made by (Ng Wee Leng, 2006) abstracted from the opinions of teachers in service to determine the necessities required for preservice teachers' acceleration of learning words and a foreign language. The results indicated that the integration of information and communication technology (ICT) is a good completion of educational practices. Because today's preservice teachers for classrooms are the teachers in service tomorrow.

In the literature, it is seen that there are studies on the relationship between word learning strategies in a foreign language and academic achievement, parental education level, frequency of story reading in a foreign language (Çevik, Orakcı, Aktan, Toraman & Sunçiçek, 2018), grade level, gender (Büyükahıska & Kozallık, 2018), and age level (Ryüp & Demirel-Yıldırım, 2019). It is seen that the relationship between educational internet use self-efficacy and lifelong learning tendencies trends (Erdamar, Demirkan, Saraçoğlu & Alpan, 2017), gender (Kahraman, Yılmaz, Erkol & Yalçın, 2013), and academic self-efficacy (Kabaran, Altıntaş & Kabaran, 2016) was investigated. Arslan (2009) is seen to mention the importance of using technology in foreign language education. Debski (2002) stated that the effect of internet technologies use on learning is still uncertain. In this regard, it may

be important to examine the relationship between university students' self-efficacy towards educational internet use and their vocabulary learning strategies in a foreign language.

The main purpose of this study is to investigate the effects of university students using the internet for educational self-efficacy beliefs on vocabulary learning strategy in a foreign language. When reviewed the domain, hardly ever or rare studies were found related to investigating ties between two variables of such a topic. In addition, the two independent variables are thought to contribute to enlighten to a large extent to the domain in terms of literature aspects. In line with the general purpose of the research, some sub-objectives are determined and presented below.

- Is there a significant difference between educational internet use self-efficacy beliefs and foreign language vocabulary learning strategies according to the gender, the type of school they study in, the devices they connect to the internet, whether they are a member of a website that may help with language learning, and daily internet usage duration of university students?

Method

Research Model

This research was conducted through correlational survey model. According to Karasar (2009), correlational survey model is the research model aiming to determine the presence and degree of change between two and more variables.

Population and Sample

The population of the study is composed of students who are studying at the School of Foreign Languages at İnönü University, while the sample is selected by the simple random method from the determined population. In this sampling method, each element constituting the population has a chance to participate to the sample (Arıkan, 2004:141). Some information on sample is given in Table 1.

Table 1. Demographic Characteristics of Participant Students

	Variables	*f*	%
Gender	Female	130	70.7
	Male	54	29.3
Age	18-20	41	22.3
	21-23	118	64.1
	24 and over	25	13.6

As can be seen in Table 1, 130 (70.7%) of the students were female; 54 (29.3%) are male. 41 students (22.3%) were 18-20, 118 (64.1%) were 21-23, and 25 (13.6%) were 24 and over age group. The research was conducted on a total of 184 students.

Data Collection Tools

Two data collection tools were used in the study. The first of these data collection tools is the Foreign Language Word Learning Strategies Scale (FLWLSS) developed by Kocaman and Kızılkaya Cumaoğlu (2014) in order to determine the vocabulary learning strategies used by the students in learning the language. The Strategy Inventory for Language Learning (SILL) by Rebecca Oxford (1990) was used to develop this scale. The five-point Likert scale consists of 6 sub-dimensions and 32 items. The sub-dimensions of the scale are titled as Memory, Cognitive, Complementary, Meta-cognitive, Affective and Social Strategies. The items of the scale are graded as "Never (1), Rarely (2), Sometimes (3), Mostly (4), Always (5). The total variance explained by these six factors was 41.02%. In this study, to determine the reliability of the scale, the Cronbach Alpha reliability coefficient was calculated to be 0.91. In terms of sub-dimensions of the scale, the Cronbach Alpha reliability coefficient was determined to be between .82 and .94.

The second data collection tool of the study is the Educational Internet Use Self-Efficacy Beliefs (EIUSB) scale developed by Şahin (2009) in order to determine the students' educational internet use self-efficacy beliefs. This scale is five-point Likert type and consists of 28 items. The scale is one-dimensional and its items are graded as "Inadequate (1), Partially Sufficient (2), Sufficient (3),

Quite Sufficient (4), Completely Sufficient (5)". The Cronbach alpha coefficient was 0.96 when it was developed. In this study, Cronbach alpha coefficient is recalculated to be 0.94.

Analysis of Data

Descriptive statistical methods (frequency, percentage, mean, standard deviation) were used to evaluate the data obtained in the study. Binary group comparisons of quantitative data were made according to independent groups t-test. Kruskal Wallis H test was used in cases where the distribution is not homogeneous to compare more than two groups and Mann Whitney U analysis was used in the determination of the group causing the difference. In the study, the effect sizes were also calculated for the cases with significant difference. To interpret the effect size, intervals of Green and Salkind (Büyüköztürk, Çokluk and Köklü, 2012) (.01: Small, .06: Medium, .14: large effect size) and Cohen's effect size (1988) (≥ 0.5: strong, ≥ 0.3: moderate and ≥ .01 weak) (Gliner, Morgan and Leech, 2015) were used together. The relationship between the dependent variables of the study was tested by Pearson correlation and the predictive variables were tested by regression analysis. The correlation values between the scales were evaluated according to the following criteria (Kalayci, 2006).

r	Relation
0,00-0,25	Very weak
0,26-0,49	weak
0,50-0,69	moderate
0,70-0,89	high
0,90-1,00	Very high

The findings were evaluated at the 5% significance level in the 95% confidence interval.

Findings

In the research, firstly students' educational internet use self-efficacy beliefs and foreign language vocabulary learning strategies were investigated according to their gender. Independent groups t test was used to determine whether the views about the scales and their sub-dimensions differed significantly in terms of gender and the results were given in Table 2.

Table 2. Comparison of students' educational internet usage self-efficacy beliefs and views on vocabulary learning strategies in foreign language according to gender variable

Subscale					Levene test		t test		
	Gender	N	$\bar{x}$	sd	F	p	df	t	p
EIUSEB	Female	130	2.96	0.559	12.770	.000*	-	-	-
	Male	54	3.25	0.826					
$FLWLS_{TOTAL}$	Female	130	2.96	0.559	3.030	.083	182	.142	.887
	Male	54	3.25	0.826					
$FLWLS_{MEMORY\_STR}$	Female	130	3.16	0.605	.002	.960	182	-.233	.816
	Male	54	3.14	0.741					
$FLWLS_{COGNITIVE\_STR}$	Female	130	3.24	0.788	1.454	.229	182	1.460	.146
	Male	54	3.27	0.836					
FLWLS $_{COMPLEMENTARY\_STR}$	Female	130	3.08	0.916	3.211	.075	182	-.502	.617
	Male	54	2.86	1.027					
$FLWLS_{METACOGNITION\_STR}$	Female	130	3.08	0.799	.010	.920	182	-.293	.770
	Male	54	3.15	0.973					
$FLWLS_{AFFECTIVE\_STR}$	Female	130	3.45	0.781	8.723	.004*	-	-	-
	Male	54	3.49	0.849					
$FLWLS_{SOCIAL\_STR}$	Female	130	3.44	0.693	.202	.654	182	-.916	.361
	Male	54	3.30	0.892					

*p<.05

As can be seen in Table 2, there are no significant differences in memory, cognitive, complementary, metacognitive, and social sub-dimensions of the vocabulary learning strategies in foreign language according to gender variable (p>.05). In the affective sub-dimension of this scale, it was understood from the Levene test results that the distribution was not homogenous. Similarly, the views collected by Educational Internet Usage Self-Efficacy Beliefs scale are not distributed evenly either. Therefore, the opinions about the affective sub-dimension of the EIUSEB scale and the FLWLS scale were compared by the non-parametric Mann Whitney U tests and the results are given in Table 3.

Table 3. Comparison of views on the EIUSEB scale and the affective sub-dimension of the FLWLS scale according to the gender variable (M.W.U. Analysis)

Subscale	gender	*N*	M. R.	*U*	*z*	*p*
EIUSEB	Female	130	86.30	2704.000	-2.451	.014*
	Male	54	107.43			
$FLWLS_{AFFECTIVE\_STR}$	Female	130	95.37	5950.000	-1.137	.256
	Male	54	85.59			

*p<.05

As can be seen in Table 3, it was determined that the opinions about the scale of EIUSEB according to the gender of the students differed significantly in favor of male students (p< ,05). On the other hand, views on the affective sub-dimension of the EIUSEB scale would not differ significantly by gender (p> .05).

Another finding of the study based on comparison is related to the high school type independent variable. Educational internet usage self-efficacy beliefs and vocabulary learning strategies in foreign language were examined according to the graduated high school type. Because of the serious differences in terms of the number of people in the groups, Kruskal Wallis H test was performed instead of ANOVA and the results are given in Table 3. Yılmaz (2007) stated that non-parametric tests should be preferred if the number of people in the group is less than 30.

Table 4. Comparison of the views about Educational internet usage self-efficacy beliefs and foreign language vocabulary learning strategies according to the variable of high school type.

Scale	Group	N	M. R.	Chi-Square	df	p
EIUSEB	Private High School	66	88.08	.759	2	.684
	Anatolian High School	99	95.44			
	Vocational High School	19	92.53			
$FLWLS_{TOTAL}$	Private High School	66	91.16	.247	2	.884
	Anatolian High School	99	94.17			
	Vocational High School	19	88.47			
$FLWLS_{MEMORY\_STR}$	Private High School	66	92.67	.076	2	.963
	Anatolian High School	99	92.99			
	Vocational High School	19	89.34			
$FLWLS_{COGNITIVE\_STR}$	Private High School	66	84.26	2.506	2	.286
	Anatolian High School	99	96.76			
	Vocational High School	19	98.92			
$FLWLS_{COMPLEMENTARY}$	Private High School	66	96.53	1.310	2	.519
	Anatolian High School	99	92.06			
	Vocational High School	19	80.82			
$FLWLS_{METACOGNITION}$	Private High School	66	94.12	.673	2	.714
	Anatolian High School	99	93.22			
	Vocational High School	19	83.13			
$FLWLS_{AFFECTIVE\_STR}$	Private High School	66	90.21	.191	2	.909
	Anatolian High School	99	93.74			
	Vocational High School	19	93.97			
$FLWLS_{SOCIAL\_STR}$	Private High School	66	93.14	.261	2	.878
	Anatolian High School	99	93.20			
	Vocational High School	19	86.61			

As seen in Table 4, it is determined that students do not differ significantly in terms of educational internet usage self-efficacy beliefs, vocabulary learning strategies in foreign language and all sub-dimensions according to the high school type they graduated from (p> .05).

Another factor to be determined in the study is whether students have internet connections in their home or mobile phones and whether there is a significant difference between the educational internet usage self-efficacy beliefs and word learning strategies in foreign language. The findings for this situation are given in Table 5.

Table 5. Comparison of educational internet usage self-efficacy beliefs and vocabulary learning strategies in foreign language based on students' access to the internet in their home or mobile phone

Scale / Dimensions	Variables	N	M.R.	S.R.	U	z	p
EIUSEB	Access	171	94.30	16124.50	804.500	-1.659	.097
	Not access	13	68.88	895.50			
$FLWLS_{TOTAL}$	Access	171	94.80	16210.00	719.000	-2.121	.034*
	Not access	13	62.31	810.00			
$FLWLS_{MEMORY\_STR}$	Access	171	94.59	16175.00	754.000	-1.935	.053
	Not access	13	65.00	845.00			
$FLWLS_{COGNITIVE\_STR}$	Access	171	93.42	15975.00	954.000	-.853	.394
	Not access	13	80.38	1045.00			
FLWLS $_{COMPLEMENTARY\_STR}$	Access	171	94.35	16133.50	795.500	-1.714	.087
	Not access	13	68.19	886.50			
$FLWLS_{METACOGNITION\_STR}$	Access	171	95.51	16332.50	596.500	-2.795	.005*
	Not access	13	52.88	687.50			
$FLWLS_{AFFECTIVE\_STR}$	Access	171	94.67	16188.50	740.500	-2.009	.045*
	Not access	13	63.96	831.50			
$FLWLS_{SOCIAL\_STR}$	Access	171	93.28	15951.50	977.500	-.725	.468
	Not access	13	82.19	1068.50			

*p<.05

As seen in Table 5, there was no significant difference between educational internet usage self-efficacy beliefs according to whether there was internet connection in students' home or mobile phone (p> .05), and total foreign language learning strategies scale scores differ significantly, from metacognitive strategies and affective strategies sub-dimension in favor of those who have internet connection (p< .05).

Another aim of the study is according to the students' answers about whether the internet contributes to the learning of foreign languages to examine the internet usage self-efficacy beliefs and vocabulary learning strategies in the foreign language. The findings for this situation are given in Table 6.

Table 6. Examining the internet usage self-efficacy beliefs and vocabulary learning strategies in the foreign language according to the students' answers about whether the internet contributes to the learning of foreign languages

Scale / Dimensions	Variables	N	M.R.	S.R.	U	z	p
EIUSEB	Contributes	163	94.13	15344.00	1282.000	-1.557	.119
	No contribution	21	74.60	1492.00			
$FLWLS_{TOTAL}$	Contributes	163	95.33	15539.50	1086.500	-2.432	.015*
	No contribution	21	64.83	1296.50			
$FLWLS_{MEMORY\_STR}$	Contributes	163	94.72	15439.50	1186.500	-1.988	.047*
	No contribution	21	69.83	1396.50			
$FLWLS_{COGNITIVE\_STR}$	Contributes	163	93.41	15226.50	1399.500	-1.034	.301
	No contribution	21	80.48	1609.50			
FLWLS $_{COMPLEMENTARYSTR}$	Contributes	163	95.86	15625.00	1001.000	-2.825	.005*
	No contribution	21	60.55	1211.00			
$FLWLS_{METACOGNITION\_STR}$	Contributes	163	95.70	15598.50	1027.500	-2.707	.007*
	No contribution	21	61.88	1237.50			
$FLWLS_{AFFECTIVE\_STR}$	Contributes	163	96.21	15682.00	944.000	-3.076	.002*
	No contribution	21	57.70	1154.00			
$FLWLS_{SOCIAL\_STR}$	Contributes	163	92.05	15004.50	1621.500	-.038	.970
	No contribution	21	91.58	1831.50			

*<.05

As can be seen in Table 6, there is no significant difference in educational internet usage self-efficacy beliefs according to whether there is internet connection in students' home or mobile phone. (p> ,05), but there is significant difference among total foreign language vocabulary learning strategies scale, memory, complementary, metacognition and affective strategies sub-dimension in favor of those who think internet has a contribution to foreign language learning. (p< .05).

In this research, it has been investigated whether the students' being a member of any web site help with the language learning differ significantly in terms of educational internet usage self-efficacy beliefs and word learning strategies in foreign language. The findings for this situation are given in Table 7.

Table 7. Investigating educational internet usage self-efficacy beliefs and vocabulary learning strategies in foreign language according to whether students are members of any web site that can help language learning on internet

Scale / Dimensions					Levene test		t test			η2
	Answers	N	$\bar{x}$	SD	F	p	df	t	p	
EIUSEB	Member	94	3.20	0.663	.861	.355	182	3.392	.001*	.059
	No member	90	2.88	0.619						
$FLWLS_{TOTAL}$	Member	94	3.30	0.587	2.369	.125	182	3.072	.002*	.049
	No member	90	3.01	0.675						
$FLWLS_{MEMORY\_STR}$	Member	94	3.38	0.752	.369	.544	182	2.361	.019*	.030
	No member	90	3.11	0.827						
$FLWLS_{COGNITIVE\_STR}$	Member	94	3.15	0.875	2.855	.093	182	2.042	.043*	.022
	No member	90	2.87	1.011						
FLWLS $_{COMPLEMENTARYSTR}$	Member	94	3.26	0.814	1.007	.317	182	2.717	.007*	.039
	No member	90	2.93	0.861						
$FLWLS_{METACOGNITION\_STR}$	Member	94	3.65	0.717	1.940	.165	182	3.483	.001*	.062
	No member	90	3.26	0.834						
$FLWLS_{AFFECTIVE\_STR}$	Member	94	3.58	0.727	.505	.478	182	3.448	.001*	.061
	No member	90	3.21	0.745						
$FLWLS_{SOCIAL\_STR}$	Member	94	2.81	1.048	1.317	.253	182	.726	.469	-
	No member	90	2.70	0.902						

*p<.05

As seen in Table 7, educational internet usage self-efficacy beliefs and vocabulary learning strategies in foreign language according to whether students are members of any web differ significantly in terms of total scale, memory, cognitive, complementary, metacognitive and affective strategies sub-dimensions (p< .05). When the average scores are examined, it is seen that the significant difference is in favor of those who subscribe to any website that can help learn a language on the internet. When the effect size values are examined, it can be said that while being a member of a website has a strong effect in terms of EIUSEB, FLWLS-METACOGNITION_STR, FLWLS-SOCIAL _STR, it has a moderate effect in terms of other sub-dimensions.

Table 8 shows whether there is a significant difference between educational internet usage self-efficacy beliefs and word learning strategies in foreign language according to daily internet usage duration.

As seen in Table 8, there was a significant difference between the internet usage self-efficacy beliefs and daily internet usage times of the students. (p< ,05). However, there are no significant differences in the level of vocabulary learning strategies in foreign languages in terms of all scale and all sub-scale. (p>.05).

In order to determine the significant differences between the groups according to educational internet usage self-efficacy beliefs, Mann Whitney U analysis was performed for paired comparisons

between each group due to the lack of complementary analyzes in nonparametric tests. According to the results of the analysis, It was determined that individuals who use Internet more than 11 hours of daily have higher self-efficacy beliefs of educational internet usage than those of 7-10 hours users (U = 77.000; p = .001 < .05) and those who use less than 3 hours (U = 139.000; p = .004 < .05).

Table 8. Investigating educational internet usage self-efficacy beliefs and vocabulary learning strategies in foreign language according to daily internet usage duration

Scale / Dimensions	Duration	N	M.R.	Chi-Square	df	p	η2
EIUSEB	Less than 3h.	50	85.16	13.055	3	.005*	.064
	3-6 h.	87	98.10				
	7-10h.	35	74.84				
	More than 11h.	12	134.00				
$FLWLS_{TOTAL}$	Less than 3h.	50	93.26	2.060	3	.560	-
	3-6 h.	87	95.13				
	7-10h.	35	81.63				
	More than 11h.	12	101.96				
$FLWLS_{MEMORY\_STR}$	Less than 3h.	50	94.47	1.760	3	.624	-
	3-6 h.	87	95.55				
	7-10h.	35	81.86				
	More than 11h.	12	93.25				
$FLWLS_{COGNITIVE\_STR}$	Less than 3h.	50	94.09	1.362	3	.714	-
	3-6 h.	87	95.52				
	7-10h.	35	83.44				
	More than 11h.	12	90.42				
$FLWLS_{COMPLEMENTARYSTR}$	Less than 3h.	50	94.64	1.496	3	.683	-
	3-6 h.	87	92.82				
	7-10h.	35	84.51				
	More than 11h.	12	104.54				
$FLWLS_{METACOGNITION\_STR}$	Less than 3h.	50	90.57	4.262	3	.235	-
	3-6 h.	87	93.61				
	7-10h.	35	83.26				
	More than 11h.	12	119.42				
$FLWLS_{AFFECTIVE\_STR}$	Less than 3h.	50	91.24	.604	3	.896	-
	3-6 h.	87	95.51				
	7-10h.	35	88.27				
	More than 11h.	12	88.29				
$FLWLS_{SOCIAL\_STR}$	Less than 3h.	50	94.11	1.931	3	.587	-
	3-6 h.	87	93.28				
	7-10h.	35	83.43				
	More than 11h	12	106.63				

*p<.05

Another factor to be determined in the study is to examine the correlation between educational internet usage self-efficacy beliefs and scales of foreign language vocabulary learning strategies. The findings for this situation are given in Table 9.

As shown in Table 9, a significant correlation was found between EIUSEB and $FLWLS_{TOTAL}$ (r = .394). (p= .000 < .001). While EIUSEB has the highest correlation with the $FLWLS_{METACOGNITION}$ sub-scale (r= .409; p= .000 < .001), Correlation between FLWLSSOCIAL _STR (r= .152; p= .040< .05) is the lowest. Other sub-dimensions were found to be between stated two values. While the highest correlation was observed with affective strategies, the lowest relationship was found to be with cognitive strategies sub-scale. Other sub-dimensions were found to be between stated two values.

Table 9. According to internet usage duration, the relationship between educational internet use self-efficacy beliefs and foreign language learning strategies scale and the sub-scales

Korelasyon	N	Pearson (r)	p
EIUSEB * $FLWLS_{TOTAL}$	184	.394**	.000**
EIUSEB * $FLWLS_{METACOGNITION\_STR}$	184	.409**	.000**
EIUSEB * $FLWLS_{SOCIAL\_STR}$	184	.152*	.040*
$FLWLS_{TOTAL}$ * $FLWLS_{AFFECTIVE\ STR}$	184	.790**	.000**
$FLWLS_{TOTAL\ I}$ * $FLWLS_{COGNITIV\_STR}$	184	.716**	.000**

**.001 Level relationship

In order to explain better the quality of the relationship, it was decided to perform simple linear regression analysis. For simple linear regression analysis to be performed, the distributions must be normal, the relationship between the dependent and the independent variable must be linear and the variables must be continuous. Figure 1 shows the distribution of normality.

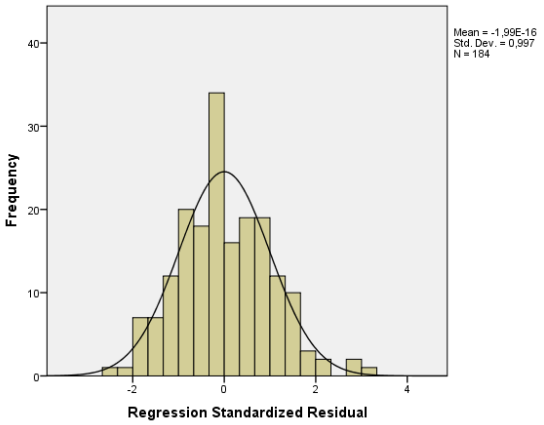

Figure 1. The distribution of normality.

As seen in the Figure 1, the vocabulary learning strategies in the foreign language are normally distributed. The assumption of normality is ensured. In addition, the Kurtosis and Skewness values indicate whether the data shows normal distribution. In this study, it was observed that Kurtosis value is between [-.022 to .356] and Skewness is [.143 to .179]. It was reported by Tabachnick and Fidell (2007) that skewness and kurtosis values [-.1.5 to 1.5] are accepted as the normality of distribution. The other pre-count of simple linear regression analysis is that there must be a linear relationship between the dependent and independent variable. Scatter plot graph for this case is given in figure 2.

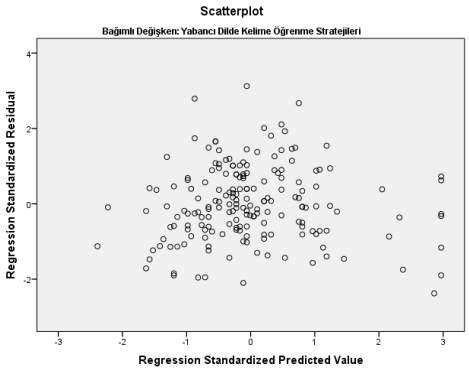

Figure 2. Scatter plot chart

When the Figure 2 is examined, a linear positive relationship is observed between the educational internet usage self-efficacy beliefs scale and the word distribution strategies in foreign language. It can be said that the linearity assumption of the regression has been provided.

The regression analysis assumes that the error terms (residual) are independent of each other. The Durbin-Watson coefficient is used to test this assumption. It is tried to be obtained whether the results of the error terms affect each other, in other words, whether there is autocorrelation or not. The Durbin-Watson value ranges from 0 to 4. The Durbin-Watson value was examined in the study and the results are given in the table below. In addition, while it is concluded that the variables were meaningful with the t tests performed in the regression analysis, the whole of the model was analyzed in terms of meaningfully with the F test. Table 10 provides information on all these values.

Table 10. The predictive power of educational internet usage self-efficacy beliefs scale on vocabulary learning strategies in foreign language

Dependent Variable	Independent Variable	ß	t	p	F	Model (p)	R^2
Foreign Language Word Learning Strategies	Fixed	1.981	9.549	.000			
	Self-Efficacy of Educational Internet Usage	.386	5.790	.000	33.525	**.000**	.156
R= .394; Durbin-Watson= 1.736							

As seen in Table 10, it is seen that the self-efficacy variables of educational internet usage with fixed value according to t tests seem to be significant. (p< .001). when examined as a whole model, it was found that educational internet usage self-efficacy beliefs scale was meaningful on vocabulary learning strategies in foreign language. (F= 33.525; p< .001). When the Durbin-Watson coefficient, which tests the assumption that the error terms are independent of each other, is examined, it can be considered 1.736 is a good value. It was found that educational internet usage self-efficacy beliefs scale accounted for about 16% of the variance of vocabulary learning strategies in foreign language. (R^2=.156).

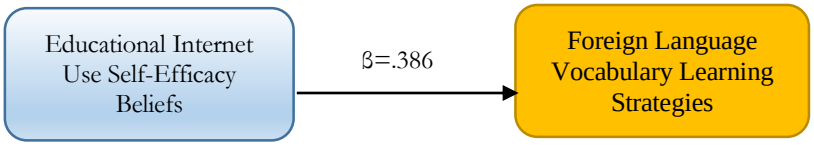

Figure 3. The effect of educational internet usage self-efficacy beliefs on foreign language vocabulary learning strategies

As seen in Figure 3, the educational internet usage self-efficacy beliefs of the students affect the learning strategies of foreign language in foreign language. (ß=0.386).

The last case to be investigated in the research is to determine the sub-dimension which has the strongest effect on vocabulary learning strategies in foreign language. For this reason, it is aimed to determine contribution of each sub-dimension step by step and make analyzes. For this purpose, stepwise method was used in regression analysis. In the step-by-step method, after determining the independent variables that can affect the dependent variable, the independent variables that affect the dependent variable most are selected. Starting from the strongest of the independent variables according to the stated conditions, independent variables which have significant effect on the dependent variable are included in the model. There are 5 models related to this method. These models are shown in Table 11.

As shown in Table 11, 6 independent variables were included in the model through stepwise regression model and 5 different models were formed. In Model 1, the F value is 302,097 and the significance value of .000, in Model 2 the F value is 397,872 and the significance value is .000, in Model 3 the F value is 2468,437 and the significance value is .000. Finally, in Model 5, F value was 2789,566 and significance value was found as .000. According to this, it can be interpreted that there is a significant difference between the averages of the variables and that the model as a whole is meaningful at each level. While it is concluded that the whole of the model is meaningful with the F

test, it is concluded that the variables are meaningful (5% significance level) with the t test. It is seen that each sub-scale has a significant level in the model. In general, in Model 1, the Affective Strategies sub-dimension predicts 63% of the variance of the vocabulary learning strategies in foreign language. In Model 2, Affective Strategies and Complementary Strategies are included in the analysis together. The predictive power of these two sub-scale on vocabulary learning strategies in foreign languages reached 82%. In Model 3, it is seen that the predictive power of Affective Strategies, Complementary Strategies and Social Strategies sub-scale in terms of vocabulary learning strategies in foreign language is 89%. In Model 4, it is seen that the sub-scale of Affective Strategies, Complementary Strategies, Social Strategies and Memory Strategy have %95 predictive power of word learning strategies in foreign language. In Model 5, when all sub-scales are included in the process, it can be seen that they have 99% clarification on vocabulary learning strategies in foreign language. As a result of these 5 models, it is seen that the Sub-scale which has the highest predictive power for word learning strategies in foreign language is Affective Strategies.

Table 11. Model Structures on the Effect of Sub-dimensions on Learning Attitude towards Learning Strategies in Foreign Language

	Independent variable	**ß**	**t**	**p**	**F**	**Model (p)**	**R^2**
Model 1	Affective Strategies	.674	17.381	.000	302.097	**.000**	**.624**
Model 2	Affective Strategies	.469	15.038	.000	397.872	**.000**	**.815**
	Complementary Strategies	.378	13.646	.000			
Model 3	Affective Strategies	.375	14.442	.000	468.437	**.000**	**.886**
	Complementary Strategies	.296	12.828	.000			
	Social Strategies	.216	10.666	.000			
Model 4	Affective Strategies	.262	13.671	.000	827.316	**.000**	**.949**
	Complementary Strategies	.219	13.366	.000			
	Social Strategies	.203	14.837	.000			
	Memory Strategy	.266	14.733	.000			
Model 5	Affective Strategies	.233	24.307	.000	2789.566	**.000**	**.994**
	Complementary Strategies	.160	18.809	.000			
	Social Strategies	.186	27.130	.000			
	Memory Strategy	.235	25.987	.000			
	Cognitive Strategy	.164	23.385	.000			

Results and Discussion

This research was conducted at İnönü University and examines the effects of educational Internet use self-efficacy beliefs on university students' foreign language vocabulary learning strategies.

No significant difference was found in the strategies of vocabulary learning in foreign languages in terms of memory, cognitive, complementary, metacognitive and social sub-dimensions according to gender but educational internet use self-efficacy beliefs are significantly different in favor of male participants. This conclusion may be a result of men's being more interested in technology than women are. In a similar study, Çetin (2014) found that male teachers have a slightly higher score in terms of computer self-efficacy than female teachers do and that difference is statistically significant. In another study, Kılıç and Coşkun (2010) stated that male teacher candidates have higher educational use skills than female teacher candidates do. This is explained by the fact that there are fewer opportunities for women with technological tools as the result of being a cultural society of Turkey (Azizoğlu & Çetin, 2009). Kuloğlu (2001) found in his study that 80% of internet cafe customers are male and 20% of them are female. Therefore, it can be declared that men are more advantageous than of women because they have access to internet and computer environments even if they have no computers in their homes. In some studies, it is emphasized that women have less confidence in using computers compared to men (Birişci, Metin & Karakaş, 2009; Hakkarainen, 2000; Namlu & Ceyhan, 2002; Mehloff, 2001). In contrast, Selwyn (2008) states that girls use the Internet better than

men for academic purposes. In some other studies (Tekinarslan, 2011; Tuncer & Tanaş, 2011) it is expressed that the computer self-efficacy belief does not change according to the gender.

It has been determined that educational internet usage self-efficacy beliefs and foreign language vocabulary learning strategies do not significantly differ according to the type of high school which students graduated from. The most important reason for this is that almost all students, regardless of the graduated high school or the graduated faculty, have computer and internet access, and that there is no relationship between having a computer, using internet and their departments. In the related literature, there are studies (Çetin, 2008; Tuncer & Tanas, 2011; Yilmaz et al., 2006) that determine the perceptions of self-efficacy of candidate teachers towards computer do not significantly differ according to type of graduated high school. However, some studies state that Computer Self-efficacy perceptions of students in the Department of Computer Education and Instructional Technology (ICT) differ in favor of computer vocational high schools and general high school graduates (Akkoyunlu & Orhan, 2003).

In the study, there was no significant difference between the age levels of students and the educational internet use self-efficacy beliefs, but it has been found out that there is a significant difference at foreign language vocabulary learning strategies and It was determined that the students who are between the ages of 18 and 20 have higher scores on the vocabulary learning strategies scale than 24 and over years old participants. From this result, it can be said that the individuals who are at the beginning of undergraduate education learn English more effectively and can use the technology more effectively. Contrary to this, Eken argues in his thesis that, there is a significant difference in favor of 23 and older age students compared to the 18, 19 and 20 years old students (Eken, 2017).

It has been found that foreign language vocabulary learning strategies differ significantly in favor of those who have an internet connection, while there is no significant difference in educational internet use self-efficacy beliefs whether they have internet connection in the students' home or on their mobile phones or not. The difference is in favor of those who have access to the Internet at home or on their mobile phones, because they have the advantage of accessing the internet where and when they want. In related literature, there are also examples of the fact that possibility of accessing the internet does not make a meaningful difference. For example, Çetin and Güngör (2014) found that primary school teachers' having internet do not affect their educational internet use self-efficacy beliefs.

There is no significant difference in the educational internet use self-efficacy beliefs according to the having internet connection or in the students' home or mobile phone. However, it has been revealed that there is a significant difference in favor of those who think that "the vocabulary learning strategies contributes to foreign language learning ". This difference also shows that individuals using the internet benefit from online vocabulary applications through their mobile phones and computers. Having access to these applications easily which makes learning more enjoyable, and having the freedom to use them at any time can be among the reasons to support this idea.

Another conclusion to be drawn from the study is that there is a significant difference between educational internet use self-efficacy beliefs and students' daily internet usage time. It has been observed that as the individuals' internet usage time increases, the educational internet usage self-efficacy beliefs also increase. This result shows that as many other areas, spending time on a specific field brings to be expertise on that field. Karsten and Roth (1998) found that computer experiences increase the educational internet self-efficacy beliefs. In some studies on teachers and candidate teachers (Ashkar & Umay, 2001; Çetin, 2008; Çetin & Güngör, 2012; Kutluca & Ekici, 2010; Seferoğlu & Akbıyık, 2003) found that there is a significant relationship between the self-efficacy perceptions for the internet and the duration of computer use.

Some relational findings were also obtained in this study. It was found that there is a correlation between the educational internet use self-efficacy and foreign language vocabulary learning strategies, and the educational internet use self-efficacy scale explaines about 16% of foreign language

vocabulary learning strategies scores. Therefore, it can be said that the use of the internet for educational purposes seems to be an important structure in terms of foreign language vocabulary learning strategies. In other words, the activities to improve the strategies of the foreign language vocabulary learning should include the educational use of the internet. Can (2012) states that the use of technology in terms of foreign language learning increases the motivation of individuals. The study conducted by Ushioda (2011) states that the advantages of internet use are important factor in the continuity of learning motivation, because students can control their own learning process. This study is also supported by the findings of some researches of Petron (2010), Hislope (2008), Wang, Song, Xia and Yan (2009) in that internet programs have contributed to the development of foreign languages thanks to the support of learning autonomy and lifelong learning. Kartal (2005) stated that the link between language teaching and technology is an undeniable fact.

As a result, the diversity of learning activities within the context of individual needs will provide many advantages. Today, the use of the internet in the development of foreign language vocabulary learning strategies is inevitable. When the findings of this research are examined, it can be seen that the use of internet for educational purposes is an important factor in terms of foreign language vocabulary learning strategies. The key issue here is that the internet must be consciously used in the direction of a certain purpose. It has been found that the use of the internet for educational purposes has an important influence on the strategies of vocabulary learning on foreign languages.

The findings of this study provide evidence that educational internet use is an effective variable on foreign language vocabulary learning strategies. Since this research is conducted on a small sample, future studies can examine the relationship between these two variables on different samples.

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