RESEARCH ARTICLE

Albena Gayef[1]
Cagri Alpturk[2]

[1]Trakya University, Faculty of Medicine, Department of Medical Education, Edirne, Türkiye
[2]Devrek Family Health Center, Zonguldak, Türkiye

Corresponding Author:
Albena Gayef
mail: albenagayef@trakya.edu.tr

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konuralptipdergi@duzce.edu.tr
konuralptipdergisi@gmail.com
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Lifelong Learning Tendencies of Faculty of Medicine Students

ABSTRACT

Objective: The aim of this study is to determine the lifelong learning tendencies of the students studying at the medical faculty and whether there is a relationship between lifelong learning tendencies and gender, grade level variables.

Methods: In the study, "Lifelong Learning Tendency Scale", sociodemographic question form were applied face to face to the medical faculty students (n= 196) in the 2019-2020 academic year. Statistical evaluation was made with the SPSS statistical program. Mean, standard deviation, frequency, percentage, Mann Whitney U, Kruskall Wallis tests were applied.

Results: Means of motivation, persistence, deprivation in regulating learning, deprivation in curiosity subdimensions, total score average are 6.43 + 2.43; 18.9 + 6.23; 24.48 + 5.05; 24.5 + 6.54; 74.34 + 9.56 respectively. The mean levels of females in motivation and deprivation in regulating learning were significantly lower than males; males' total score mean was significantly higher than females ($p<0.05$). Fifth grade students' deprivation in regulating learning averages were significantly higher than the first grade ($p= 0.001$). Fifth grade students' deprivation in regulating learning averages were significantly higher than the second grade ($p= 0.039$). Fifth grade students' deprivation in regulating learning mean was significantly higher than the third grade ($p=0.017$). Fourth grade students' lifelong learning tendencies total score was significantly higher than the first grade ($p= 0.013$). Fifth grade students' lifelong learning tendencies total score was significantly higher than the first grade ($p= 0.012$).

Conclusions: Appropriate environments should be prepared to increase the lifelong learning tendencies of medical faculty students. In this direction, on-campus and off-campus systems should be developed in which students can easily access and effectively use learning resources.

Keywords: Lifelong Learning, Tendency, Faculty, Medicine, Student.

Tıp Fakültesi Öğrencilerinin Yaşam Boyu Öğrenme Eğilimleri

ÖZET

Amaç: Bu çalışmanın amacı tıp fakültesinde eğitim gören öğrencilerin yaşam boyu öğrenme eğilimlerini ve yaşam boyu öğrenme eğilimleri ile cinsiyet ve sınıf düzeyi değişkenleri arasında bir ilişki olup olmadığını belirlemektir.

Gereç ve Yöntem: Araştırmada, 2019-2020 eğitim öğretim yılında tıp fakültesi öğrencilerine (n= 196) "Yaşam Boyu Öğrenme Eğilimi Ölçeği" ve sosyodemografik sorulardan oluşan form yüz yüze uygulanmıştır. İstatistiksel değerlendirme SPSS istatistik programı ile yapılmıştır. Ortalama, standart sapma, sıklık, yüzde, Mann Whitney U, Kruskall Wallis testleri uygulanmıştır.

Bulgular: Motivasyon, sebat, öğrenmeyi düzenlemede yoksunluk, merak yoksunluğu alt boyut ortalamaları, toplam puan ortalaması sırasıyla 6,43 + 2,43; 18,9 + 6,23; 24,48 + 5,05; 24,5 + 6,54; 74,34 + 9,56'dır. Kadınların motivasyon ve öğrenmeyi düzenlemede yoksunluk ortalamalarının erkeklere göre anlamlı olarak daha düşük; erkeklerin toplam puan ortalamalarının kadınlara göre anlamlı olarak daha yüksek olduğu belirlenmiştir ($p<0.05$). 5.sınıf öğrencilerinin öğrenmeyi düzenlemede yoksunluk ortalamalarının 1.sınıfa göre anlamlı olarak daha yüksek ($p= 0.001$), 5.sınıf öğrencilerinin öğrenmeyi düzenlemede yoksunluk ortalamalarının 2.sınıfa göre anlamlı olarak daha yüksek ($p= 0.039$), 5.sınıf öğrencilerinin öğrenmeyi düzenlemede yoksunluk ortalamalarının 3.sınıfa göre anlamlı olarak daha yüksek ($p=0.017$) olduğu saptanmıştır. 4.sınıf öğrencilerinin yaşam boyu öğrenme eğilimleri toplam puanının 1.sınıfa göre anlamlı olarak daha yüksek ($p= 0.013$), 5.sınıf öğrencilerinin yaşam boyu öğrenme eğilimleri toplam puanının 1.sınıfa göre anlamlı olarak daha yüksek ($p= 0.012$) olduğu saptanmıştır.

Sonuç: Tıp fakültesi öğrencilerinin yaşam boyu öğrenme eğilimlerinin arttırılmasına yönelik uygun ortamlar hazırlanmalıdır. Bu doğrultuda öğrencilerin öğrenme kaynaklarına kolayca erişebileceği ve etkin biçimde kullanacakları kampüs içi ve dışı sistemler geliştirilmelidir.

Anahtar Kelimeler: Yaşam Boyu Öğrenme, Eğilim, Fakülte, Tıp, Öğrenci.

INTRODUCTION

In the twenty-first century, the context of learning has changed to meet life-related needs. It has come to the fore not to transfer past information to students, but to gain the skills of accessing updated information in the fastest and most reliable ways and using this information appropriately. The understanding of "education and learning" that continues throughout adulthood and/or vocational education has evolved into a "lifelong education and learning" approach (1). Technological developments and scientific studies have rapidly developed communication tools and these tools have enabled everyone to reach this information. In our world where such rapid changes are experienced, knowledge assumes the position of the main source of production and development. Therefore, accessing, using and producing information has become the social and economic necessities of the age (2).

Lifelong learning was first used by Grundtvig (3) and came to the education in 1970 (4). Lifelong learning is defined as the educational process that takes place throughout life without restrictions (5). Lifelong learning is all kinds of formal, non-formal or distance education that individuals receive as a result of their needs in order to enable them to gain new knowledge and skills at any stage of their lives without limitation of time, place and subject, or to improve their existing knowledge and skills (6). Lifelong learning is when individuals have the knowledge and skills necessary for self-learning without the need for anyone else. It should be aimed to train students who are responsible for and can manage their own learning (7).

The rapid change that is happening day by day in today's society makes it necessary for individuals to constantly renew / improve themselves. Thanks to today's possibilities, the individual can create a self-learning environment by making use of various tools and equipment. In addition, many types of education such as e-learning, distance education, courses, in-service, pre-service, vocational and technical education are included at the scope of lifelong learning (8).

Considering the definitions made in the literature, the focus in lifelong learning is individual's continuous self-improvement. This concept includes continuity of learning and four different components: motivation, persistence, curiosity and self-regulation (9).

It is very important to determine the lifelong learning tendencies of medical faculty students in order to increase the lifelong learning skills. The aim of this study is to determine lifelong learning tendencies of medical faculty students and whether there is a relationship between lifelong learning tendencies and gender, grade variables.

MATERIAL AND METHODS

In the study "Lifelong Learning Disposition Scale" was used. This scale was developed by Coşkun (10) on university students and validity and reliability study was conducted for the field of medical education by Arslan et al. (1). This scale consists of 25 items and four subdimensions. The dimensions are: Motivation (4 items), persistence (8 items), deprivation in regulating learning (5 items) and deprivation in curiosity (8 items). The Cronbach's alpha +of the scale was 0.92 (1).

In this study, stratified sampling method was used. Students are stratified by each grade and gender. The sample volume was calculated as follows: According to the literature (9), students' lifelong learning tendency scale score was taken as 89.09±15.28 to find a 5% difference significant with 0.01 probability of error and 90% power it was calculated that 179 cases should be taken. However, considering possible case losses, it was decided to recruit 200 students. In the study, 98% (n=196) of 200 students were reached. In the study, lifelong learning tendencies scale and sociodemographic questions were applied face to face to medical school students (n = 196) in the 2019-2020 academic year.

Statistical evaluation was made with the SPSS statistics program. Mean, standard deviation, frequency, percentage, Mann Whitney U and Kruskall Wallis tests were used. The results were interpreted at a 95% confidence interval, with a significance level of $p < 0.05$.

In the study, scale's Cronbach's alpha was 0.884, and the Cronbach's alpha values of the sub-dimensions of motivation, persistence, lack of regulation of learning, lack of curiosity were 0.689, 0.808, 0.693, 0.795 respectively.

Ethics committee approval was received from Trakya University Faculty of Medicine Scientific Research Ethics Committee (Decision No: 14/14, Date: 02.09.2019).

RESULTS

Motivation subscale mean was 6.43 ± 2.43; Persistence subscale mean was 18.9 ± 6.23; Deprivation in regulating learning subscale mean was 24,48 ± 5,05; The mean of deprivation in curiosity subscale was 24.5 ± 6.54. The total score average was 74.34 ± 9.56.

In Table 1, the distribution of students according to gender and grade level is seen.

Table 1. Distribution of students according to gender and grade

VARIABLES	**n**	**%**
Gender		
Female	111	56.6
Male	85	43.4
Grade	**n**	**%**
First	50	25.5
Second	33	16.8
Third	41	20.9
Fourth	20	10.2
Fifth	52	26.5
TOTAL	196	100.0

As seen in Table 2, females' motivation and deprivation in regulating learning averages were significantly lower than males ($p < 0.05$). The total mean scores of males were significantly higher ($p < 0.05$) than females.

As seen in Table 3, it was determined that the average of deprivation in regulating learning and total score averages differ significantly ($p < 0.05$) according to grade.

Table 2. Comparison of lifelong learning tendencies subdimension averages according to gender

VARIABLES	Gender	N	Mean Rank	Mann Whitney U	p
Motivation	Female	111	87.20	3463.000	**0.001**
	Male	85	113.26		
Persistence	Female	111	92.64	4066.500	0.097
	Male	85	106.16		
Deprivation in regulating learning	Female	111	89.19	3684.000	**0.008**
	Male	85	110.66		
Deprivation in curiosity	Female	111	91.62	3953.500	0.052
	Male	85	107.49		
Total score	Female	111	89.00	3663.000	**0.007**
	Male	85	110.91		

Table 3. Comparison of lifelong learning tendencies subdimension averages according to grade

VARIABLES	Grade	N	Mean Rank	X^2	p
Motivation	First	50	93.25	1.530	0.821
	Second	33	107.44		
	Third	41	96.73		
	Fourth	20	94.38		
	Fifth	52	100.86		
Persistence	First	50	86.80	5.006	0.287
	Second	33	94.17		
	Third	41	97.72		
	Fourth	20	104.68		
	Fifth	52	110.74		
Deprivation in regulating learning	First	50	80.74	13.658	**0.008**
	Second	33	93.61		
	Third	41	92.05		
	Fourth	20	109.93		
	Fifth	52	119.38		
Deprivation in curiosity	First	50	88.25	8.969	0.062
	Second	33	87.08		
	Third	41	99.45		
	Fourth	20	128.50		
	Fifth	52	103.32		
Total score	First	50	83.13	10.072	**0.039**
	Second	33	91.52		
	Third	41	95.07		
	Fourth	20	118.38		
	Fifth	52	112.77		

Fifth grade students' average deprivation in regulating learning was significantly higher than the first grade students (Mann Whitney U = 801.000; p = 0.001).

The average deprivation in regulating learning of fifth grade students was significantly higher than the second grade students (Mann Whitney U = 629.500; p = 0.039).

Fifth grade students' deprivation in regulating learning average was significantly higher than the third grade (Mann Whitney U = 759.500; p = 0.017).

The total score of fourth grade students' lifelong learning tendencies was significantly higher than the first grade students (Mann Whitney U = 310.000; p = 0.013).

The total score of fifth grade students' lifelong learning tendencies was significantly higher than the first grade students (Mann Whitney U = 927.000; p = 0.012).

DISCUSSION

In our study, mean of motivation subdimension was 6.43 $\pm$ 2.43; mean of persistence subdimension was 18.9 $\pm$ 6.23; mean of deprivation

in regulating learning subdimension was 24.48 ± 5.05; mean of the deprivation in curiosity sub-dimension was 24.5 ± 6.54. The total score average was 74.34 ± 9.56. Female students' motivation and deprivation in regulating learning averages were significantly lower than males ($p < 0.05$). The total mean scores of males were significantly higher ($p < 0.05$) than females.

In the literature, there are research results that parallel and differ from the findings obtained in our study. In a study, male students' lack of curiosity sub-dimension scores were higher than female students. Students' motivation, persistence, deprivation in regulating learning and total scores didn't differ significantly according to gender (4). Şahin et al. (11) and Kangalgil and Özgül (12) found that lifelong learning of students didn't differ according to gender. In some studies, female students have higher lifelong learning tendencies than male students (9,13,14,15,16). In the study of Gencel (13), female students' perceptions of lifelong learning competencies were significantly higher than male students.

In our study, lifelong learning tendency total score average was 74.34 ± 9.56. In a study students' lifelong learning tendencies were low (4). Similarly, in a study conducted by Coşkun and Demirel (9), students' lifelong learning tendencies were low. In a study conducted with nursing students, the average score of Lifelong Learning Tendencies Scale was 68.1 ± 23.58 (17). In another study, lifelong learning scale total score was 56.41±17.12. Students' lifelong learning tendencies differed significantly according to gender and grade. Male students' lifelong learning tendencies were higher than female students. Students' lack of learning and lack of curiosity mean scores differed significantly according to gender. The mean scores of the third and fourth grade students regarding lifelong learning, deprivation in regulating learning and lack of curiosity were significantly higher than the first and second grade students (18).

In another study, the lifelong learning tendencies of the students were very good. It has been found that there are differences in lifelong learning tendencies according to gender. Female nursing students' lifelong learning tendencies were higher than males. Deprivation in regulating learning and lack of curiosity subdimensions were significantly differed according to grade. Total YBÖÖ scores of female students had a higher rank average than males (19).

In a study conducted with teacher candidates, the deprivation in organizing learning and curiosity, the lifelong learning tendencies of the students differed significantly according to gender. Female students' lifelong learning tendencies were higher than males. It has been determined that female students' level of lifelong learning tendencies in deprivation in organizing learning and curiosity sub-dimensions was lower than males (20). In a study, curiosity scores of females were significantly higher than males (21). In another study, female students have a higher level of curiosity towards learning than males (22). Coşkun and Demirel (9), Kılavuz and Aydın (23), Kılıç (24), Karaduman and Tarhan (25), Çetin and Çetin (26) found that lifelong learning tendencies of female students were higher than males. On the other hand, Dikmen et al. (18), Dikmen et al. (27), Ekşioğlu et al. (28) found that lifelong learning tendencies of male students were higher than females. In another study, male students' lifelong learning tendency scores were significantly higher than females (29). In a study, it was observed that female students in each sub-dimension of lifelong learning were at a higher level than male students (8). In another study, students' lifelong learning tendencies were high, there was a significant difference in all sub-dimensions except the motivation sub-dimension. Lifelong learning tendencies of female students were higher than males (30). In studies, female students' lifelong learning were higher than males (13, 31). These differences that emerge in comparisons of lifelong learning tendencies according to gender is thought to be due to the difference in research method and samples.

In our study, it was found that the average of deprivation in regulating learning and the total score averages of lifelong learning tendencies differed significantly ($p<0.05$). Fifth grade students' average deprivation in regulating learning was significantly higher than the first grade students. The average deprivation in regulating learning of fifth grade students is significantly higher than the second grade students. It was determined that fifth grade students' deprivation in regulating learning average was significantly higher than the third grade. Fourth grade students' lifelong learning tendencies total score was significantly higher than the first grade students. Fifth grade students' lifelong learning tendencies total score was significantly higher than the first grade students. Similar to our study's results, in a study, first grade students' lifelong learning tendencies were lower than other grades. Second year students' scores in motivation subdimension were higher than fourth graders; first, second and third year students' scores on persistence dimension were higher than fourth grades. In the deprivation in regulating learning subdimension, the scores of the second and fourth grade students were higher than the first grade students and the fourth grade students were higher than the third grade. In the scores obtained from the deprivation in curiosity subdimension and the total of the scale, it was determined that the averages of the second, third and fourth grade students were higher than the first grade (4). In another study, there was no difference between medical school and nursing students in terms of lifelong learning and gender. Lifelong learning orientation of medical

students didn't differed according to grade (32). In a study, results indicated that the orientation toward lifelong learning tended to increase gradually along the education (33).

In our study, first grade students'lifelong learning tendencies scores were lower than other grades. In the literature, it is stated that lifelong learning takes place in different ways in every age period. In this context, one of the reasons why first grade students' lifelong learning tendencies are lower than other grades may be factors affecting lifelong learning tendencies such as "having more experience and learning habits" (34). In another study, the average of first grade students 'lifelong learning tendencies was lower than fourth grade students (9). In the study conducted by Atacanlı (35), the lifelong learning preferences of medical faculty students didn't differed significantly according to grade. In another study, lifelong learning tendencies of university students didn't differ according to their grade level (29).

In a study which examined the lifelong learning competencies of vocational high school students studying in different departments and classes Karakuş (36) found a significant difference between 1st and 2nd grade students. Level of the 2nd grade students' lifelong learning competencies was higher than the 1st grade (36). In another study, 1st grade students were at a higher level in each sub-dimension of lifelong learning tendencies than the 2nd and 3rd grade students (8). In a study, 3rd grade students' lifelong learning scores were lower than the other three grades (12).

In a study, it was observed that they had the highest average score in the motivation sub-dimension and the lowest average score in the lack of curiosity sub-dimension (15). In another study, students' motivation sub-dimension scores were high. In a study, students have a lifelong learning motivation, but their tendency to adapt this situation to different situations and to maintain their curiosity is lower than the motivation and persistence sub-dimensions. In the study, students' scores were lower in the deprivation in regulating learning and curiosity subdimensions (16).

In another study, it was found that students' lifelong learning tendencies are high (37). In a study, students' lifelong learning tendencies were at a medium level (38). As a result of the study of Karaman and Aydoğmuş (22), it was observed that the participants were at a very good level in motivation and persistence. In a study conducted with Turkish teacher candidates studying at the Faculty of Education program, it was observed that students in all subdimensions generally had a high average in the Lifelong Learning Scale (8). In a study conducted with nursing students, students' lifelong learning levels were low. They got the highest score from the "Curiosity Loss" subdimension and the lowest score from the "Motivation" subdimension (23). In the research conducted by Tunca et al. (4) on teacher candidates, the highest mean score was in the "Curiosity Deprivation" dimension and the lowest mean score was in the "Motivation" sub-dimension. In another study students' "Lack of Curiosity" subdimension mean score was highest. The lowest average score was in the "Motivation" subdimension (9).

On the other hand, there are studies in the literature in which lifelong learning tendencies were low. These studies were conducted among pre-service teachers, teacher candidates taking pedagogical formation and university students (4, 9, 28). As a result of another study, the average scores of medical faculty students ($X = 85.20 \pm 9.87$) were relatively lower than students from other faculties (39). In another study, clinical students scored significantly higher toward lifelong learning (40).

An important reason for these differences may be the differentiation of measurement tools used in studies, as well as the focus on different components of lifelong learning. The reason why the results differ in this way can be shown that the socio-demographic characteristics of the students and the departments they study in are different. It is observed that the main reasons for these differences are the differences between the study groups. In addition, it is thought that the differences in the content of lifelong learning in education curricula are also an important factor. Yet another reason may be the differences in the subtitles included in the scales. Another reason is that the professions and branches are different.

CONCLUSION

In line with the results obtained in the research, importance can be given to the development of lifelong learning tendencies in line with the activities to be carried out in the medical education program. Qualitative research can be conducted to investigate the reasons for the results of the research. In the light of the research findings, it can be said that there is a need to organize teaching-learning processes in medical faculties in order to gain lifelong learning competence. Suitable environments that support lifelong learning opportunities should be prepared and in this direction, on-campus and off-campus systems where students can easily access learning resources (library, internet, e-learning applications, courses, seminars, etc.) should be developed. Students should take orientation training for the use of information sources. In future studies, qualitative research can be conducted in addition to quantitative research on other factors that may be associated with lifelong learning tendencies.

REFERENCES

1. Arslan ŞF, Sarıkaya Ö, Vatansever K. Reliability and validity study of the lifelong learning tendency questionnaire for medical education. Tıp Eğitimi Dünyası. 2016;47:38-46.
2. Akbulut S, Erol A, Say S. Examining the relationship between lifelong learning tendencies and occupational anxiety of the prospective teachers. Journal of Education and New Approaches. 2018;1(1):1-11.
3. Wain K. The learning society: postmodern politics. International Journal of Lifelong Education. 2000;19(1):36-53.
4. Tunca N, Şahin AS, Aydın Ö. Life-long learning tendencies of pre-service teachers. Mersin University Journal of the Faculty of Education. 2015;11(2):432-446.
5. Dinevski, D, Dinevski IV. The concepts of university lifelong learning provision in Europe. Transition Studies Review. 2004;11(3):227-35.
6. Güleç İ, Çelik S, Demirhan B. What is lifelong learning? An evaluation on definition and scope. Sakarya University Journal of Education. 2012;2(3):34-48.
7. Erdamar G, Demirkan Ö, Saraçoğlu G, Alpan G. The relationship between high school teachers' life-long learning tendencies and their educational ınternet use self-efficacy beliefs. Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi. 2017;17(2):636-57.
8. Kurt E, Cevher YT, Arslan N. Pre-service turkish teachers' tendencies towards lifelong learning. Trakya Journal of Education. 2019; 9(1):152-60.
9. Diker Coşkun Y, Demirel M. Lifelong learning tendencies of university students. H.U. Journal of Education. 2012;42:108-120.
10. Coşkun Diker Y. Examining lifelong learning tendencies of university students according to some variables. Hacettepe University, Social Science Institute, Educational Science Department. Doctoral dissertation. Ankara. 2009.
11. Şahin M, Akbaşlı S, Yelken TY. Key competences for lifelong learning; the case of prospective teachers. Educational Research and Review. 2010;5(10):545-56.
12. Kangalgil M, Özgül F. Investigation of physical education and sports training students in lifelong learning trends. Journal of Global Sport and Education Research. 2018;I (1):64-72.
13. Gencel İE. Prospective teachers' perceptions towards lifelong learning competencies. Education and Science. 2013;38(170):237-52.
14. İzci E, Koç S. The evaluation of the teacher candidates' views on the life long learning. Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi. 2012;5(9):101-14.
15. Bulaç E, Kurt M. Öğretmen adaylarının yaşam boyu öğrenme eğilimlerinin incelenmesi. Amasya Üniversitesi Eğitim Fakültesi Dergisi. 2019;8(1):125-61.
16. Şahin Ü, Sarıtaş E, Çatalbaş G. Lifelong learning tendencies of primary school teacher candidates. PAU Journal of Education. 2020;48:374-89.
17. Şenyuva E, Kaya H. Nurses' Lifelong-learning tendencies and their attitudes toward distance education: A sample of Turkey. The New Educational Review. 2014;36(2):17-29.
18. Dikmen Y, Yuvacı HU, Erol F. The investigation of lifelong learning tendencies in medical faculty students. International Journal of Human Sciences. 2017;14(3):2399-408.
19. Arslan Y. Hemşirelik öğrencilerinin yaşam boyu öğrenme eğilimlerinin belirlenmesi. Yüksek Lisans Tezi, Doğu Akdeniz Üniversitesi. 2018.
20. Gökyer N, Türkoğlu İ. Lifelong learning trends of university students. The Journal of International Social Sciences. 2018;28(2):125-136.
21. Dindar H, Bayrakçı M. Factors effecting students' lifelong learning in higher education. International Journal on Lifelong Education and Leadership. 2015;1(1):11-20.
22. Karaman D, Aydoğmuş U. Living length learning trends of university students. An application at Uşak University Eşme Vocational School. Nevşehir Hacı Bektaş Veli University SBE Journal. 2018;8(1):23-44.
23. Kılavuz F, Karabağ Aydın A. Determining the correlation between nursing students' individual entrepreneurship perceptions and lifelong learning trends. Journal of Hacettepe University Faculty of Nursing. 2020;7(3):240-248.
24. Kılıç Ç. Perceptions of candidate teachers towards lifelong learning. Journal of Education and Instructional Research. 2014;3(4):79-87.
25. Karaduman A, Tarhan S. Examining the relationship between university students' lifelong learning tendencies and their self-efficacy perceptions. Journal of Human Sciences. 2017;14 (1):355-75.
26. Çetin S, Çetin F. Lifelong learning tendencies of prospective teachers. Journal of Education and Practice. 2017;8(12):1-8.
27. Dikmen Y, Denat Y, Filiz NY, Başaran H. Hemşirelik öğrencilerinde yaşam boyu öğrenme eğilimleri. Journal of Human Rhythm. 2016;2(1).
28. Ekşioğlu S, Tarhan, S, Çetin Gündüz H. The relationships between self efficacy expectations and personality traits with lifelong learning tendency. Kastamonu Education Journal. September 2017; 25(5):1925-40.

29. Seyhan S, Kadı A. Lifelong learning tendencies and media literacy levels of university students. TSA. 2015;Year: 19 No: 3.
30. Yüzlü U. Relationship between lifelong learning tendencies and lifelong learning competence levels of associate degree students. Bartın University Institute of Educational Sciences. Bartın, 2019.
31. Karaduman A. The relationship between the lifelong learning tendencies of undergraduate students and their self-efficacy perceptions. Master's Thesis, Bartın University Institute of Educational Sciences. Bartın, 2015.
32. Mi M, Riley-Doucet C. Health professions students' lifelong learning orientation: Associations with information skills and self efficacy. Evidence Based Library and Information Practice. 2016;11.2:121-135.
33. Babenko O, Koppula S, Daniels L, Nadon L, Daniels V. Lifelong learning along the education and career continuum: meta-analysis of studies in health professions. Journal of Advances in Medical Education & Professionalism. 2017;5(4):157-63.
34. Günüç S, Odabaşı HF, Kuzu A. Factors affecting lifelong learning. Gaziantep University Journal of Social Sciences. 2012;11(2):309-25.
35. Atacanlı MF. Ankara Üniversitesi Tıp Fakültesi öğrencilerinin öğrenme tercihi değerlendirme (LPA) ölçeği aracılığıyla yaşam boyu öğrenme davranışının yıllara göre değişiminin araştırılması. Yüksek lisans tezi, Ankara Üniversitesi, 2007.
36. Karakuş C. Lifelong learning competences of vocational school students. Journal of Research in Education and Teaching. 2013;2(3):26-35.
37. Yenice N, Tunç AG. An investigation of pre-service teachers' lifelong learning tendencies and their individual innovativeness levels. Kastamonu Education Journal. 2019;27(2).
38. Duymuş Y, Sulak S. The effect of undergraduate education, gender and department on prospective teachers' lifelong learning dispositions. The Journal of Limitless Education and Research. 2018;3(2):58-74
39. Kozikoğlu İ. Üniversite ve meslek yüksekokulu öğrencilerinin yaşam boyu öğrenme yeterliklerinin incelenmesi. Journal of Instructional Technologies & Teacher Education. 2014;3(3):29-43.
40. Wetzel AP, Mazmanian PE, Hojat M, Kreutzer KO, Carrico RJ, Carr C, Veloski J, Rafiq A. Measuring medical students' orientation toward lifelong learning: A psychometric evaluation. 2010;Acad Med. 85(10): Supplement, S41-S44.