

## An Examination of Studying Approaches and Information Literacy Self-Efficacy Perceptions of Prospective Teachers

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### Abstract

*Problem Statement:* Students may behave differently from each other during the learning process. While some of them struggle to conceive the subject with all respects (the deep studying approach), the others just memorize it without any effort to comprehend (the surface studying approach). Today, students usually learn the strategies on their own regarding how and when to study to be successful. They spend lots of time doing this and sometimes fail. A majority of them are in favor of the surface studying approach and study only before the exam. Determining studying approaches and information literacy self-efficacy perceptions of prospective teachers may shed light on future studies on this matter.

*Purpose of the Study:* The study aims to determine if there is a relationship between information literacy self-efficacy (ILSE) perceptions of prospective teachers and their studying approaches.

*Method:* Participants were selected from Kocaeli University Technical Education Faculty. 703 students were involved in the research. The data was collected via “Studying Approaches Scale” and “Information-Self-Efficacy Scale.”

*Findings and Results:* Studying approaches of prospective teachers are at a reasonable level with regard to the deep studying approach (DSA) and the surface studying approach (SSA). The results show that ILSE of prospective teachers is very high. Also, mean scores of prospective teachers were examined for their grade levels in the study. Consequently, prospective teachers of fourth grade have the highest mean score in terms of their preference for the DSA. Additionally, computer-use levels of prospective teachers were investigated. As a result, prospective teachers who use computers at advanced levels have the highest mean score in

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terms of their preference to the DSA. The prospective teachers who find themselves successful have preferred the DSA more, compared to the other prospective teachers' preferences. Furthermore, there is a slight positive correlation between the DSA and ILSE perceptions of prospective teachers.

*Conclusions and Recommendations:* If demands of the modern era and the constructive learning situations are considered, the prospective teachers should be trained as to be equipped with competencies. Therefore, they can teach effective learning and studying behaviors to their students where they are assigned to work. In order to realize this aim, integration of the courses, which are related to effective studying approaches, to the syllabus might be helpful. The courses should be based on the events that help effective learning and studying behaviors be acquired by students and consider activities to reinforce them.

*Keywords:* deep studying approach, surface studying approach, self-efficacy, information literacy, prospective teacher

Today, the learning and teaching environments have changed from a traditional to a constructivist perception. Roles of teachers and students have also changed for these environments. While teachers have shifted their roles from information transmitting to guiding, students must be engaged for the constructivist role that they can integrate new information to their own experience rather than receiving information in a passive mode. It is inevitable that students, who have the increased learning responsibility in the constructivist learning environments, make conscious efforts and improve their skills on how to learn.

According to Tay (2005), a student's act of joining the learning action is linked to how well the student knows the learning strategies and how appropriately s/he uses these strategies. When recent studies based on student centered training are examined, it is seen that there have been numerous studies on the characteristics of students affecting learning (Entwistle & McCune, 2004; Biggs, 1999; Biggs, Kember & Leung, 2001; Ellez & Sezgin, 2002; Colak & Fer, 2007).

It is accepted that the students' own studies are a crucial factor in the learning period. Therefore, their learning approaches are very important. It is believed that the acquisition of these learning approaches in school years and forming them as habits will also reflect post-schooling success (Turkcan & Ocal, 2003; Yesilyaprak, 2000; Yildirim, Doganay & Turkoglu, 2000).

According to Biggs (1999), who examined studying methods of students, students may behave differently from each other during the learning process. While some of them struggle to conceive all aspects of the subject (the deep studying approach [DSA]), others just memorize it without any effort to comprehend (the surface studying approach [SSA]) (as cited in Yilmaz & Orhan, 2011). According to Entwistle and McCune (2004), learning approaches indicate the studying strategies that the

students use as well as why they choose them. The DSA is closely linked with constructivist theory, which requires students to reconstruct the information efficiently. The SSA, on the other hand, is a traditional training model, where teacher transacts the information and the student has a passive role (Dart, Burnett, & Purdie, 2000). According to Chan (2003), the DSA describes circumstances in which the learning requires effort, comprehension, integration, and personal judgment (as cited in Topkaya, Yaka & Ogretmen, 2011).

It is important to ensure the students with certain studying habits and skills can comprehend their lessons efficiently with conscious efforts and can be more successful on exams. A student, who adopts the DSA, plays an active role in the learning process and can take responsibility for his/her learning, success, and failure. Success for the students with no effective studying skills will be low not only at school but also in professional life, since they do not reap rewards for their efforts and the time they allocated to learning (Tekler, 2002). The performed research on the subject has proved a high-level relationship between the DSA and success (Gow, Kember, & Cooper, 1994; Booth, Luckett, & Mladenovic, 1999; Bryne, Flood, & Willis, 2002; Yilmaz & Orhan, 2011).

Today, students usually independently learn the strategies regarding how and when to study to be successful. They sometimes fail and waste lots of time to accomplish this. A majority of them are in favor of the SSA and study only before the examination. However, teachers could guide the students in gaining studying skills. In order to realize this aim, teachers and prospective teachers need to be aware of their own studying habits so as to guide not only students but also themselves. Therefore, carrying out a study towards the determination of prospective teachers' studying habits (i.e. how and what level) would be contributive in determining the strategies of this subject in the future.

Nowadays, lifelong learning is very important, information increases fast, and access to information is easy and affordable. Therefore, students should possess the DSA as well as the information literacy efficacy in accessing, analyzing, evaluating, and using the information they need. Information literacy is a skill of reaching needed information and having the ability to use it (American Association of School Librarians and Association for Educational Communications and Technology [AASL/AECT], 1998).

Competency in lifelong learning is an important tool in coping with and keeping up with the continuous need for change in information societies. Thereby, making individuals gain information literacy skills has taken its place among the strategic objectives of countries (DPT, 2004, 2008). The importance of information literacy as one of the critical ingredients in education is strongly articulated in the literature, as is the need for promotion of these skills as a priority for all areas of education, including teacher training (SCANS, 1991; AASL/AECT, 1998; Breivik, Hannock, & Senn, 1998; ACRL, 2000; International Society for Technology Education [ISTE], 2000; National Council for Accreditation of Teacher Education [NCAT], 2001).

In an information society, to provide teachers and prospective teachers with information literacy proficiencies is useful and necessary both for their own professional and personal lives and also for their ability to transmit such skills to their students. Likewise, the studies highlighting that the individuals should be provided with these skills beginning from the very early ages as designed activities, have rapidly gained popularity in the literature (Demiralay & Karadeniz, 2008; Erdem & Akkoyunlu, 2002; Kurbanoglu & Akkoyunlu, 2002). Without existence of necessary abilities to use information in an effective manner, information abundance alone cannot create a better-informed society (ALA, 2000).

In view of realizing the core of information and learning it by way of associating it with previous learning, DSA and information literacy proficiencies resemble one another. The students who adopt DSA acquire the information from multiple sources and try to obtain a form suitable with their own thoughts (Bath & Smith, 2009). The information writers also know how the information is ordered, the decisions that need be made, and how to find and use (and accordingly how to learn) the necessary information needed for their work (Erdem, Yılmaz, & Akkoyunlu, 2008). With those aspects, the necessity for DSA in lifelong learning and information literacy proficiency match up with each other. Both of them are related to acquiring the needed information, processing, and effective use. To provide the students instruction on information literacy proficiency and features of DSA is extremely important in preparing them for the future. Determining the study approach of students, strategies needed for moving the students from SSA to DSA can be developed by teachers. Organizing information literacy courses at all educational levels, beginning from the primary education, might, in fact, be influential in teaching these skills. In the studies of Kurbanoglu and Akkoyunlu (2007) it has been noted that the importance of information literacy skill for each student at every educational level, beginning from primary education to higher education, was accepted long time ago, but the adaptation of information literacy skills to prospective teaching programs has been neglected. It is seen that teacher competency, determined by the Ministry of Education (2006), also includes competency of information and technology. These regulations can be seen as an indication that the importance of having information literacy skills has been grasped in our country.

Besides gaining information literacy skills, the awareness of these skills is also useful to consciously use them. This situation, which is referred to as self-efficacy, is also valid for information literacy. Self-efficacy is the judgment of the individuals on how well they can do the actions required for coping with potential situations (Bandura, 1997). The concept of self-efficacy is also used in information literacy as well as in many other fields. **“Self-efficacy of information literacy” is defined as one’s belief in the self to use information (Korkut & Akkoyunlu, 2008).** As Bandura (1997) pointed out success does not only mean having necessary skills. One cannot be successful if s/he has the skill but lacks the self-confidence in performing the action. Thus, having high levels of self-efficacy perceptions with regard to information literacy in students is as important as having information literacy skill.

In the light of the studies, it is reasonable to infer that studying approaches and ILSE perceptions of prospective teachers have an effective role in the acquisition of lifelong learning skills and in preparing themselves, as well as their students, for the future. Determining studying approaches and ILSE perceptions of prospective teachers may shed light on needed studies on this issue. Do the prospective teachers with high ILSE perceptions prefer DSA or SSA in their studying approaches?

The aim of this study is to determine whether or not there is a relationship between ILSE perceptions of prospective teachers and their studying approaches. In light of this aim, the following research questions are addressed:

RQ1: Based on studying approaches and ILSE, what are the levels of prospective teachers?

RQ2: Do the studying approaches and ILSE of prospective teachers differ significantly based on their ages, grades, level of computer use, and perception of their success?

RQ3: Is there a relationship between ILSE perceptions of prospective teachers and their studying approaches?

## Method

### *Research Design*

The study is based on a relational scan model, which is one of the general scan models. The relational scan model aims to determine the existence and degree of change in two or more variables (Karasar, 2004). A relational screening model was used in this study because relationships between more than two variables were examined, and there were no changes that affected conditions or environments.

### *Research Group*

Participants of the study were selected from Kocaeli University Technical Education Faculty. 715 first, second, third and fourth grades students from the departments of Computer Education, Electronic Education, Electricity Education, and Automotive Education participated to the study. As some surveys were eliminated because of incomplete information, the final number of valid surveys used for data collection was 703.

Table 1

*Descriptive Statistics of Participants*

<i>Age</i>	<i>N</i>	<i>%</i>
18-20	125	17.8
21-23	406	57.8
24 and above	172	24.5
<i>Grade</i>	<i>N</i>	<i>%</i>
First	144	20.5
Second	154	21.9
Third	206	29.3
Fourth	199	28.3
<i>Level of Computer Using</i>	<i>N</i>	<i>%</i>
Low	46	6.5
Mid	385	54.8
High	272	38.7
<i>Perception of Success</i>	<i>N</i>	<i>%</i>
Those who found themselves successful	529	75.2
Those who did not find themselves successful	174	24.8

Among the participants 57.8% of the students were in the 21-23 age range, 24.5% were in 24-26 age range, and 17.8% were in the 18-20 age range. Distribution of the students according to grade levels as freshman, sophomore, junior and senior were 20.5%, 21.9%, 29.3%, and 28.3% respectively. In terms of computer use, 6.5% of the students were at a low level, 54.8% of them were at a mediocre level, and 38.7% of them were at high level. While 75.2% of the students perceived themselves as successful, 24.8% of them did not perceive themselves as successful.

*Instruments*

The data in this study was collected via the “*Studying Approaches Scale*” and “*Information-Self-Efficacy Scale*.” The scales were applied to 703 voluntary students enrolled at four different departments in Kocaeli University Technical Education Faculty during the 2010-2011 academic years. Demographic data were collected with the scales.

*Studying Approaches Scale.* The Studying Approaches Scale that was used in this study was first designed by Biggs in 1987. The same scale was revised to be used again by Biggs, Kember, and Leung in 2001. The Turkish adaptation of the scale was done by Yilmaz and Orhan (2011). The scale, which has 20 items, measures two factors as “*DSA*” and “*SSA*.” The possible point interval ranges from 10 to 50 for

each approach. Scores in any studying approach, high or low, indicate how much that a prospective teacher prefers type of studying approach. Each item on the scale has five options ranging from “(1) never valid” to “(5) always valid.” The studying approach of a student was determined based on high scores of an approach (Yilmaz & Orhan, 2011). The main aim of the students who use DSA is not getting high scores but comprehending and internalizing the topic. With this in mind, students focus on understanding the core of the topic without losing the wholeness of it. On the contrary, the main aim of the students who use SSA is to perform at a minimum in the courses. They receive new ideas and information in a passive way. Motivation and strategy were included in the scale as sub-dimensions of each approach. However, the data in this study was analyzed only in DSA and SSA sub-dimensions of the studying approach scale. That is, motivation and strategy were not used in the analyses. Cronbach alpha reliability coefficient of the scale, which was adapted to Turkish, is 0.79 for DSA and 0.73 for SSA (Yilmaz & Orhan, 2011). The study was piloted with 210 students enrolled in evening time groups of Kocaeli University Technical Education Faculty in order to do reliability analyses. The results of the pilot study revealed that Cronbach alpha reliability coefficient for DSA is 0.77 and 0.74 for SSA.

*Information Literacy Self-Efficacy Scale (ILSES).* The other scale that was used in the study – the scale of information literacy self-efficacy – was designed by Kurbanoglu, Akkoyunlu, and Umay (2006). ILSES is composed of 28 items and uses a 7-point Likert scale, anchored with notations (7=almost always true, 6=usually true, 5=often true, 4=occasionally true, 3=sometimes but infrequently true, 2=usually not true, 1=almost never true) used to design the instrument. The minimum and maximum scores that can be taken from the scale are 28 and 196 respectively. Cronbach alpha reliability coefficient of the scale was calculated as 0.92. Similarly to the previous scale, the scale was piloted with the evening time groups’ participants from Kocaeli University Technical Education Faculty in order to do reliability analyses. According to the results of the pilot study, Cronbach alpha reliability coefficient for information literacy self-efficacy scale is 0.87. ILSES consists of 7 sub-factors. However, in this study, analyses related to sub-dimensions were not made; the scale was not evaluated unidimensionally, and findings relevant to sub-dimensions were not been ranked.

Data collection tools were applied with voluntary participation of the students by the researcher after the aim of the study was explained. The data collection process was done in one setting, and it took 30 minutes for the students to answer the tools.

#### *Analyses and Interpretations of the Data*

Frequency (f), percentages (%), mean scores ( $\bar{x}$ ), t-test, one way ANOVA, Scheffe test, and Pearson moment correlation were used in data analyses of the study. Data of the study were tested at the 0.05 significance level.

## Results

1. *Based on studying approaches and ILSE, what are the levels of prospective teachers?*  
 Studying approach and ILSE levels of prospective teachers were examined. The results are given in Table 2.

Table 2

*The Levels of Prospective Teachers Based on Studying Approaches and ILSE (N=703)*

Variables	$\bar{x}$	SD
Studying approach		
DSA	29.49	6.34
SSA	29.95	6.71
ILSE	149.67	23.74

As noted in Table 2, the mean score of DSA is  $\bar{x}=29.49$  and the mean score of SSA is  $\bar{x}=29.95$ ; that is, the means of both approaches are very close to each other. When each dimension is evaluated over 50 points, it can be interpreted that prospective teachers have moderate level studying approaches both from DSA and SSA. The mean score of ILSE perceptions of prospective teachers is  $\bar{x}=149.67$ . Considering the maximum score that can be taken from the scale is 196, this value might be regarded as rather high.

2. *Do the studying approaches and ILSE of prospective teachers differ significantly based on their ages, grades, level of computer use, and perception of their success?*

2.1. *Do the studying approaches of prospective teachers differ significantly based on their ages, grades, level of computer use, and perception of their success?*

In order to test whether studying approaches of prospective teachers differ according to their ages, grades, level of computer use, and perception of their success, one-way ANOVA and t-test were performed. The results are given in Table 3.



Table 3

The Results of Studying Approaches of Prospective Teachers Based on Their Ages, Grades, Level of Computer Use, and Perception of Their Success

	Age	N	$\bar{x}$	ss	F	p	Cohen's f
DSA	18-20	125	28.96	5.75	6.08	.002	.017
	21-23	406	29.03	6.27			
	24 and above	172	30.94	6.71			
SSA	18-20	125	30.88	6.07	1.48	.227	
	21-23	406	29.72	6.77			
	24 and above	172	29.83	6.98			
Grades		N	$\bar{x}$	ss	F	p	Cohen's f
DSA	First	144	28.13	6.53	3.43	.017	.014
	Second	154	29.43	5.89			
	Third	206	29.86	6.05			
	Fourth	199	30.18	6.65			
SSA	First	144	29.93	5.94	0.81	.484	
	Second	154	30.18	7.02			
	Third	206	30.36	7.17			
	Fourth	199	29.37	6.49			
Level of computer using		N	$\bar{x}$	ss	F	p	Cohen's f
DSA	Basic level	46	26.82	6.14	6.10	.002	.017
	Mid level	385	29.29	6.28			
	Advanced level	272	30.21	6.34			
SSA	Basic level	46	31.13	6.80	5.59	.004	.015
	Mid level	385	30.55	6.54			
	Advanced level	272	28.91	6.81			
Perception of their success		N	$\bar{x}$	ss	t	p	Cohen's f
DSA	Yes	529	30.51	6.00	7.7	.000	.078
	No	174	26.38	6.34	5		
SSA	Yes	529	29.54	6.69	2.8	.005	.011
	No	174	31.19	6.64	2		

Results of the analysis were carried out both in DSA and SSA dimensions. As noted in Table 3, a significant difference was found between DSA and the prospective teachers' ages ( $F[2-700]=6.08$ ,  $p<.01$ ). For ages of 24 and above, the mean score ( $\bar{x}=30.94$ ) is higher than for the ages of 21-23 ( $\bar{x}=29.03$ ) and the ages of 18-20 ( $\bar{x}=28.96$ ). As a result, the prospective teachers in the 24 and above group preferred

DSA more than the other prospective teachers in other age groups. From another point of view, no significant difference was found between SSA and ages of the participants.

In order to test whether studying approaches of prospective teachers differ according to grade levels, one-way ANOVA was performed. Results of the analysis were carried out both in DSA and SSA dimensions. A significant difference was found between DSA and grade levels of prospective teachers ( $F[3-699]=3.43, p<.01$ ). When mean scores regarding grade levels of prospective teachers are examined in terms of preferring DSA, the highest mean score belongs to fourth grade prospective teachers ( $\bar{x}=30.18$ ). This is followed by third ( $\bar{x}=29.86$ ), second ( $\bar{x}=29.43$ ), and first ( $\bar{x}=28.13$ ). The difference between SSA and grade levels of prospective teachers was not found statistically significant.

In order to test whether studying approaches of prospective teachers differ according to computer use level, one-way ANOVA was performed. Results of the analysis were carried out both in DSA and SSA dimensions. A significant difference was found between DSA and computer using levels of prospective teachers ( $F[2-700]=6.10, p<.01$ ). When mean scores regarding computer use levels of prospective teachers are examined, in terms of preferring DSA, the highest mean score belongs to prospective teachers who use computers at advanced levels ( $\bar{x}=30.21$ ). This is followed by prospective teachers in the mid-group ( $\bar{x}=29.29$ ) and prospective teachers at the basic level ( $\bar{x}=26.82$ ), respectively. As a result, prospective teachers who use computers at high levels preferred DSA more than the other prospective teachers at other computer using levels.

A significant difference was found between SSA and computer using levels of prospective teachers ( $F[2-700]=5.59, p<.01$ ). When mean scores regarding computer using levels of prospective teachers are examined, in terms of preferring DSA, the highest mean score belongs to prospective teachers who use computer at basic levels ( $\bar{x}=31.13$ ). This is followed by prospective teachers at the mid-level ( $\bar{x}=30.55$ ) and prospective teachers at the advanced level ( $\bar{x}=28.91$ ), respectively. It would be correct to assume that prospective teachers who use computer at basic levels preferred SSA more than the other prospective teachers at other computer using levels.

In order to test whether studying approaches of prospective teachers differ according to how they perceive their success, a t-test was performed. A significant difference was found between DSA and how teachers perceive their success ( $t[701]=7.75, p<.001$ ). The mean score of those who find themselves successful ( $\bar{x}=30.51$ ) is higher than those who do not find themselves successful ( $\bar{x}=26.38$ ). This finding indicates that those who find themselves successful preferred DSA more than the other group of prospective teachers.

In order to test whether SSA of prospective teachers differ according to how they perceive their success, a t-test was performed. A significant difference was found between SSA and how prospective teachers perceive their success ( $t[701]=2.82,$

$p < .01$ ). The mean score of those who do not find themselves successful ( $\bar{x} = 31.19$ ) is higher than those who find themselves successful ( $\bar{x} = 29.54$ ). This finding indicates that those who perceive themselves unsuccessful preferred SSA more than the other group of prospective teachers.

2.2. Do the ILSE of prospective teachers differ significantly based on their ages, grades, level of computer use, and perception of their success?

In order to find out whether ILSE perceptions of prospective teachers differ according to their ages, grades, level of computer use, perception of their success, one-way ANOVA and t-test were performed. The results are given in Table 4.

Table 4

*The Results of ILSE of Prospective Teachers Based on Their Ages, Grades, Level of Computer Use, and Perception of Their Success*

ILSE		N	$\bar{x}$	ss	F	p	Cohen's f
Age	18-20	125	147.97	25.06	5.681	.004	.015
	21-23	406	147.96	24.49			
	24 and above	172	154.94	24.04			
ILSE		N	$\bar{x}$	ss	F	p	Cohen's f
Grades	First	144	148.14	23.20	3.259	.021	.013
	Second	154	148.11	26.18			
	Third	206	149.63	23.44			
	Fourth	199	154.09	21.99			
ILSE		N	$\bar{x}$	ss	F	p	Cohen's f
Level of computer use	Basic level	46	132.23	26.52	24.580	.000	.065
	Mid level	385	147.45	23.01			
	Advanced level	272	155.76	22.30			
ILSE		N	$\bar{x}$	ss	t	p	Cohen's f
Perception of their success	Yes	529	153.46	21.42	7.68	.000	.077
	No	174	138.14	26.62			

A significant difference was found between ILSE perceptions of prospective teachers and their ages ( $F[2-700]=5.68$ ,  $p < .01$ ). For the ages of 24 and above mean scores ( $\bar{x} = 154.94$ ) is higher than for the ages of 18-20 ( $\bar{x} = 147.97$ ) and the ages of 21-23 ( $\bar{x} = 147.96$ ). As a result it might be interpreted that the prospective teachers in the 24 and above group have higher ILSE perceptions than the other prospective teachers in other age groups.

In order to test whether ILSE perceptions of prospective teachers differ according to grade levels, one-way ANOVA was performed. A significant difference was found

between ILSE perceptions of prospective teachers and grade levels ( $F[3-699]=3.25$ ,  $p<.05$ ). When mean scores regarding grade levels of prospective teachers are examined, the highest mean score belongs to fourth grade prospective teachers ( $\bar{x}=154.09$ ). This is followed by third ( $\bar{x}=149.63$ ), first ( $\bar{x}=148.14$ ) and second ( $\bar{x}=148.11$ ), respectively. As a result it would be reasonable to infer that fourth grade prospective teachers have higher ILSE perceptions than the other prospective teachers at other grade levels.

In order to test whether ILSE perceptions of prospective teachers differ according to computer using levels, a one-way ANOVA was performed. A significant difference was found between ILSE perceptions of prospective teachers and computer using levels ( $F[2-700]=24.58$ ,  $p<.001$ ). When mean scores regarding computer use levels of prospective teachers are examined, in terms of ILSE perceptions of prospective teachers, the highest mean score belongs to prospective teachers who use computer at advanced levels ( $\bar{x}=155.76$ ). This is followed by prospective teachers at the mid-level ( $\bar{x}=147.45$ ) and prospective teachers at the basic level ( $\bar{x}=132.23$ ), respectively.

In order to test whether ILSE perceptions of prospective teachers differ according to how they perceive their success, a t-test was performed. A significant difference was found between ILSE perceptions of prospective teachers and how they perceive their success ( $t[701]=7.68$ ,  $p<.001$ ). The mean score of those who find themselves successful ( $\bar{x}=153.46$ ) is higher than those who do not find themselves successful ( $\bar{x}=26.38$ ). This finding indicates that those who find themselves successful have higher ILSE perceptions than the other prospective teachers who find themselves unsuccessful.

3. *Is there a relationship between ILSE perceptions of prospective teachers and their studying approaches (n=703)?*

In order to test whether there is a relationship between ILSE perceptions of prospective teachers and their studying approaches, correlation analysis was performed. Results of the analysis are given in Table 5.

Table 5

*The Relationship Between ILSE Perceptions of Prospective Teachers and Their Studying Approaches*

<i>Studying Approach</i>	$\bar{x}$	ss	DSA	SSA	ILSE
DSA	29.49	6.34	1.000	-.213**	.303**
SSA	29.95	6.71	-.213**	1.000	-.240**
ILSE	149.67	23.74	.303**	-.240**	1.000

\*\* $p<.01$

When correlation coefficient is between 1.00-0.70, it might be defined as strong; when between 0.70-0.30, it might be defined as moderate; and when between 0.30-0.00, it might be defined as weak (Buyukozturk, 2002). As noted in Table 5, there is a weak positive correlation between DSA and ILSE perceptions of prospective teachers ( $r=30$ ,  $p<.01$ ). It was also found that there is a weak negative correlation between SSA and ILSE perceptions of prospective teachers ( $r= -24$ ,  $p<.01$ ). In light of these findings, it makes sense to comment that while there is an increase in ILSE perceptions of prospective teachers, their tendency to prefer DSA also increases. While there is a decrease in ILSE perceptions of prospective teachers, their preferred studying approach tends to be SSA.

### Discussion and Conclusion

A relational scan model was used in this study where a possible relationship between ILSE perceptions of prospective teachers and their studying approaches was examined. According to the results, prospective teachers have moderate-level studying approaches from both DSA and SSA, and it is possible to state that ILSE of prospective teachers is very strong. It can be stated that the research result in terms of information literacy proficiency is a positive result, and in terms of study approach, it requires the development of effective strategies to increase the number of students with DSA. On the other hand, prospective teachers with high levels of self-confidence in searching, finding, and evaluating information might lead us to think that these prospective teachers can be good guides for their students. Similar findings were also found in studies of Demiralay and Karadeniz (2008) and Niran, Simisaye and Oyefuga (2010). ILSE perceptions of university students were found to be high in these studies. Similar findings were also found in studies of Akkoyunlu and Yilmaz (2011). **According to findings, it was seen that the prospective teachers' overall mean of selfefficacy beliefs about information literacy score was at the moderate level.**

The mean score of the 24 and above age group was higher than other age groups. This might be due to the fact that teachers who are 24 and above spent more time on learning experiences; they had more teaching certificate courses and they have experienced practical teaching compared to younger prospective teachers.

According to arithmetic averages of DSA, averages of students who are in third and fourth year classes are higher than the ones who are in first and second year classes. Based on this result, it can be stated that DSA of prospective teachers according to the students who are in first and second year classes, are associated with abundance of learning experiences. This can be considered as a sign of the teacher training programs (TTP), which are applied in this Technical Education Faculty, and have an impact on the development of effective learning and study behaviors of prospective teachers. Previous studies in this field agree with this study; that is, significant differences between studying skills of students and their grade levels were found (Bay, Tugluk, & Basaran, 2005; Ellez & Sezgin, 2002; Tulum, 2001). The prospective teachers employ more DSA as the grade level increases. This situation is

in parallel with Bayrak and Erkoc's (2008) study, which examines studying approaches based on grade levels. Findings of the study revealed that mean scores of **prospective teachers' DSA increase at third and fourth.**

Another striking finding of the study revealed that the difference between DSA and how the teachers perceive their success was found statistically significant at  $p < .001$ . This finding indicates that those who found themselves successful preferred DSA more than the other group of prospective teachers. Supportively, in some other studies, it was found that students who perceive themselves successful use more effective studying strategies and have more positive attitudes (Entwistle, 1998; Goldman & Warren, 1973; Yip & Chung, 2005). In another study, students with successful self-perceptions and positive attitudes to teachers were reported to have more positive attitudes and strategies (Erdamar, 2010).

This result might be interpreted as that the prospective teachers in 24 and above group have higher ILSE perceptions than the other prospective teachers in other age groups. The same case is also valid for DSA. Based on the findings here, it is possible to comment that prospective teachers in the 24 and above group are more conscious and more self-confident in terms of ILSE perceptions and studying approaches.

Mean scores of fourth graders are higher than the mean score of other students at different grades. This finding is in accordance with some studies in the literature. For instance, in the study of Akkoyunlu and Kurbanoglu (2003), prospective teachers' mean scores were reported to increase from the first grade to fourth grade. In other words, ILSE perceptions of prospective teachers increase as years pass by. Akkoyunlu and Kurbanoglu (2003) interpret this situation as follows: students are required to prepare more research assignments and do more projects as the requirements of the education they receive. Thus, students are increasingly guided towards information resources and libraries, and so they are informed well in these fields. Since students are supposed to use their information and skills more, their experience develops in a parallel manner. The increase in experience might be explained by the increase in their perceptions of ILSE. Likewise, it might also be interpreted, as in this study, that as the experience of prospective teachers increase, their ILSE perceptions also increase.

Mean scores of prospective teachers who use computers in high levels are higher than mid-levels and basic levels of teachers. This might be interpreted as a positive relationship between ILSE perceptions of prospective teachers and their computer using levels. It might be put forward that as computer use level increases, ILSE perceptions of prospective teachers also increase relatively. Similar findings were also found in studies by Demiralay and Karadeniz (2010), Sendurur, Gulsoy, Sendurur, and Mutlu (2011) and Usluel (2006). Students who can use computers at mid and advanced levels were documented to have high ILSE perceptions.

A significant difference was found between ILSE perceptions of prospective teachers and how they perceive their success. It was observed that ILSE perceptions of prospective teachers who perceive themselves successful are higher than those

who do not perceive themselves successful. In the light of the third research question of the study, a weak positive correlation was detected between DSA and ILSE perceptions. Based on the findings, certain suggestions could be made towards developing studying approaches and ILSE perceptions of prospective teachers. Suggestions are as follows:

When characteristics of the era we are in and constructive learning situations are considered, prospective teachers should be trained in such a way that they could be equipped with competency, which will enable them to teach effective learning and studying behaviors to their prospective students where they are assigned to work. In order to make this occur, integration of the courses related to effective studying approaches might be helpful. Such courses should be based on how and through what kind of activities the students can be provided with to encourage effective learning and studying behaviors. Specifically, concrete examples and practices towards the department in which they are trained would be necessary. Elective courses towards improving the ways of information literacy might be incorporated to the curriculum. Lecturers with scales might measure the studying approaches of prospective teachers in Education Faculties. Lecturers in Technical Education Faculties must be encouraged to attend INSET (In-service Training) and/or various courses, seminars, and conferences towards learning and studying approaches. Thereby, lecturers can acquire necessary information and skills by this way, and they can guide prospective teachers on the point of effective studying methods related to their courses. The effect of ILSE and the studying approaches on educational success and satisfaction can also be analyzed.

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## Öğretmen Adaylarının Ders Çalışma Yaklaşımları Ve Bilgi Okuryazarlık Öz-Yeterlikleri Üzerine Bir Çalışma

### Atf:

Geçer, A.K. (2012) An examination of studying approaches and information literacy self-efficacy perceptions of prospective teachers. *Eğitim Araştırmaları-Eurasian Journal of Educational Research*, 49, 151-172.

### (Özet)

#### *Problem Durumu*

Günümüzde öğrenme öğretme ortamları geleneksel anlayıştan yapılandırmacı bir anlayışa doğru yönelmiştir. Yapılandırmacı öğrenme ortamlarında öğrenme sorumluluğu artan öğrencilerin öğrenmeyi öğrenme konusunda bilinçli çabalar içinde olmaları ve beceri haline getirmeleri kaçınılmaz olmuştur. Öğrenciler öğrenmeyi gerçekleştirirken birbirlerinden farklı davranabilmektedirler. Öğrencilerin bir kısmı konuyu tüm boyutları ile anlamaya çalışırken (derin yaklaşım), bir kısmı ise anlamaya çalışmadan sadece ezberlemeye çalışmaktadır (yüzeysel yaklaşım). Öğrencilerin belirli ders çalışma yaklaşımına sahip olmalarını sağlamak, onların hem derslerine bilinçli bir şekilde çalışarak anlamalarına hem de sınavlarda başarılı olmalarına yardımcı olmak demektir. Öğrenciler, derslerinde başarılı olmak için nasıl ve ne zaman çalışacakları konusundaki yaklaşımları genellikle kendi kendilerine öğrenmektedirler. Bunu gerçekleştirirken bazen başarısız olmakta ve çok zaman kaybetmektedirler. Çoğunlukla yüzeysel yaklaşımı benimsemekte ve sınav zamanları ders çalışmaktadırlar. Öğretmen adaylarının ders çalışma yaklaşımlarının nasıl ve ne düzeyde olduğunun belirlenmesine yönelik çalışma yapmak, gelecekte bu konuda etkili stratejilerin belirlenmesine olanak sağlayabilir. Diğer yandan yaşam boyu öğrenmenin önem kazandığı, bilginin hızla arttığı, bilgiye erişimin son derece kolay ve ucuz olduğu çağımızda bireylerin ihtiyaç duydukları bilgiye ulaşma, analiz etme, değerlendirme ve kullanmada öğrencilerin derin yaklaşıma sahip olmalarının yanı sıra bilgi okuryazarlık yeterliklerine de sahip olmaları kaçınılmaz bir gerekliliktir. Öğretmen adaylarının ders çalışma yaklaşımlarını ve bilgi okuryazarlık öz-yeterliklerinin düzeyini belirlemek ve aralarında anlamlı bir ilişki olup olmadığını saptamak ileride bu konuda yapılacak çalışmalara ışık tutabilir.

#### *Araştırmanın Amacı*

Bu araştırmanın amacı öğretmen adaylarının ders çalışma yaklaşımları ile bilgi okuryazarlık öz-yeterlik düzeylerini belirlemek ve bunlar arasında anlamlı bir ilişki olup olmadığını saptamaktır.

#### *Araştırmanın Yöntemi*

Araştırmada genel tarama yöntemlerinden ilişkisel tarama modeli kullanılmıştır. Çalışma kümesi olarak Kocaeli Üniversitesi Teknik Eğitim Fakültesi belirlenmiştir. Bilgisayar öğretmenliği, Elektronik öğretmenliği, Elektrik öğretmenliği ve Otomotiv öğretmenliği örgün bölümlerinde 1., 2., 3. ve 4. sınıfta okuyan toplam 703 öğrenci

çalışmaya katılmışlardır. Bu çalışmada veriler, “Ders Çalışma Yaklaşımları Ölçeği” ve “Bilgi Okuryazarlığı Öz-yeterlik Ölçeği” ile toplanmıştır. Ölçekler 2010-2011 öğretim yılında Kocaeli Üniversitesi Teknik Eğitim Fakültesi'nin örgün bölümlerinde (Bilgisayar öğretmenliği, Elektronik Öğretmenliği, Elektrik Öğretmenliği ve Otomotiv Öğretmenliği) okuyan 703 öğrenciye gönüllülük esasına uygun şekilde uygulanmıştır. Öğrencilerin demografik özellikleri ile ilgili bilgiler de ölçeklerle birlikte verilerek toplanmıştır.

#### *Araştırmanın Bulguları*

Öğretmen adaylarının gerek derin gerekse yüzeysel yaklaşım açılarından orta düzeyde ders çalışma yaklaşımına sahip oldukları ifade edilebilir. Öğretmen adaylarının bilgi okuryazarlık öz-yeterliklerinin oldukça yüksek olduğu görülmektedir. Öğretmen adaylarının ders çalışma yaklaşımlarının yaşlarına göre analiz sonuçları derin ve yüzeysel yaklaşım boyutlarında gerçekleştirilmiştir. 24 ve üstü yaş grubunda yer alanların derin yaklaşımı diğer yaş grubundaki öğretmen adaylarına göre daha çok tercih ettikleri ifade edilebilir. Öğretmen adaylarının ders çalışma yaklaşımlarının alt boyutlarından biri olan yüzeysel yaklaşım ve öğretmen adaylarının yaşları arasında ise anlamlı bir farklılığa rastlanmamıştır. Öğretmen adaylarının ders çalışma yaklaşımlarının alt boyutu olan derin yaklaşım boyutu ile okudukları sınıfları arasında ortalamalara bakıldığında en yüksek ortalamaya dördüncü sınıfta okuyan öğretmen adaylarının sahip olduğu görülmektedir. Öğretmen adaylarının ders çalışma yaklaşımlarının alt boyutlarından biri olan yüzeysel yaklaşım ve okudukları sınıflar yönünden anlamlı bir farklılığa rastlanmamıştır. İleri düzeyde bilgisayar kullanan öğretmen adaylarının temel ve orta düzeyde bilgisayar kullanan öğretmen adaylarından daha çok derin yaklaşımı tercih ettikleri görülmektedir. Diğer yandan temel düzeyde bilgisayar kullanan öğretmen adaylarının orta ve ileri düzeyde bilgisayar kullanan öğretmen adaylarından daha çok yüzeysel yaklaşımı tercih ettikleri görülmektedir. Ders çalışma yaklaşımlarından derin yaklaşım ile öğretmen adaylarının kendi başarılarını algulamaları arasında anlamlı bir farklılık görülmektedir. Kendini başarılı bulan öğretmen adaylarının ders çalışma yaklaşımlarından daha çok derin yaklaşımı tercih ettiğini göstermektedir. Kendini başarılı bulmayan öğretmen adaylarının ders çalışma yaklaşımlarından daha çok yüzeysel yaklaşımı tercih ettiğini göstermektedir. 24 ve üstü yaş grubunda yer alanların bilgi okuryazarlık öz-yeterliklerinin diğer yaş gruplarından daha yüksek olduğu ifade edilebilir. Öğretmen adaylarının bilgi okuryazarlık öz-yeterliklerinin sınıflarına bakıldığında en yüksek ortalamaya dördüncü sınıfta okuyan öğretmen adaylarının sahip olduğu görülmektedir. Bunu sırasıyla üçüncü sınıfta okuyan, ikinci sınıfta okuyan ve birinci sınıfta okuyan öğretmen adayları izlemektedir. İleri düzeyde bilgisayar kullanan öğretmen adaylarının aritmetik ortalamaları temel ve orta düzeyde bilgisayar kullanan öğretmen adaylarından daha yüksektir. Öğretmen adaylarının bilgi okuryazarlık öz-yeterlik alguları ile öğretmen adaylarının kendi başarılarını algulamaları arasında anlamlı bir farklılık görülmektedir. Kendini başarılı bulan öğretmen adaylarının bilgi okuryazarlık öz-yeterlik algularının kendini başarısız bulan öğretmen adaylarından daha yüksek olduğu görülmektedir. Öğretmen adaylarının ders çalışma yaklaşımının

alt boyutu olan derin yaklařım ve bilgi okuryazarlık z-yeterlikleri arasında dřk dzeyde pozitif ve anlamlı bir iliřki vardır.

#### *Arařtırmanın Sonuları Ve nerileri*

İinde bulunulan aęın zellikleri ve yapılandırıcı ğrenme ortamları dřnldęnde, ğretmen adaylarının ğretmenlik mesleęine atandıklarında ğrencilerine etkili ğrenme ve ders alıřma davranıřlarını kazandırabilecek yeterlilikte yetiřtirilmelidirler. Bunu gerekleřtirmek iin etkili ve verimli ders alıřma yaklařımı ile ilgili derslerin ğretmen yetiřtirme programlarında olması yararlı olabilir. Sz konusu derste etkili ğrenme ve ders alıřma davranıřlarının ğrencilere ne tr etkinliklerle ve nasıl kazandırılabilceęi zerinde durulmalıdır. zellikle ğretmen adaylarının yetiřtikleri ğretim dalına ynelik olarak somut rnekler ve uygulamalar yapılması yerinde olur.

*Anahtar Szckler:* Ders alıřma yaklařımı, bilgi okuryazarlıęı z-yeterlik inanları, ğretmen adayı