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Prospective teachers' lifelong learning tendencies and information literacy self-efficacy

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The purpose of this study is to determine the correlations between prospective teachers' lifelong learning tendencies and their information literacy self-efficacy. It is also to find out if such properties differed significantly in terms of gender, grade, computer usage skills, achievement perception, and willingness to pursue an academic career and workplace belief in achievement. Participants in this study were 200 prospective teachers from Hacettepe University, Faculty of Education in Ankara, Turkey. Data were gathered through Lifelong Learning Tendencies and Information Literacy Self-efficacy Scales. The findings revealed that prospective teachers' lifelong learning tendencies and their information literacy self-efficacy were quite high. Their lifelong learning tendencies did not differ in terms of their computer usage skills whereas a significant difference was found in terms of their gender, grade, achievement perception, willingness to pursue an academic career and achievement in workplace. No differences were found in the prospective teachers' information literacy self-efficacy in terms of gender and grade; however, significant differences were found in terms of computer usage skills, achievement perception, willingness to pursue an academic career and belief in achievement in workplace. A moderate but significant positive correlation was found between their lifelong learning tendencies and information literacy self-efficacy.

Key words: Lifelong learning, lifelong learning tendency, information literacy, information literacy self-efficacy, prospective teacher.

INTRODUCTION

Society demands information that individuals can get to prepare for a future characterized by change. It is almost obligatory for any individual to become acquainted with the current economic, social and technological developments. Individuals who fail to keep up with the change are likely to fall progressively behind, become less employable and less competitive as well. An existing and static body of knowledge is no longer enough to handle information explosion, changing work patterns, rapid growth of technologies and globalisation (Candy,

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2002). While providing countless opportunities, constant changes have dramatically altered the knowledge and abilities individuals need to live productively. Rapid changes occurring in technology and job environments require more people to have high-level of skills and receive education during their whole lives (OECD, 1996). There has been a pressure for learning across the lifespan. Learning how to learn is fundamental to economic and personal success in the information age and it is the best way to meet the challenge of change (Doyle, 1994). The ability to acquire how to learn is a key characteristic of those who are information literate. To acquire lasting information, socities need confident, independent and self-regulated learners equipped for lifelong learning (Kumaresan, 2008).

Lifelong learning

The concept of lifelong learning gained great popularity after the report issued by Faure et al. (2007). In this report, it was stated that lifelong learning would be the basic concept of educational policies for both developed and developing countries. Lifelong learning refers to the acquisition, renewal and change of all sorts of information and skills, if necessary, throughout an individual's life. The concept of "lifelong learning" become a slogan from time to time, but in recent years has come to be a point which greatly focuses on state development plans, strategic plans and policies relating to the future in many countries. For example, European Union declared the year 1996 as lifelong learning year; strategies and projects were developed through negotiations with member and candidate countries; and lifelong learning memorandum reporting the previously conducted studies which covered the ten-year future targets was issued in 2000 (Sarma, 2002). Similarly, the UK government established the ministry in the field of lifelong learning in 1997 for the first time in its history. Then, in 1998, it established an advisory committee responsible for developing policies in order to increase demand for learning among adults and also improve the educational opportunities intended for them (Field, 2006).

As lifelong learners the students should possess the following skills in their life.

1. Reasoning and analytical skills,
2. The ability to integrate information from diverse disciplines to synthesize new concepts upon which to draw and carry out reasonable action plans,
3. Effective communication, suited to the message and the audience,
4. Ability to use computers and even other devices still to be invented,
5. Social skills to communicate and work with people of diverse cultures and expertise.

Candy, Crebert and O'Leary (1994) also developed a profile for a lifelong learning person in higher education, as follows:

1. He/she has an inquisitive mind with a motivation for learning; he/she is curious and he/she follows his/her own learning,
2. He/she is information literate, he/she obtains information from different sources which he/she evaluates and uses,
3. He/she learns information profoundly but not superficially,
4. He/she has a positive attitude towards learning and organizational skills.

Individuals living in the information society will continue lifelong learning by acquiring the skill of "learning how to learn". As mentioned before, learning how to learn is fundamental to economic and personal success in this information age and the best way to meet the challenge is change (Doyle, 1994). The ability to learn how to learn is a key characteristic of those who are information literate. Societies of information age need confident, independent, self-regulated learners equipped for lifelong learning.

Information skills are basic skills essential to the success of lifelong learning, success in school, workplace and home (Hancock, 1993). Information literate individuals are well prepared for challenges and changes that arise in their careers and personal lives. In other words, they are well prepared for lifelong learning.

Information literacy

Information literacy in fact shares features with traditional literacy. Having "literacy" traditionally refers to an individual's ability to read and write in a language shared in a specific culture. The word "literacy" is an evolving and developing concept and is being used in a much broader, metaphorical sense, to refer to other skills and competencies, such as "information literacy", "visual literacy", "media literacy" and "scientific literacy" (Condy et al., 2010; UNESCO, 2006). The meaning of these concepts tends to be diverse and shifting, ranging from the view of literacy as a set of largely technical skills. These skills should be applied in critical ways for the examination of one's surroundings (e.g. the workplace and the media) and as well push for social change (UNESCO, 2006).

Information literacy is one of those knowledge that broadly refers to the ability to access and use a variety of information sources to solve an information need. There are numerous definition of information literacy. Rader (1991) defines information literacy as acquiring and evaluating information effectively with the aim of solving

problems and making decisions. Information literacy is defined by Shapiro and Hughes (1996) as a new discipline extending from the use of computer and access to information, social, cultural, philosophical content and even influence on information. Information literacy is defined by AASL/AECT (1998) as the skill of accessing and using information.

Information literate people are defined as individuals who are aware of the need for information, who know how to access information and how to evaluate and use the obtained information efficiently. Information literate people are also regarded as individuals prepared for lifelong learning (American Library Association, 1989). It is thought that information literacy will develop learning experiences of each student, and thereby increase lifelong learning of the students. Moreover, Lau (2006) describes information literacy "as a series of skills" which can be learnt; he/she argues that these skills include having a particular attitude towards learning, using online tools such as educational tools, and using techniques such as working in groups. He mentions that lifelong learning is a good habit, which must be acquired; and beneficial pre-conditions of lifelong learning include a desire for change and curiosity for information. Briefly, information literacy and lifelong learning mutually impact and strengthen one another. These two concepts are very important for the success of individuals, institutes and societies. Therefore, educational institutions have a great responsibility in enabling individuals to acquire lifelong learning and information literacy skills. One of the purposes of an education is to train individuals in accordance with the needs of the society. For that reason, today educational systems are responsible for turning out of individuals who have the attributes appropriate for the information age and who can meet the expectations of the information society. It is vital to note that lifelong learning and information literacy are very significant to any country especially developing countries such as Turkey.

Information literacy are critical to achieve any potential economic, social and political empowerment for the development of the countries. Information literacy shapes and changes the way citizens in the country think, feel and react to various circumstances in the sense that it builds or strengthens the sense of pride, self-esteem and self-confidence in the people. Dewan et al. (2005) argued that it is important to have information literate people in order to accelerate the rate of development in the country. It plays an important role by contributing positively to the spheres and dimensions of national development such as economic, social, political, environmental and cultural development.

Lifelong learning is a prominent concept in education policy reforms, ranging from preparation in early education to adult basic education and continuing education. Therefore, lifelong learning is an essential part in any country's development process, where individuals acquire their life skills, soft skills and vocational skills throughout their lifespan in order to take part in their social, cultural, vocational and professional life. As mentioned before, developing countries such as Turkey should give more importance so that all people will have access to lifelong learning, education and training opportunities, which will, in turn, contribute toward improving the quality of life and building of a peaceful, prosperous and democratic country. The lifelong learning and information literacy components should be in those countries' agenda to help close the digital division and promote social inclusion.

Within today's information society, being able to function as independent lifelong learners is the most important learning outcome. The essential enabler to reaching that goal is information literacy. Therefore, teaching individuals information literacy skills is an important step in developing lifelong learners (Iannuzzi et al., 1999).Teachers should firstly have the necessary skills so that information literacy program can be included and applied in educational institutes (Breivik et al., 1998; Akkoyunlu and Kurbanoğlu, 2003).

Information literacy and self-efficacy

Possessing information literacy skills is essential to be equipped for lifelong learning. Feeling confident and competent in using these skills is also necessary. According to Bandura (1994), success is not only based on the possession of necessary skills, it also requires the confidence to use these skills effectively. In other words, learning certain skills is not enough, so individuals should also develop confidence in the skills that they learn. Hence, despite possessing information literacy skills, teachers of today's societies must also feel competent and confident in the use of these skills. Therefore attainment of high sense of self-efficacy is as important as possessing information literacy skills. Self-efficacy is one of the central concepts of the social-learning theory developed by Bandura (1995). It is defined as "beliefs of individuals in their capacities for organizing activities and actions which are necessary to display a particular performance and the realization of the performance in a successful way" (Bandura, 1995). It is a well-known fact that individuals with high self-efficacy in a topic are more willing to participate in activities relating to this topic and have higher expectations from those kinds of practices. When these individuals encounter any difficulty, it becomes easier for them to deal with it. Strong self-efficacy has effects such as voluntarily choosing of a domain, being motivated, making efforts to achieve a task, spending time addressing a task, and being resilient to failure. Self-efficacy also determine how much effort individuals will put on an activity, how long they will

persevere and how resilient they will be in the face of difficulties, and adverse situations. Self-efficacy is a critical determinant of self-regulation which is a key component of both information literacy and lifelong learning. Bandura underlines that people who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative (Bandura, 1986). If individuals feel competent and confident about their information literacy skills, they will be willingly to undertake lifelong learning activities. Because high level of self-efficacy leads to a desire and willingness to act and to risk trying a new behavior, it therefore becomes important to use information literacy skills to accomplish lifelong learning.

Given the range of learning the needs people face daily, and the ever continuing expansion of available information, educational institutions can never directly meet all the learning needs of their graduates throughout their lifetimes, but they assume significant responsibility for ensuring that their graduates can learn outside of formal learning situations (Breivik, 2000). They can assume significant responsibility for creating generations of independent learners by equipping their students with the information literacy skills and helping them to improve their information literacy self-efficacy. As Tavıl (2014) mentioned in her study, teachers' self-efficacy have a powerful impact on their teaching abilities. A strong sense of efficacy enables teachers to have positive teaching behaviors and attitudes in the teaching and learning environment. Therefore, teachers cannot prepare their students to be information literates, in other words to be lifelong learners, unless they themselves possess information literacy skills (Carr, 1998).

Purpose of the study

This study examines the relations between prospective teachers' lifelong learning tendencies and their information literacy self-efficacy. To this end, the following research questions were formulated:

1. What is the level of prospective teachers' lifelong learning tendencies?
2. Do prospective teachers' lifelong learning tendencies vary significantly by their gender, grade, computer usage level, perceived academic achievement, willingness to pursue an academic career, and beliefs on achievement in workplace?
3. What is the level of prospective teachers' information literacy self-efficacy?
4. Do prospective teachers' information literacy self-efficacy vary significantly by their gender, grade, computer usage level, perceived academic achievement, willingness to pursue an academic career, and beliefs on achievement in workplace?
5. Is there a statistically significant relationship between prospective teachers' lifelong learning tendencies and their information literacy self-efficacy?

METHODS

The present study uses a relational descriptive model, allowing determination of the relationships between two or more variables. A descriptive study aims to give snapshot from a certain perspective in order to clarify the nature of a specified phenomena, while a relational study aims to observe a certain phenomena rather than manipulate it.

Participants

Participants of the study consisted of 200 prospective teachers in the department of Elementary Education at Hacettepe University in Ankara, Turkey. 69% were female (n = 138) and 31% were male (n = 62). 48% of the participants were first grade (n = 96) and 52% of them were fourth grade (n = 104) students. 8.5% (n = 17) of the participants have stated computer usage level poor, 46% (n = 92) barely acceptable, 41% (n = 82) good, 4.5% (n= 9) very good. 2.5% (n = 5) of the participants have perceived academic achievement very poor, 3.5% (n = 7) poor, 38.5% (n = 77) barely acceptable, 51% (n = 102) good, 4.5% (n = 9) very good. 41.5% (n= 83) of the participants have willingness to pursue an academic career, however 33.5% (n= 50) do not thinking about pursuing career. Undecided participants are 25% (n = 50) of the study group. 94.5% (n = 189) of the participants have a belief on achievement on workplace. Just 1.5% (n= 3) of them have a belief on failure. 4% (n= 8) of the participants stated their indecision.

Instruments

Personal inquiry form, the Lifelong Learning Tendencies Scale (Coşkun, 2009) and the Information Literacy Self-Efficacy Scale (Kurbanoğlu et al., 2006) were used to collect the data. Personal inquiry form is composed of six questions concerning gender, grade, computer usage level, perceived academic achievement, willingness to pursue an academic career, and beliefs on achievement in workplace.

The Lifelong Learning Tendencies Scale (Coşkun, 2009) is a 6-point likert scale with 27 items. In Coşkun and Demirel's (2010) study, the Cronbach alpha reliability coefficient of the scale was calculated as 0.89. The lowest score on this scale is 27 and the highest is 162.

The Information Literacy Self-Efficacy Scale (Kurbanoğlu et al., 2006) is a 7-point Likert scale with 28 items. Cronbach's reliability coefficient for this 28-item scale was found as 71, The lowest score on this scale is 28 and the highest score is 196.

Data analysis

Four statistical procedures, which run on the data collected through the scales, were used in data analysis:

1. Prospective teachers' lifelong learning tendencies and their information literacy self-efficacy were analyzed by using descriptive statistics;
2. t-test was used to find out if there is a difference between mean scores of prospective teachers' lifelong learning tendencies and

their information literacy self-efficacy;
3. Analysis of variance (ANOVA) was implemented to examine the differences between the prospective teachers' lifelong learning tendencies and their information literacy self-efficacy about gender, grade, computer usage skills, achievement perception, willingness to pursue an academic career, and belief in achievement in workplace. Besides, the homogeneity of group variances was tested in order to determine the groups between which there was difference at the end of the ANOVA. When group variances were homogenous, the least-squared difference (LSD) test was utilized. However, if group variances were not homogenous, Tamhane multiple comparison tests were utilized (Köklü et al., 2007).
4. A Pearson correlation coefficient was performed to find significant correlations between prospective teachers' lifelong learning tendency and information literacy self-efficacy.

RESULTS AND DISCUSSION

The following section presents the findings relevant to the research questions respectively.

First research question

The first research question is "What is the level of prospective teachers' lifelong learning tendencies?". Prospective teachers' lifelong learning tendencies' mean score was calculated. The mean score of the prospective teachers' lifelong learning tendencies was 123.91. Compared to the highest score ($\bar{X}$ = 162) on the lifelong learning tendencies scale, this value seems quite high. A primary objective of universities is to develop skills such as curiosity, searching and questioning which thereby develop individuals' abilities to access and produce information. Prospective teachers should be provided with environments that allow them to develop individually and socially in order to produce students and researchers who are able to engage in lifelong learning (Knapper and Cropley, 2000). It can be said that the tendency towards lifelong learning among prospective teachers is influenced by their learning experiences in this kind of learning environment. Demirel and Coşkun (2009) found in their study that students at a faculty of education have had high levels of curiosity. In a study conducted by Coşkun (2009), the mean score of students' (n=1545) lifelong learning tendencies was found to be 89.09. This was interpreted as an indication that students make insufficient use of opportunities to voluntarily participate in lifelong learning and in activities relating to lifelong learning.

Second research question

The second research question is "Do prospective teachers' the lifelong learning tendencies vary significantly by their gender, grade, computer usage level, perceived academic achievement, willingness to pursue an academic career, and beliefs on achievement in workplace?". Prospective teachers' lifelong learning tendency in terms of their gender was compared by the use of t test at the level of 0.05. One conclusion that can be drawn from these results is that female prospective teachers' lifelong learning tendencies self-efficacy mean score ($\bar{X}$ =127.64) is significantly higher than male prospective teachers' self-efficacy mean score ($\bar{X}$ = 115.60) and (t=3.84, p=.000). t test was also calculated to compare the mean scores of participants' lifelong learning tendency according to their grades, and the results revealed a significant difference in favor of senior prospective teachers ($\bar{X}$ =129.35, t=3.92, p=0.000).

According to the findings, the mean score of female prospective teachers relating to lifelong learning tendencies are higher than those of male prospective teachers. These findings are similar to those reported by Coşkun (2009) and Jenkins (2004). Jenkins (2004) reported that the concept of lifelong learning is a feature needed particularly by women. The fact that women have to change jobs, quit jobs or take long breaks due to their roles and responsibilities in family life and social life increases their efforts to acquire different qualities. In this sense, lifelong learning has a very important role for women. Evaluation of scores according to grade showed a significant difference in favor of senior students. Coşkun (2009) also found that senior students have higher lifelong learning tendencies compared to 1st grade students.

ANOVA was performed to show differences between the mean scores of prospective teachers' lifelong learning tendency in terms of their academic achievement perception. The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. The results of the ANOVA was statisticaly significant (F = 3.20, p = 0.01). LSD multiple comparisons test was used for further analysis of group differences to identify where the differences reside for achievement perception. The achievement perception of prospective teachers rose from very poor to very good. Results of the further analysis indicated that there were significant statistical differences in prospective teachers' lifelong learning tendencies mean scores in favour of prospective teachers having good and very good achievement perception ($p<0.05$).

ANOVA was also used to compare the differences between prospective teachers' lifelong learning tendencies in terms of their willingness to pursue an academic career, belief in achievement in workplace and their computer usage skills. Findings showed that lifelong learning tendencies differ according to the willingness to pursue an academic career (F = 16.87, p = 0.000). The highest mean score belongs to the group willing to pursue an academic career ($\bar{X}$ = 127.64, p = 0.000).

While group variances were not homogenous, Tamhane multiple comparison tests were utilized for further analysis of group differences to identify where the differences reside for willingness to pursue an academic career. The Tamhane multiple comparisons test results showed a significant difference in favour of prospective teachers who have the willingness to pursue an academic career.

Findings revealed that their lifelong learning tendencies differ in terms of their belief on achievement in the workplace (F = 8.10, p = 0.000). LSD multiple comparisons test was used for further analysis of group differences to identify where the differences come for belief on achievement in the workplace. According to the result of the LSD multiple comparisons test, a significant difference was found between groups who believe that they will be successful in their business life ($\bar{X}$ =20.17, p= .000).

Briefly, the lifelong learning tendencies of prospective teachers differ significantly in terms of achievement perception, willingness to pursue an academic career and belief on achievement in workplace. It can be concluded that as the achievement perceptions of prospective teachers increase; their lifelong learning tendencies also increase, indicating that the achievement perceptions of prospective teachers positively impact their lifelong learning tendencies. However, the findings indicate that the lifelong learning tendencies of prospective teachers do not differ according to computer usage skills (F = 1.27; p = 0.28). These findings are similar to those reported by Coşkun (2009).

Third research question

The third research question is “What is the level of prospective teachers’ information literacy self-efficacy?". Prospective teachers’ information literacy self-efficacy mean score was calculated. The mean score of the prospective teachers’ information literacy self-efficacy was 146.34 which indicates a high level on the scale which in turn is quite satisfactory. These findings are similar to studies of Akkoyunlu and Kurbanoğlu (2003); Demiralay (2008) and Smith (2013).

Fourth research question

The fourth question is “Do prospective teachers’ information literacy self-efficacy vary significantly by their gender, grade, computer usage level, perceived academic achievement, willingness to pursue an academic career, and beliefs on achievement in workplace?". Prospective teachers’ information self-efficacy in terms of their gender and grades were compared by the use of t test at the level of 0.05. The results stated that the information literacy self-efficacy mean score of female prospective teachers ($\bar{X}$ = 148.68, sd = 23.56) is higher than those of male prospective teachers ($\bar{X}$ = 141.09, sd = 30.80) however, there was no significant difference in terms of their gender (t =1.90, p = 0.06). Similarly, even though the mean score of 4th grade prospective teachers ($\bar{X}$ = 149.43, sd = 24.57) are higher than those of 1st grade prospective teachers ($\bar{X}$ = 142.98, sd = 27.55), the difference between the mean scores is not statistically significant (t = -1.75, p = 0.08). In the studies conducted by Usluel (2007), Demiralay (2008) and Chu (2012), the information literacy self-efficacy of female students was found to be higher than that of the male students.

ANOVA was used to compare the mean scores of prospective teachers’ information self-efficacy beliefs in terms of their computer usage skills, achievement perception, willingness to pursue an academic career, and belief in achievement in workplace. Results revealed that significant differences were found in terms of their computer usage skills (F = 8.46, p < 0.05), achievement perception (F = 4.39, p = 0.000), willingness to pursue an academic career (F = 10.05, p = 0.000) and belief in achievement in workplace (F = 3.53, p = 0.003). LSD multiple comparisons test was used for further analysis of group differences to identify where the differences reside for computer usage skills and achievement perception. The computer usage skills of prospective teachers rose from very poor to very good. The LSD multiple comparisons test showed a significant difference between groups with low computer usage skills and groups with intermediate computer usage skills; between groups with poor computer usage skills ($\bar{X}$ = 121.12, sd = 21.38) and those with good computer usage skills ($\bar{X}$ = 152.39, sd = 20.83); between groups with poor computer usage skills ($\bar{X}$ = 121.12, sd = 21.38) and those with very good computer usage skills ($\bar{X}$ = 159.11, sd = 24.54); and between groups with intermediate computer usage skills ($\bar{X}$ = 144.35, sd = 28.40); and those with good computer usage skills ($\bar{X}$ = 152.39, sd = 20.83). According to the LSD multiple comparisons test, a significant difference was also found between groups with very poor achievement perception ($\bar{X}$ =115.00, sd = 52.02); and groups with poor achievement perception ($\bar{X}$ = 153.43, sd = 24.60); between groups with very poor achievement perception ($\bar{X}$ = 115,00, sd = 52.02) and groups with good achievement perception ($\bar{X}$ =150.89, sd = 23.45); groups with very poor achievement perception ($\bar{X}$ = 115.00, sd = 52.02) and groups with very good achievement perception ($\bar{X}$ = 157.67, sd = 25.06). As the computer usage skills of prospective teachers and achievement perceptions increase, information literacy self-efficacy perceptions also increase.

Findings showed that prospective teachers' information

literacy self-efficacy differ according to their willingness to pursue an academic career (F = 16.87, p = 0.000). The highest mean score belongs to the group willing to pursue an academic career ($\bar{X}$ =155.16). While group variances were not homogenous, Tamhane multiple comparison tests were utilized for further analysis of group differences to identify where the differences reside for the willingness to pursue an academic career. The Tamhane multiple comparisons test results showed a significant difference in favour of prospective teachers who are willing to pursue an academic career and between groups unwilling to pursue an academic career and those indecisive about the matter (p<0.05). LSD multiple comparisons test was used for further analysis of group differences to identify where the differences reside for belief in achievement in their workplace. The LSD multiple comparisons test showed that there was a significant difference between those believing that they will be successful in their future workplace ($\bar{X}$ = 147.48, sd = 24.72); and those that do not believe that they will be successful in their workplace ($\bar{X}$ = 119.00, sd = 73.61); between groups believing that they will be successful in their workplace and those indecisive about this matter ($\bar{X}$ = 129.63, sd = 29.37).

It can be said that the information literacy self-efficacy beliefs of prospective teachers are positively impacted by computer usage skills, achievement perceptions, willingness to pursue an academic career, and beliefs in achievement in the workplace. Demiralay (2008) found that the information literacy self-efficacy of prospective teachers differed significantly in terms of experience of computer usage skills and the level of internet skills. In the present study, it was shown that as prospective teachers' experience in using computers increases, their information literacy self-efficacy beliefs also increase. In Tang and Tseng's study (2013) the results revealed that distance learners who have higher information literacy self-efficacy exhibited higher self-efficacy for online learning. The present study also showed that while prospective teachers' experience in using computer increased, their information literacy self-efficacy also increased.

Fifth research question

The fifth research question set out as "Is there a statistically significant relationship between prospective teachers' lifelong learning tendencies and their information literacy self-efficacy?". The Pearson correlation coefficient was calculated to determine the relationship between prospective teachers' lifelong learning tendencies mean score and their information literacy self-efficacy beliefs mean score. The results showed a significance level of p < 0.05 for the Pearson correlation between prospective teachers' lifelong learning tendency and their information literacy self-efficacy. The research found a moderate but significant positive relationship between prospective teachers' lifelong learning tendency and their information literacy self-efficacy (r = 0.47, p < 0.01). Breivik (2000) stressed that information literacy skills constitute a basis for lifelong learning in the present world, where information increases very rapidly and technologies used to access that information change rapidly. Breivik (2000) also stated that information literacy is a means to lifelong learning. Information societies can overcome challenges through an information-literate society which adopts the goal of lifelong learning a principle. Individuals acquiring lifelong knowledge and skills in the present information societies will be the individuals knowing how to utilize the information in different situations. It is seen that lifelong learning and information literacy concepts attract the attention of researchers in different countries at the present time. Dudziak (2007) found out that there has been an increasing interest in the topics of information literacy and lifelong learning as a result of attempts of librarians in Latin America in recent years. In that study, it was concluded that information literacy and lifelong learning are essential factors for a continuing progress of democracy which has to be built on strong foundations in Latin America.

Conclusıon

The need to deal with rapid changes in science and technology in the 21st century and adapting to the conditions of information society has led to the need for lifelong learning. The importance of school in promoting a lifelong learning society can never be underestimated. The duration and quality of the education received in schools has a critical importance for the skills and motivation required for successful learning in subsequent years, and so a lifelong learning strategy should cover also the compulsory school years (Demirel, 2009). The basic condition of lifelong learning, whose target population comprises of citizens from every segment and every age group of the society, is information literacy (Candy, 1994; Iannuzzi, Mangrum and Strichart, 1999; Breivik, 2000; Akkoyunlu, 2008).

The present study examined the lifelong learning tendencies and information literacy self-efficacy beliefs of prospective teachers. According to the study findings, prospective teachers have strong tendencies towards lifelong learning and were confident on information literacy self-efficacies. While the lifelong learning tendencies of students do not change according to computer usage skills, a significant difference was found in favor of female students and senior students. In addition, a significant difference was found in favor of students who have high academic perception, who are

willing to pursue an academic career and who believe that they will be successful in their business lives.

No difference was found in the information literacy self-efficacies of students according to gender and grade, but a significant difference was found in favor of computer usage skills, achievement belief, willingness to pursue an academic career and belief in achievement in business life. Self-efficacy beliefs were high among students who have strong computer usage skills, which are willing to pursue an academic career and who believe that they will be successful in their business lives. An intermediate positive relationship (r = 0.466) was found between lifelong learning tendencies and information literacy self-efficacy beliefs. According to the findings, it can be said that these features increase together. Individuals acquiring lifelong knowledge and skills in the present information societies will be the individuals knowing how to transfer the information to different situations.

Lifelong learning is a principle that students should develop throughout their life. University education alone is insufficient to achieve this goal. For that reason, the philosophy of lifelong learning should be taken as a basis and particular educational experiences should be constituted in all the educational stages, starting from preschool stage, in order to introduce features such as learning how to learn, information literacy, efficient use of learning resources, setting and achieving learning objectives, and attaching importance to information and personal development. Educational policies and curricula within universities should be structured to promote the tendency to lifelong learning.

The only way of creating a lifelong learner and information literate society is to train teachers who possess both lifelong learning tendencies, information literacy skills and a high level of efficacy for these skills and support their training by the governmental policies. Undoubtly, realization of these aims will require time, patience, funding, and cooperation among education specialists, librarians, and government authorities. Teachers need to learn new skills and become lifelong learners themselves to keep up to date with new knowledge, pedagogical ideas, and technology. Besides, educational policies in teacher training programs should be structured to promote the tendency towards lifelong learning and information literacy. It is hoped that this research will serve as a catalyst for the teacher training or in-service teacher training programs to seriously initiate discussions around the importance of lifelong learning and information literacy skills for promoting knowledge based societies while taking into account some of the suggestions offered.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

REFERENCES

Akkoyunlu B, Kurbanoğlu S (2003). A study on teacher candidates' perceived information literacy self-efficacy and perceived computer self-efficacy. Hacettepe University J. Educ. 24:1-10.

American Library Association (1989). Presidential Committee on Information Literacy: Final Report. Available at http://www.ala.org/acrl/nili/ilitlst.html Accessed 10 March 2015.

Bandura A (1995). Exercise of personel and collective efficacy in changing societies. In Bandura, A (Ed.) Self-efficacy in Changing Societies. (pp. 1-45). New York: Cambridge University Press.

Bandura A (1994). Self-efficacy. In Ramachaudran, VS (Ed.), Encyclopedia of Human Behavior, New York: Academic Press 4:71-81.

Bandura A (1986). Social foundations of thought and action: A social cognitive theory. NJ: Prentice-Hall Inc.

Breivik PS (2000). Information literacy for the sceptical library director. IATUL Conference, 3-7 July, Queensland University of Technology, Queensland: Australia.

Breivik PS, Hannock, V, Senn J (1998). A Progress Report on Information Literacy: An update on the American Library Association Presidential Committee on Information Literacy: Final Report, Chicago: ALA.

Candy P, Crebert G, O'Leary J (1994). Developing Lifelong Learners Through Undergraduate Education, Commissioned Report No. 28, National Board of Employment Education and Training. Canberra: Australian Government Publishing Service.

Candy PC (2002). Lifelong learning and information literacy. White Paper prepared for UNESCO. Available at http://www.nclis.gov/libinter/infolitconf&meet/candy-paper.html. Accessed 10 August 2016.

Carr JA (1998). Information literacy and teacher education. ERIC Digest, ED 424231. Washington DC: Clearinghouse on Teaching and Teacher Education.

Chu SKW (2012). Assessing information literacy: A case study of primary 5 students in Hong Kong. School Library Res. 15:1-24.

Condy J, Chiagona, A, Rajendra, C, Thornhill C (2010). Final year teacher training students' perception of THRASS. South Afr. J. Educ. 30:261-275.

Coşkun YD (2009). Undergraduate students' lifelong learning tendencies. Unpublished Doctoral Dissertation, Hacettepe University, Turkey.

Coşkun YD, Demirel M (2010). Lifelong learning tendency scale: The study of validity and reliability. World Conference on Psychology, Counselling and Guidance (WCPCG 2010). Procedia Soc. Behav. Sci. 5:2343-2350.

Dewan S, Ganley D, Kraemer KL (2005). Across the digital divide: A cross country multi-technology analysis of the determinants of IT penetration. J. Association Infor. Syst. 6(12):409-432.

Demirel M, Coşkun YD (2009). Investigation of curiosity levels of university students in terms of some variables. Mehmet Akif Ersoy University J. Educ. 9(18):111-134.

Demiralay R (2008). An evaluation of student teachers' information literacy self-efficacy in point of usage of information and communication technologies. Unpublished Master Dissertation, Gazi University, Turkey.

Doyle CS (1994). Information literacy in an information society: A concept for the information age. New York: Syracuse University.

Dudziak EA (2007). Information literacy and lifelong learning in Latin America: The challenge to build social sustainability. Information Development, 23:43-47. Available at http://idv.sagepub.com/cgi/content/abstract/23/1/43 Accessed 9 April 2016.

Field J (2006). Lifelong learning and the new educational order. Sterling, VA: Trentham Books.

Faure E, Herrara F, Kaddoura A, Lopes H, Petrosvky AV, Rahnema M, Ward CR (1972). Learning to be. Paris: UNESCO.

Hancock VE (1993). Information literacy for lifelong learning, Syracuse NY: ERIC Clearinghouse on Information Resources, ED358870.

Iannuzzi P, Mangrum CT, Strichart SS (1999). Teaching information

literacy skills, Boston: Allyn and Bacon.
Jenkins A (2004). Women, lifelong learning and employment, Centre for the Economics of Education.
Knapper, CK, Cropley, AJ (2000). Lifelong learning in higher education. London: Kogan Page.
Kumaresan, SC (2008). Knowledge management and sharing through interactive web-based e-learning and training opportunities for lifelong learning in developing countries. J. Library Information Technol. 28(5):13-17.
Kurbanoğlu S, Akkoyunlu B, Umay A (2006). Developing the information literacy self-efficacy scale. Journal of Documentation, 62(6):730-743.
Lau J (2006). Guidelines on information literacy for lifelong learning. IFLA. Available at http://archive.ifla.org/VII/s42/pub/IL-Guidelines2006.pdf. Accessed 17 March 2016.
OECD (1996). Lifelong Learning for all. Paris: Head of Publications Service.
Rader HB (1991). Information literacy: A revolution in the library. RQ, 31(1):25-28.
Sarma S (2002). Modern methods of lifelong learning and distance education. New Delhi: Sarup & Sons.
Shapiro JJ, Hughes SK 1996. Information Literacy as a Liberal Art: Enlightenment proposals for a new curriculum. Educom Review, 31(2): 31-35.
Smith JK (2013). Secondary teachers and information literacy (IL): Teacher understanding and perceptions of IL in the classroom. Library Infor. Sci. Res. 35(3):216-222.
Tang Y, Tseng HW (2013). Distance learners' self efficacy and information literacy skills. J. Acad. Librarianship, 39:517-521.
Tavıl MZ (2014). The effect of self reflections through electronic journals (e-journals) on the self efficacy of pre-service teachers. South Afr. J. Educ. 34(1):1-20.
UNESCO (2006). Understanding of literacy. Education for All Global Monitoring Report. Paris.
Usluel YK (2007). Can ICT usage make a difference on student teachers' information literacy self-efficacy? Library Infor. Sci. Res. 29:92-102.