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Research Article

Do the Lifelong Learning Tendencies of Nursing Students Affect Their Attitudes Toward E-Learning?

Emine Şenyuva, Hülya Kaya

Department of Nursing Education, İstanbul University-Cerrahpaşa, Florence Nightingale Nursing Faculty, İstanbul, Turkey

ORCID iDs of the authors: E.Ş. 0000-0001-8855-6692, H.K. 0000-0001-6769-7613.

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Abstract

AIM: This study aimed to determine the lifelong learning tendencies and e-learning attitudes of prospective nurses and the relationship between these variables.

METHOD: This was a descriptive study conducted to find the relationship between lifelong learning tendencies and e-learning attitudes of nurses. The population of the study consisted of a total of 1202 students who were enrolled in the nursing faculty of a state university. The data were collected by an information form, the Lifelong Learning Tendency Scale, and the E-Learning Attitude Scale. Continuous variables were presented as arithmetic means, standard deviations, and minimum, maximum, and median values, while categorical variables were presented as frequencies and percentages. Pearson correlation test was used to determine the relationship between the scores of the scales.

RESULTS: The minimum score of the nursing students was 70.00 and their maximum scores was 152.00 in the Lifelong Learning Tendency Scale, with a mean score of 122.80 ± 21.35. The minimum score of the participants was 34.00 and their maximum score was 95.00 in the E-Learning Attitude Scale, with a mean score of 62.56 ± 8.72. There was a positive and weak statistically significant relationship between the lifelong learning tendencies and e-learning attitudes of the prospective nurses ($r = .238$, $p > .01$).

CONCLUSION: As a result of the study, the lifelong learning tendencies of the nursing students were found to be high, and considering the sub-dimension scores of lifelong learning tendency scale of the nursing students, in general, the participants' motivation, persistence, and deficiency in learning scores were high and curiosity motivation scores were medium. They had medium-level attitudes toward e-learning, and there was a weak, positive relationship between their lifelong learning tendencies and e-learning attitudes. It is recommended that involving nursing students in seminars, conferences, and scientific activities will support their lifelong learning. It is also recommended to organize learning environments where they will experience positive e-learnings.

Keywords: Distance education, e-learning, lifelong learning, nursing, nursing students

Introduction

Nowadays, globalization is causing several changes and developments in scientific knowledge, technology, and healthcare services. These changes and developments make it a necessity for individuals to continue their professional development after graduation and increase the significance of e-learning as an educational environment that plays an important role in lifelong learning and provides individuals with lifelong learning skills (Hedge & Hayward, 2003; Şenyuva, 2015).

Lifelong learning is an education that allows equipping individuals with knowledge and skills and provides them with the capacity of continuing their education outside formal education (Hayward & Hedge, 2002; Şenyuva, 2012). Through lifelong learning, individuals update their professional knowledge and skills and continuously improve their point of view and intellectual levels (Gopee, 2001, 2005; Şenyuva, 2012). Because the field of information technology is so dynamic, it is critical that we prepare our graduates to become lifelong learners. Becoming a lifelong learner requires deciding upon what one needs to learn and to which extent, having willingness and curiosity toward learning, using information and communication technologies, taking responsibility for their own learning, and having skills for learning by themselves (Gopee, 2002; Hayward & Hedge, 2002; Şenyuva, 2015). One of the learning settings that support these skills of individuals/students allow them to continue their individual and occupational development throughout life and facilitate them to take their own learning responsibility by themselves is e-learning (Diker Coşkun, 2009; Şenyuva & Kaya, 2014).

E-learning involves educational environments where electronic devices-equipment and information and communications like

Corresponding Author: Emine Şenyuva
E-mail: esenyuva@istanbul.edu.tr

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the internet are used to carry out teaching and learning processes (Glen, 2005). Today, both students and members of professions are not able to attend formal education due to different reasons. Additionally, the education demands and expectations, learning styles, etc. of today's students are different from the demands and expectations of conventional students. In comparison to conventional learning environments, e-learning provides students with advantages such as flexibility of location, time, and space, reaching more students than educational institutions bound with physical bricks can do, provision of different educational opportunities for broad masses, spending less time to contact with the source of learning, and requiring lower costs (Hayward & Hedge, 2002; Hedge & Hayward, 2003; Pamfilie et al., 2012). These advantages allow students to gain lifelong learning skills by accessing informatio n/resources/courses/expert individuals (Hayward & Hedge, 2002; Hedge & Hayward, 2003; Pamfilie et al., 2012). Moreover, e-learning supports nursing students' lifelong learning by utilizing education opportunities in the place and time that are suitable for them despite their geographical distance, sustenance of individual, and professional development while working, elimination of their shortcomings, and improvement of their skills (Diker Coşkun, 2009; Gopee, 2002).

Relevant studies have emphasized that, in lifelong continuation of individual and occupational development, e-learning plays an important role and provides great opportunities. This situation makes it inevitable for nursing students to utilize e-learning which allows them to update their individual and occupational knowledge, skills, attitudes, and behaviors, follow a career, or in other words, continue their lifelong learning (Glen, 2002; Gopee, 2002; Pamfilie et al., 2012; Şenyuva & Kaya, 2014). Thus, it is important to determine the mentioned characteristics of nursing students and improve these during their basic training.

The relevant literature includes studies to reveal the lifelong learning tendencies of university students enrolled in different departments and their attitudes toward e-learning (Demirel & Akkoyunlu, 2010; Diker Coşkun & Demirel, 2012; Dikmen et al., 2016; Güçlü et al., 2013; Karaduman & Tarhan, 2017; Kuzu et al., 2015; Liaw et al., 2007; Şentürk, 2016; Tunca et al., 2015). Lifelong e-learning is a self-driven commitment to continual professional development with the help of information technologies. Hence, if we encourage our students to practice effective lifelong e-learning, it should provide the blueprint for a lifetime of professional success. However, only a limited range of studies have found the relationship between tendencies for lifelong learning and e-learning attitudes of nursing students. In this context, this study is important in terms of determining the lifelong learning tendencies and e-learning attitudes of nursing students and revealing the relationship between these two variables.

This study aimed to determine the lifelong learning tendencies and e-learning attitudes of nursing students, as well as the relationship between these two variables.

Research Questions

1. How are the tendencies of nursing students regarding lifelong learning?
2. How are the attitudes of nursing students toward e-learning?
3. How is the relationship between the lifelong learning tendencies and e-learning attitudes of nursing students?

Methods

Study Design

This study was a cross-sectional design.

Sample

The study was conducted at a nursing faculty in Istanbul which is rooted and old faculty in a state university in Turkey. The population of the study consisted of a total of 1202 students (first year: 273, second year: 284, third year: 289, fourth year 340) who were enrolled at the nursing faculty of a state university. Sample selection was not carried out in the study, and it was aimed to reach the entirety of the population. The study was carried out with 1041 students who agreed to participate.

Data Collection Tools

The data were collected with an information form, the Lifelong Learning Tendency Scale, and the E-Learning Attitude Scale.

Information Form: The form which was developed by the researchers included eight questions for determining the participants' age, sex, marital status, education program of graduation, and state of using computers and the internet.

Lifelong Learning Tendency Scale: The scale developed by Diker Coşkun (2009) consists of 27 items and 4 sub-dimensions such as motivation, persistence, deficiency in organizing learning, and lack of curiosity. The options for the six-point Likert-type scale are in the form of "very applicable (6)" and "not applicable at all (1)." The minimum score in the motivation, deficiency in organizing learning, and persistence sub-dimensions of the scale is 6, while the maximum score that can be obtained is 36. The lowest possible score in the lack of curiosity sub-dimension is 9, while the highest possible score is 54. The deficiency in organizing learning and lack of curiosity sub-dimensions of the scale are scored with a negative sign. The lowest score that can be obtained in the scale is 27, while the highest score is 162. Increased scores in the scale indicate increased tendency for lifelong learning. The Cronbach's alpha reliability coefficient for the original scale was 0.84 (Diker Coşkun, 2009). The total Cronbach's alpha reliability coefficient in this study was 0.92. The sub-dimension Cronbach's alpha coefficients were 0.87, 0.88, 0.86, and 0.91, respectively, for the sub-dimensions of motivation, persistence, deficiency in organizing learning, and lack of curiosity.

E-Learning Attitude Scale: Some items of the scale that was developed by Wilkinson et al. (2010) were modified by Haznedar (2012) with improvement and updates according to the conditions in Turkey. The scale is 1-dimensional, and it has 20 items. The options for the five-point Likert-type scale are in the form of "absolutely agree (5)" and "absolutely disagree (1)." The lowest possible score that can be obtained from the scale is 20, while the highest possible score is 100.

The Cronbach's alpha reliability coefficient of the scale is 0.94 (Haznedar & Baran, 2012). This coefficient was found as 0.84 in this study.

Data Collection

The data were collected by the researchers through face-to-face interviews based on voluntary participation of the students. Before collecting the data, the students were briefly informed about the study. Filling out the data collection form took about 10 min.

Statistical Analysis

The data were analyzed using the Statistical Package for Social Sciences for windows 21.0 software. Continuous variables were presented as arithmetic means, standard deviations, and minimum, maximum, and median values, while categorical variables were presented as frequencies and percentages. Pearson correlation test was used to determine the relationship between the scores of the scales. The results were analyzed on a 95% CI and $p < .05$ was considered as a significance level (Polit & Beck, 2012).

Ethical Aspect of the Study

The ethics board approval for the study was obtained from the Clinical Research Ethics Board of the Istanbul University-Cerrahpasa, Cerrahpasa Faculty of Medicine (date and number: May 04, 2016—162689). After the approval of the ethics board, permission was received from the faculty of nursing where the study would be conducted. Verbal and written consent was received from the students before collecting the data.

Results

Socio-Demographic Characteristics of the Nursing Students

Among the nursing students, 23.1% were first-year students, 24.5% were second-year students, 23.3% were third-year students, and 29.1% were fourth-year students. 88% of the students were women, 12% were men, and their mean age was 20.63 ± 1.37. 73.3% graduated from Anatolian high schools and 23.1% graduated from regular high schools (Table 1).

73.9% of the nursing students had their own computers, and they had used computers for a mean time period of 8.16 ± 3.11 years (minimum 1–maximum 18 years). All of the participants used the internet; 84.1% used it for searching information, 84.1% used it for downloading music and movies, 79.3% used it for searching information about their training, 74.4% used it for following recordings and notes from their classes, 71.1% used it for things such as doing homework and preparing PowerPoint presentations, 63.4% used it for sending e-mails, 34.5% used it for reading the news, 58.5% used it for chatting, 36.6% used it for shopping, 34.5% used it for playing games, 31.1% used it for banking activities, and 10.8% used it for meeting new people.

Lifelong Learning Tendencies of the Nursing Students

The minimum and maximum scores of the participants in the Lifelong Learning Scale were 70.00 and 152.00, respectively, and their mean score was 122.80 ± 21.35 (Table 2).

Table 1.
Sociodemographic Characteristics of the Nursing Students (n = 1041)

		n	%
Sex	Male	872	83.8
	Female	169	16.2
Mean age	20.63 ± 1.37	Min. 17	Max. 25
Graduation	Regular high school	240	23.1
	Anatolian high school	763	73.3
	Science high school	6	.6
	Social sciences high school	1	.1
	Technical and vocational high schools	31	3.0

The mean motivation sub-dimension score of the participants was 30.84 ± 4.19. The highest mean score in the motivation sub-dimension was in the item "even if I have sufficient financial opportunities, I would continue to gain new knowledge and skills for my improvement as a student" (5.31 ± 0.86), while the lowest was in the item "I am more willing than my friends in terms of gaining new knowledge and skills" (4.82 ± 1.01) (Table 2).

The mean persistence sub-dimension score of the participants was 27.88 ± 5.26. The highest mean score in the persistence sub-dimension was in the item "even if the topic I am learning is difficult to learn and complicated, I spend an effort to learn it in the best way possible" (4.94 ± 1.02), while the lowest was in the item "Even if my schedule is packed, I would create opportunities to gain new knowledge and skills" (4.37 ± 1.07 (Table 2).

The mean deficiency in organizing learning sub-dimension score of the participants was 26.15 ± 7.81. The highest mean score in the deficiency in organizing learning sub-dimension was in the item "I do not pay importance to what people around me contribute to my learning process" (4.70 ± 1.61), while the lowest was in the item "It is meaningless for me to constantly gain new knowledge and skills just for improving myself as a student" (3.88 ± 1.93) (Table 2). The mean lack of curiosity sub-dimension score of the participants was 37.94 ± 10.57. The highest mean score in the lack of curiosity sub-dimension was in the item "I do not spend time to learn a subject just because I am curious about it" (4.77 ± 1.59), while the lowest was in the item "I prefer to spend the time I would spend for my improvement as a student with my loved ones" (3.47 ± 1.54) (Table 2).

E-Learning Attitudes of the Nursing Students

The minimum and maximum scores of the participants in the e-Learning Attitudes Scale were 34.00 and 95.00, respectively, and their mean score was 62.56 ± 8.72 (Table 3). Among the items, the highest mean score of the e-learning attitudes of the participants was in the item "it disturbs me that e-learning does not include face-to-face interaction" (3.48 ± 1.24), while the lowest was in the item "e-learning is unnecessary" (2.45 ± 1.18) (Table 3).

Table 2.
Mean Item, Sub-Dimension, and Total Scores of the Lifelong Learning Tendencies of the Nursing Students (n=1041)

Item	X ± SD
1. It is absolutely suitable for me to develop new knowledge and skills in different fields to improve myself.	5.27 ± .85
2. I can gain any piece of knowledge if I believe it will ensure my personal development.	5.24 ± .79
3. One of my priority goals in life is to improve myself as a student by constantly gaining new knowledge and skills.	5.17 ± .86
4. Even if I have sufficient financial opportunities, I would continue to gain new knowledge and skills for my improvement as a student.	5.31 ± .86
5. Constantly learning new things is a passion for me.	5.03 ± .97
6. I am more willing than my friends in terms of gaining new knowledge and skills.	4,82±1,01
Motivation	**30.84 ± 4.19**
7. I like spending a large part of my time for research with learning purposes.	4.53 ± 1.07
8. Even if my schedule is packed, I would create opportunities to gain new knowledge and skills.	4.37 ± 1.07
9. I allocate a part of my personal spending to gain new knowledge and skills.	4.42 ± 1.29
10. I spend an effort to gain new knowledge and skills without any obligation.	4.85 ± 1.07
11. While I am reaching my priority goals, I try to gain new knowledge and skills that are not related to these goals.	4.78 ± 1.13
12. Even if the topic I am learning is difficult to learn and complicated, I spend an effort to learn it in the best way possible.	4.94 ± 1.02
Persistence	**27.88 ± 5.26**
13. I do not believe that gaining new knowledge and skills in things that are not related to my profession.	4.29 ± 1.84
14. It is meaningless for me to constantly gain new knowledge and skills just for improving myself as a student.	3.88 ± 1.93
15. I do not pay importance to what people around me contribute to my learning process.	4.70 ± 1.61
16. I do not use sources of knowledge about my profession (such as books, the internet) if I do not have to.	4.42 ± 1.64
17. I think I would have difficulty to learn a new piece of knowledge or skill about my profession that I am encountering for the first time.	4.36 ± 1.57
18. My self-assessment about what I have learned prevents me from learning new topics.	4.50 ± 1.58
Deficiency in organizing learning	**26.15 ± 7.81**
19. If I do not have to (for exams, projects, etc.), I do not want to lose time by research.	4.28 ± 1.37
20. I prefer to spend the time I would spend for my improvement as a student with my loved ones.	3.47 ± 1.54
21. I do not find it necessary to spend an effort to complete what I lack if I am not responsible for the topic I am learning (if I am not going to take an exam, etc.).	4.12 ± 1.60
22. As long as I do not have to, I think it would be a waste of time for me to participate in courses and seminars just for learning new things.	4.50 ± 1.50
23. I do not spend time to learn a subject just because I am curious about it.	4.77 ± 1.59
24. I think libraries are boring places.	4.55 ± 1.47
25. Except for cases where I am obligated, I prefer to spend time on my hobbies rather than spending an effort to learn new things.	3.91 ± 1.54
26. I do not want to spend an effort to gain new knowledge and skills if it will have a financial cost for me.	3.85 ± 1.56
27. It disturbs me to constantly feel like I have to learn new knowledge and skills.	4.49 ± 1.56
Lack of curiosity	**37.94 ± 10.57**
Total	**122.80 ± 21.35**

X: Arithmetic means, SD: Standard deviations

The Relationship Between the Lifelong Learning Tendencies and e-Learning Attitudes of the Nursing Students

There was a weak, positive relationship between the lifelong learning tendencies and the e-learning attitudes of the participants (r = .238 p > .01) and between the deficiency in organizing learning (r = .273 p = .000) and lack of curiosity (r = .306 p = .000) sub-dimensions of the lifelong learning tendencies of the participants and their e-learning attitudes, while the relationship between their e-learning attitudes and the sub-dimensions of motivation (r = .008 p = .803) and persistence (r = .045 p = .143) was not significant (p > 0.01) (Table 4).

Table 3.
Mean Item and Total Scores of the E-Learning Attitudes of the Nursing Students (n=1041)

Item		X ± SS
1.	I want to learn in the e-learning environment.	3.29 ± 1.31
2.	I do not think e-learning would be useful.	2.87 ± 1.29
3.	E-learning is unnecessary.	2.45 ± 1.18
4.	The idea of receiving an education by e-learning disturbs me.	2.63 ± 1.25
5.	E-learning is fun.	3.36 ± 1.18
6.	E-learning makes it easier to learn.	3.33 ± 1.18
7.	I follow developments about e-learning.	3.23 ± 1.18
8.	I think I would encounter a large number of problems if I attend classes by e-learning.	2.98 ± 1.24
9.	E-learning should be made prevalent.	3.30 ± 1.24
10.	E-learning prevents people from socializing.	2.91 ± 1.17
11.	E-learning is not suitable for my way of studying.	3.20 ± 1.28
12.	E-learning attracts my attention.	3.26 ± 1.33
13.	Assessment cannot be made properly in e-learning.	3.23 ± 1.20
14.	It disturbs me that e-learning does not include face-to-face interaction.	3.48 ± 1.24
15.	E-learning increases my motivation.	3.03 ± 1.12
16.	E-learning increases success.	3.06 ± 1.20
17.	E-learning increases the productivity of the learner.	3.11 ± 1.18
18.	I do not think there would be sufficient teacher support in e-learning.	3.34 ± 1.18
19.	I like learning in the e-learning environment.	3.12 ± 1.14
20.	I like studying at my own pace by e-learning.	3.37 ± 1.18
Total		**62.56 ± 8.72**

X: Arithmetic means, SS: Standard deviations

Discussion

Most of the nursing students who participated in the study were female. Their age was in the range of 17-25, while most of them graduated from Anatolian high schools.

Socio-Demographic Characteristics of the Nursing Students

Most of the participants stated that they used the internet, and most of those who used the internet stated that their primary purpose for using the internet is gaining knowledge about their professional development. This result may be interpreted as a positive finding that shows that nursing students may utilize e-learning for lifelong learning.

Table 4.
The Relationship Between the Lifelong Learning Tendencies and E-Learning Attitudes of the Nursing Students (n=1041)

	E-Learning Attitudes	
Lifelong Learning Tendencies	***r***	***p***
Motivation	.008	.803
Persistence	.045	.143
Deficiency in organizing learning	.272**	.000
Lack of curiosity	.306**	.000
Total	.238**	.000

Pearson correlation
*$p > .05$, **$p > .01$

Lifelong Learning Tendencies of the Nursing Students

Lifelong learning is a process where individuals maintain their own development. For nurses to be able to provide qualified healthcare services in our time, they need to follow scientific and technological changes and developments, update their professional knowledge, skills, and attitudes, and adopt lifelong learning. Dikmen et al.'s study (2017) on the students of a faculty of medicine found their lifelong learning tendencies to be high. Likewise, university students' lifelong learning tendencies were found to be high, and their lifelong learning capacities were found to be on a good level in studies by Demirel and Akkoyunlu (2010), Karaduman and Tarhan (2017), Karakuş (2013), Kuzu et al. (2015) and Şahin et al. (2010). The studies by Dikmen et al. (2016) with nursing students and by Diker Coşkun and Demirel (2012) with university students found the students' lifelong learning tendencies to be low. This study found the lifelong tendencies of nursing students to be high (Table 2). This result may be interpreted as that the nursing students were willing in terms of gaining knowledge for them to continue their individual and occupational development, dedicated to their learning statuses and patient, or in other words, they had embraced lifelong learning.

One of the most important dimensions of lifelong learning is *motivation*. It plays an important role in achieving the active participation of the individual in any process of learning, behavioral changes, and accomplishing continuity in learning. The individuals who learn lifelong, on the other hand, need to have the desire to continuously learn and have curiosity and willingness toward learning (Hayward & Hedge, 2002). Studies on learning state that learning cannot be considered independently of motivation (Eggen & Kauchak, 2001). Considering that the minimum and maximum possible score that can be obtained in the motivation sub-dimension of the scale in the study are 9 and 36, respectively, it may be stated that the motivation levels of the nursing students were high (Table 2). This result, which was in parallel with those in the studies by Demirel and Akkoyunlu (2010), Karaduman and Tarhan (2017), Karakuş (2013), Kuzu et al., (2015) and Şahin et al. (2010), may be interpreted as that the nursing students were filling to gain new knowledge and skills about any topic or situation, and they had sufficient motivation for maintaining lifelong learning.

Another characteristic of individuals who have tendency for lifelong learning is *determination in learning, persistence*. The dictionary definition of persistence is not backing out from one's promises or decisions, completing a task to the end, resistance, and determination (http://www.tdk.gov.tr, Date: May 4, 2020). As much as the degree of the person's motivation, learning is also dependent on maintaining that motivation and sustaining it in different forms. Motivated students, even if they encounter obstacles, are persistent in completing a task. In this context, persistence refers to the belief of the individual in themselves regarding learning and their determined attitude to realize this belief (Shunk & Pintrich, 2002). Considering that the minimum and maximum possible scores that can be obtained in the persistence sub-dimension of the scale in the study are 9 and 36, respectively, it may be stated that the nursing students had high levels of persistence (Table 2). This result was in parallel to those in the studies by Demirel and Akkoyunlu (2010), Karaduman and Tarhan (2017), Karakuş (2013), Kuzu et al. (2015), Şahin et al. (2010) and Tunca et al. (2015). This may be interpreted as that the nursing students were determined to participate in learning activities and maintain this participation, they would show a persistent attitude to complete a task they started and reach their goals, and they would spend an effort when they encounter difficult and complex problems.

Another characteristic of individuals who adopt lifelong learning is *organizing learning*. Organizing learning is the control of the individual over the knowledge and skills they obtained with their own thoughts and behaviors, and it sets a basis for lifelong learning (Smith, 2009). Harpe and Radloff (2000) stated that students with skills in organizing learning have cognitive strategies such as planning and assessing their learning and adapting it to learning processes, categorizing pieces of knowledge, and using these when they are required. The lifelong learning individual has to have skills of taking responsibility in own learning, learning by themselves, etc. (Hayward & Hedge, 2002; Şenyuva, 2015). Considering that the minimum and maximum possible score that can be obtained in the deficiency in organizing learning sub-dimension of the scale in the study are 9 and 36, respectively, it may be stated that the nursing students had high levels in organizing learning (Table 2). This result was in parallel with those in the studies by Demirel and Akkoyunlu (2010), Karaduman and Tarhan (2017), Karakuş (2013), Kuzu et al. (2015), Şahin et al. (2010) and Tunca et al. (2015). This may be interpreted as that the nursing students knew how, where, when, and why they would learn and which situations result in effective learning, had the belief in organizing their time and opportunities by taking the responsibility of their learning in their hands, used high-level thinking skills about obtaining and using information, and were aware of their limitations and advantages.

Curiosity is the difference between what one knows and what one does not know, that is, desire to learn about a situation, event, or subject (http://www.tdk.gov.tr, 04.05.2020). It is a driving force for lifelong learning. Curiosity is a necessity to accumulate knowledge according to Piaget (1952), a compulsory characteristic for not only individuals but also species to survive according to Bruner (1966), thirst for knowledge according to Freud (1915), and an important element in the psychological development of a person according to Maslow (1970) (cited in Diker Coşkun, 2009). Considering that the minimum and maximum possible score that can be obtained in the lack of curiosity sub-dimension of the scale in the study are 9 and 54, respectively, it may be stated that the nursing students had medium levels of curiosity (Table 2). This result was consistent with those in the studies by Demirel and Akkoyunlu (2010), Karaduman and Tarhan (2017), Karakuş (2013), Kuzu et al. (2015), Şahin et al. (2010) and Tunca et al. (2015). This may be interpreted as that the nursing students were not curious about searching for and learning knowledge that they were interested in, or they needed.

Considering the sub-dimension scores of Lifelong Learning Tendency Scale of the nursing students, in general (Table 2), the participants' motivation, persistence, and deficiency in learning scores were high. These results show that the nursing students paid importance to lifelong learning activities, and they were willing, determined, and eager to participate in activities related to lifelong learning and maintain this participation. However, they had medium levels of lack of curiosity (Table 2). This may be interpreted as a necessity to improve these characteristics of nursing students.

E-Learning Attitudes of the Nursing Students

The nursing students had medium levels of attitudes toward e-learning (Table 3). These levels were also found in studies with university students and faculty members conducted by Liaw et al. (2007) abd Mohammadi et al. (2011). Studies by Karaman (2011), Mouzakitis and Tuncay (2011) and Yu and Yang (2006) determined that nurses and nursing students who had experience with e-learning had positive attitudes toward e-learning. In this study, the e-learning attitudes of the nursing students were found to be medium (Table 3). This result may be interpreted as that the nursing students preferred face-to-face communication rather than e-learning, and thus, they would not be sufficiently willing to use e-learning as a tool in accessing things such as information/courses/resources that could support their lifelong learning. Additionally, this result suggested that, in the case that nursing students have knowledge and experience

regarding well-organized e-learning settings, their attitudes toward e-learning may increase in a positive direction.

The Relationship Between the Lifelong Learning Tendencies and e-Learning Attitudes of the Nursing Students

The increase in globalization today leads the boundaries of education to constantly broaden. This situation causes changes to be experienced in the education system and makes it compulsory for the education system to adapt to changes such as the rapid development of information, knowledge, and communication technology and interaction between public and private spheres (Hedge & Hayward, 2003; Pamfilie et al., 2012). Besides these changes, the education system aims for individuals to enter an ongoing learning process with the purpose of developing their individual needs, areas of interest, and learning skills throughout life, or become lifelong learning individuals (Pamfilie et al., 2012). E-learning is one of the most significant education settings that individuals may use to reach this goal. This is because e-learning plays an important role in providing individuals with lifelong learning skills. The flexibility of location, time, and space and different opportunities for broad masses provided by e-learning allows reaching more students than educational institutions bound by physical bricks can do and increases the lifelong learning skills of individuals by allowing them to access information/resources/courses/expert individuals in an increasingly interconnected world (Hayward & Hedge, 2002; Hedge & Hayward, 2003; Pamfilie et al., 2012). There was a weak and positive relationship between the lifelong learning tendencies, the deficiency in organizing learning, and lack of curiosity sub-dimensions and their attitudes towards e-learning ($p > 0.01$) (Table 4). In other words, as the lifelong learning tendencies of nurses increase, their positive attitudes toward e-learning also increase, though to a weak extent. Studies by Gopee (2001, 2005) also emphasized that e-learning is highly important for lifelong learning. As Peters (2009) also argued, while lifelong learning is very important in creating the postmodern information society, e-learning/distance education is just as important for lifelong learning (Jarvis, 2009). This result suggests that the nursing students would not be able to sufficiently utilize e-learning opportunities for achieving individual and professional improvement from where they live and when they want for overcoming their shortcomings and improving their skills.

Study Limitations

The study is limited to the students of a faculty of nursing at a state university who agreed to participate. It may not be generalized to all nursing students.

Conclusion and Recommendations

As a result of the study, the lifelong learning tendencies of the nursing students were found to be high, and considering the sub-dimension scores of lifelong learning tendency scale of the nursing students, in general, the participants' motivation, persistence, and deficiency in learning scores were high and curiosity motivation scores were medium. They had medium-level attitudes toward e-learning, and there was a weak, positive relationship between their lifelong learning tendencies and e-learning attitudes.

In light of these results, different and well-planned e-learning programs can support the development of lifelong learning tendencies of the nursing students. As technology advances and education pressures rise, lifelong learning and e-learning are economical, innovative, and reputable platform for program directors to incorporate into their curricula. It is suggested to increase the study related to lifelong learning and e-learning for enhanced nursing learning, improved clinical skills, and heightened learner satisfaction, and different samples are used for in-depth investigation of their views on qualitative research.

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