



## LIFELONG LEARNING COMPETENCE SCALE (LLLCS): THE STUDY OF VALIDITY AND RELIABILITY

### YAŞAM BOYU ÖĞRENME YETERLİK ÖLÇEĞİ (YBÖYÖ): GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI

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**ABSTRACT:** In this research our aim is to develop a scale for lifelong learning competences and investigate the validity and the reliability of the structure of the scale. The participants of this research are 300 secondary school teachers who are randomly selected. The findings on the scale's validity of the structure are computed by the method of factor analysis. It is observed, at the end of analysis, that lifelong learning competencies scale (LLLCS), which is made up of 6 sub-dimensions, contains 51 items. The six sub-dimensions are stated as follows; "self-management competencies", "learning how to learn competencies", "initiative and entrepreneur competencies", "competencies of acquiring information", "digital competencies" and "decision-taking competencies". The coefficient of Cronbach Alfa reliability of the scale is measured as 0.95. As the studies on the viability and reliability illustrate, the scale has the sufficient merit of utilization.

**Keywords:** Lifelong learning, Lifelong learning competencies, Validity, Reliability, Teachers

**ÖZET:** Bu araştırmanın amacı, yaşam boyu öğrenme yeterliklerine yönelik bir ölçek geliştirmek ve ölçeğin geçerlik ve güvenirlik yapısını incelemektir. Araştırmanın çalışma grubunu rastgele olarak seçilen 300 ortaokul öğretmeni oluşturmaktadır. Ölçeğin yapı geçerliğine ilişkin bulgular faktör analizi yöntemi ile hesaplanmıştır. Analiz sonucunda 6 alt boyuttan meydana gelen yaşam boyu öğrenme yeterlikleri ölçeği (YBÖYÖ) 51 maddeden oluşmuştur. Belirlenen 6 alt boyut ise sırasıyla; "öz yönetim yeterlikleri", "öğrenmeyi öğrenme yeterlikleri", "inisiyatif ve girişimcilik yeterlikleri", "bilgiyi elde etme yeterliği", "dijital yeterlikler" ve "karar verebilme yeterliği" şeklinde isimlendirilmiştir. Ölçeğin Cronbach Alfa güvenirlik katsayısı ise 0.95 olarak hesaplanmıştır. Yapılan geçerlik ve güvenirlik çalışmalarına göre ölçek kullanılabilir niteliklere sahiptir.

**Anahtar sözcükler:** Yaşam boyu öğrenme, Yaşam boyu öğrenme yeterlikleri, Geçerlik, Güvenirlik, Öğretmenler

## 1. INTRODUCTION

Adjustment to the rapidly changing era is necessary for the survival of societies. Specifically, the advances in sciences and technology have impacts on social, economic and cultural experiences; career fields and the job descriptions have changed. Therefore, the profile of men-power in demand has also changed. With adjustment to the changes and development, advance and transformation into information society is enabled only by educating individuals in that direction. "Lifelong learning" policy allows them to exist as individuals who have access to information, use information in the proper place, learn how to learn besides being creative and critical thinkers.

The concept of lifelong learning policy, which is understood as non-stop learning in our lives, is essential in satisfying the rapidly changing societal needs (Wang 2008) and following information and technology (Bryce 2004). Lifelong learning is an essential strategy (European Commission 2002). European Commission (2002) that province development and sustainability of information, skill and competencies of individuals (Cowan et al. 2004; Figel 2006; Sim et al. 2003).

In the first decade of 1970's, some international organizations (OECD, UNESCO) applied lifelong-learning for humanistic purposes (Hake 1999), which was accepted as a popularized slogan in the educational policies of EU (Beycioğlu & Konan 2008; Dehmel 2006). Especially in 1973, lifelong learning was used for education by UNESCO (Demirel 2009a; Friesen & Anderson 2004; Green 2002; Kang 2007), which developed life skills programs for adults (Viswanathan et al. 2008). In most

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general sense, the lifelong learning approach is defined as “learning which have been acquired from cradle to tomb” (Woodrow 1999); it was granted an international award in the year of 1996 (Demirel 2009a) and seen as an important strategy for unemployment (Fischer 2001).

Lifelong learning, which aims at influencing the inexperienced in changing career fields and focusing on the demands of individuals taking self-responsibility in their learning process (Rainbird 2000), assist their development by helping them build up their potentials at utmost degree (Demirel 2009b), and increase the social welfare by assisting their development of learning skills (Bath & Smith 2009; Brockett & Hiemstra 1991; Cansever 2009; Demirel 2009c; Hojat et al. 2003; Janssen et al. 2007; Koper et al. 2005). Technology plays an important role in this process. The approach of lifelong learning and recent technological development intersects (Sharples 2000). Distance learning applications satisfy lifelong learners need by eradicating the limitations in the educational process (Barratt 2006; Muller et al. 2010). Also, these changes and trends allow individuals more freedom in their choice of learning activities (Longworth 2003).

Lifelong learning process consists of three learning situations in which the learning activities are realized. These are formal education, informal education and non-formal education (Antikainen 1998; Eneroth 2008; Fahr 2005; Woodrow 1999; Özcan, 2011). Lifelong learning process; “Finds more effective ways in the limited resources in teaching and learning”, “Satisfies the rapidly increasing educational needs and fulfill the expectations of students from various backgrounds whose number also constantly increase”, “New careers, opportunities and rapid change”, “Explosion of information and technology”, “Transition into information society”, “Plays a significant role due to the reconstruction in economy, institutional reforms, and changes in offices” (Kiley & Cannon 2005).

In the lifelong learning process, learners should possess the following qualifications; “Self-Planning their learning”, “Self-assessment of their learning”, “Become more active learners”, “Learn in any environment”, “Peer-learning and teacher-oriented learning skills”, “The ability of applying different learning strategies in different situations” (Knapper & Cropley 2000).

In order to become lifelong learners individuals of the information society should possess several specific skills. The competencies of lifelong learning, which are called in the combined trio of information, skills and attitudes in the literature, are classified in 8 headings in general (Demirel 2009c; Figel 2006; Otten & Ohana 2009; Hürsen et al. 2010); “Mother tongue communication skill”, “Communication in foreign language skill”, “Competence in mathematics and science & basic competencies in technology”, “Numerical Competencies”, “Learning how to learn”, “Social and Citizenship competencies”, “Entrepreneur”, “Cultural Awareness and expression”. The eight key competencies provide opportunity for keeping up the rapid changes and promote success both in social life and in career. All of these competencies are equally significant, and interrelated.

Determining to what extent individuals possess lifelong learning competencies and eliminating the lacks in this field are considered essential for social development. Training lifelong learning individuals could only be realized by teachers as lifelong learners. Teachers should assist students to develop habits of lifelong learning to adjust themselves to the changes they encounter in their lives and renew themselves constantly (Demiralay & Karadeniz 2008).

This research is done for the teachers, who are assigned the important duty of training successful life-long learners. The literature review shows that there is no sufficiently qualified scale to determine individuals “lifelong learning competencies”. This is considered as a deficiency in providing data for lifelong learning and assessment of the present situation. Within this perspective, the aim of this study is to develop a scale for the assessment of lifelong learning competencies and analyze its structure of validity and reliability.

## 2. METHOD

### 2.1. Participants

Teachers are assigned the greatest duty in training individuals as lifelong learners. Therefore, the study group of this research is consisted of 300 teachers from the secondary schools in North

Cyprus. The secondary schools are randomly selected. Also, to obtain reliable results, volunteer teachers are selected as participants. 200 (66, 7 %) of the participants are female, whereas 100 (33, 3 %) of them are male. The distribution of the length of service of the participants are illustrated in Table 1.

**Table 1: Profile of the Participants**

	Frequency	Percent (%)
1-5 years	122	40,7
6-10 years	62	20,7
16-20 years	49	16,3
11-15 years	34	11,3
21 and above	33	11,0
<b>Total</b>	<b>300</b>	<b>100</b>

## 2.2. Instrument

Lifelong learning competencies scale (LLLCS) is made up of two parts, which are “demographic data” and “lifelong learning competencies”. In the first part, “demographic data”; the participants’ gender and the length of service are determined, whereas in the second part, the level of lifelong learning competencies are exhibited.

### 2.2.1. Lifelong Learning Competencies Scale (LLLCS)

During the process of developing lifelong learning competencies scale (LLLCS) four stages in order are taken into consideration. Literature on “lifelong learning approach” and “lifelong learning competencies” are primarily reviewed to diagnose the problem in the research and therefore establishing aims. Then eight titles for lifelong learning competencies are formed. After the problem diagnosis of the research in the second stage, interviews are done with academicians of this field (N=17) and teachers (N=10) and their views are consulted. Also, interviewed teachers (N=10) are asked to write a composition, expressing their views on “lifelong learning competencies”. In the third stage, following the results of the literature review, interviews with teachers and academicians. An item pool for the questionnaire is prepared. In the process of forming an item pool, we took pains in doing the content analysis for teachers’ compositions prior to formulating expressions of questions for the questionnaire. In the fourth stage, the prepared item pool is revised by the specialists (N=17), and their views on each item are re-consulted. The teachers also examine the item pools and their feedback on the comprehension of the items is taken into consideration; a pre-application is done, generating statistical data.

In the process of developing the questionnaire, the specialist’s views were consulted for the purpose of finding answers to the questions on the reliability of the questionnaire. The items, on which ninety-percent of consensus is reached for each question, are added to the questionnaire.

70 item draft version is revised, and after reconsulting the views of specialists and teachers, the second draft with 66 items is prepared. Next, the validity and reliability analysis of the scale is completed with the application of the scale to 300 teachers. Having done the statistical analysis, the fifteen items, whose load factor is estimated below 0.40, are taken out of the scale; the scale’s final draft version contains 51 items. In the studies on scale development, it is claimed that the sector point could be taken from the factor load that varies from 0.30 to 0.40 in setting the factor pattern (Çoklar & Odabaşı 2009; Gürbüzür & Şad 2010; Johnson & McClure 2004; Neale & Liebert 1980; Özçınar 2006; Stevens 1996; Tuan et al. 2000). In this study, the sector point is 0.40. Also special attention is paid to the difference in the two factor load value of 0.10, for the items whose load value of two factors is over 0.40. In this case, independence among factors is justified.

The scoring of the items in LLLCS is 5 point likert-type; it is designed as “Never”, “A little”, “Medium”, “A lot” and “All” and graded as 1, 2, 3, 4, 5.

### 2.3. Procedure

When we look at the literature review, we observe that different application forms are present in the process of applying a questionnaire. The applications can be classified in four groups, which are called face to face, mail, phone and computer applications (Aiken 1997). In this study, the face to face application method is utilized for lifelong learning competencies scale. First of all, necessary permission is granted from the Ministry of Education and Culture at the stage of applying LLLCS, and then the data collector instrument is applied to teachers from randomly selected schools. Keeping in mind the principle of volunteer selection, the participants are told about all necessary information about the instrument. We took pains in waiting for the participants to respond the questions sincerely.

### 2.4. Data Analysis

The data obtained from the application of LLLCS is analyzed by the SPSS 16 packet program. The 0.05 level estimated value is interpreted as meaningful. For the LLLCS validity and reliability tests, primarily normal distribution analysis is done which contains the operations of mean, median, mode, Std. deviation, variance, minimum and maximum values, range, Skewness and Kurtosis. As in many studies, (Ekici 2005; Namlu & Odabaşı 2004; Peterson et al. 2000; Yazıcı et al. 2009) KMO (Kaiser-Mayer-Olkin) Bartlett's test of sphericity (BTS) are applied and Principal Component Analysis and Varimax Rotation are calculated. The structure validity factor analysis of the scale and internal consistency reliability test are examined by coefficient of Cronbach Alfa. Also, total correlations are calculated to determine the relations of the scale items.

The factor analysis, which is a flexible data analysis, is considered as the most powerful method for the application of structure validity (Kahn 2006; Kerlinger 1973). In developing a scale, the size of the sample must be taken into consideration in doing a factor analysis with multiple variables (Preacher & MacCallum 2002; Sapnas 2004). Upon examining the literature review, we observe that the minimum size of sample should be varied from 100 to 250 (Sapnas 2004). Therefore, the number of study group for the factor analysis in this research (N=300) is justified.

### 3. Findings

Upon examining the results of the validity and reliability tests in the normal distribution analysis of the scale, it is observed that the minimum value is estimated as 57 whereas the maximum value is 255 and 198 is calculated for the range. Also the mean value is 199.29, the median is 200, Standard deviation 26.520, Skewnes value is -.957 whereas the Kurtosis value is calculated as 3.580.

In order to determine the obtained data from the study group for the appropriateness of the factor analysis, KMO (Kaiser-Meyer-Olkin) ve Bartlett's test of sphericity (BTS) are utilized. In the analysis, KMO value is estimated at 0.938. In the literature review, it is stated that Literature the KMO value should be over 0.60' whereas the value of 0.90 KMO is considered as complete in every respect (Namlu & Odabaşı 2007). And thus, in this study the KMO value of (0.938) can be considered as complete. In the Bartlett's test of sphericity results (9855,396, df:1275, p:0.00), for LLLCS in this study is estimated as significant. It is observed that the obtained results of the KMO ve Bartlett's tests are appropriate for the factor analysis.

It is shown in the results of the analysis that the communalities differ from 0.42 to 0.77. Also, the initial eigen values of 8 out of 51 items, which are added in the analysis, are over 1. The six factors are gathered in the scale. The Total Variance of the scale is presented in detail in Table 2.

**Table 2: LLLCS The Results of Factor Analysis Total Variance Explained**

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%		Variance	%
1	17,637	34,583	34,583	17,637	34,583	34,583	8,090	15,864	15,864

2	5,142	10,082	44,665	5,142	10,082	44,665	6,379	12,509	28,372
3	2,659	5,214	49,879	2,659	5,214	49,879	5,358	10,507	38,879
4	1,991	3,904	53,783	1,991	3,904	53,783	3,687	7,229	46,108
5	1,326	2,600	56,383	1,326	2,600	56,383	3,631	7,119	53,228
6	1,284	2,517	58,900	1,284	2,517	58,900	2,893	5,673	58,900
7	1,034	2,028	60,928						
8	1,013	1,986	62,914						
9	,942	1,847	64,761						
10	,916	1,796	66,557						
11	,880	1,725	68,282						

Extraction Method: Principal Component Analysis.

As it is observed in Table 2, the cumulative percentage for 6 factors is estimated as 58.900 percent. The results obtained for total and loadings percentage of variance are as follows; the first factor is 17.637 and 34.583 percent. The second factor is 5.142 and 10.082 percent. The third factor is 2.659 and 5.214 percent. The fourth is 1.991 and 3.904 percent. The fifth factor is 1.326 and 2.600 percent whereas the sixth factor is calculated as 1.284 and 2.517 percent.

It is stated that in the social sciences the variances might differ from forty percent to sixty percent (Hoe-Lau & Woods 2009; Namlu & Odabaşı 2007). The variance percentage of this study is above fifty percent and is at an acceptable limit. As a result of the Varimax rotation, the variance factor with 6 factors and its distribution is stated as follows; 15.864 percent for the first factor, 12.509 for the second, 10.507 percent for the third, 7.229 percent for the fourth, 7.199 percent for the fifth and for the sixth factor it is calculated as 5.673 percent.

In the analysis, the calculated mean for each scale item is between 3.43 and 4.25 whereas the standard deviations are between 0.71 and 1.24. The total correlations of the scale items is estimated between 0.32 and 0.74. In the literature, it is claimed that the acceptable limit of the item total correlations is generally above 0.20 (Namlu & Odabaşı 2007). In this study, the value of the total item correlations is above 0.20 which is an acceptable value. Table 6 presents the calculated value of the mean, standard deviations and total item correlations for each of the 51 item in LLLCS.

In scientific research, validity of the test is as important as its reliability. The reliability of a test is represented by the coefficient of reliability (Goto et al. 2010). The reliability of LLLCS is calculated by Cronbach Alpha reliability formula. The total coefficient of Cronbach Alpha reliability of the 51 item scale is calculated as 0.95. Studies show that estimated value of 0.70 and above for the coefficient of reliability value for each test is counted satisfactory (Hung et al. 2010; Özdamlı 2009; Van de Ven & Ferry 1979). According to the results obtained, it can be said that the scale is reliable. The reliability of the six-sub dimensions of the scale is illustrated in Table 3.

**Table 3: Coefficient of Reliability of the Cronbach Alpha in Accordance to the 6 Sub-Dimension of LLLCS**

Sub-dimensions	coefficient of reliability
Self-management competencies	0.93
Competencies of learning how to learn	0.91
Competencies of Initiative and entrepreneurship	0.89
Competencies on acquiring information	0.83
Digital Competencies	0.85
Competencies of decision-taking	0.75

As it is illustrated in Table 3, the coefficient of reliability in all sub-dimensions of the scale is above 0.70 and that all dimensions, therefore, are reliable. The factors and the value of factor loads in lifelong learning competency scale are illustrated in Table 4.

**Table 4: LLLCS Factors and Factor Load Values**

Item No – Items	Fac. I	Fac. II	Fac. III	Fac. IV	Fac. V	Fac. VI
<b>Self-management competencies</b>						
1 Ability to take new decision for career development	,588					
2 Being able to be aware of lacks in the process of individual development	,765					
3 The ability of self-assessment in learning process	,667					
4 Ability to work cooperatively with colleagues.	,599					
5 Group leadership in activities in career field.	,617					
6 Knowing how to self-motivate in career development.	,663					
7 Constant self-motivation in learning a new subject	,705					
8 Taking responsibility individually in team work	,752					
9 Actively participating all activities in any field	,770					
11 Presenting creative ideas upon encountering problems at work	,678					
13 Ability of adjusting easily to new opinions in career	,591					
14 Ability to conduct projects on career development	,610					
21 Constantly studying new subjects that one is learning	,543					
<b>Competencies of learning how to learn</b>						
23 Ability to determine the available opportunities for career development		,556				
26 Following the programs of all learning activities , related to your field of career		,524				
30 Ability to pose question without hesitation in the process of learning		,483				
32 To be able to be curious on any subject in one's field of career		,546				
34 Ability to form concept maps in acquiring knowledge on the subject one is interested in		,625				
35 Ability to choose the significant points on a subject one is learning		,710				
36 Ability to choose documents that contribute to the career development		,668				
37 Ability to choose materials that facilitate learning		,759				
38 Ability to concentrate on the new information in the learning process		,553				
42 Ability to be aware of the problems one encounter in the process of learning		,636				
48 Ability to use language effectively in the process of learning		,526				
52 Ability to form empathy in the process of learning		,458				
<b>Competencies of initiative and entrepreneurship</b>						
10 Ability to take decision on any issue			,620			
17 Ability to adjust to informational change in your field of career			,711			
19 Ability to turn the created opinions into action at work			,770			
24 Ability to notice the information one needs in your career field			,784			
25 Ability of self-direction in achieving the targets			,635			
27 Ability to choose the best learning environment to reach the targets			,752			
29 Ability to listen attentively what is said in the professional development activities			,773			
33 Ability to transfer the accumulated knowledge into daily life			,514			
39 Being always eager in learning new things about career			,484			
43 Ability to suggest solutions for any problem in the field.			,545			
<b>Competencies on acquiring information</b>						
51 Ability to form healthy relations in the process of acquiring information				,660		
53 Expressing opinions easily on any issue				,548		
59 Facilitate transition of information via e-mail				,669		

61 Access to information on internet through search engines such as Google.	,704
65 Utilizing mobile phones in accessing to new information	,620
63 Benefit from social utility websites such as face book, twitter in the process of gathering information.	,620
<b>Digital competencies</b>	
57 Ability to save data in computer	,521
58 Ability to use Internet	,631
60 Benefit from online internet tools such as online journals, newspapers, videos	,684
62 Benefit from online news-group	,594
64 Ability to use chat-programs such as chat, and msn.	,660
66 Facilitate sharing information on internet with colleagues	,700
<b>Competencies of decision-taking</b>	
12 Ability of pre-planning each stage to reach targets in career development process	,498
16 Ability to solve problem that hinder promotion in your career field.	,651
18 Able to predict the risks one can encounter at work	,677
40 Ability to guess how much time is required in learning a new subject.	,480

Upon examining Table 4, we see that the factor load value of the scale varies from .45 to .78. The title of the each six factor in order, which are obtained from the factor analysis results, are stated as follows; “Competencies of self-management”, “Competencies of learning how to learn”, “Competencies of the initiative and entrepreneurship”, “Competencies of acquiring information”, “Digital competencies” and “Competencies of decision-taking”.

#### 4. Discussion and Conclusions

The study, which aims at developing a lifelong learning competencies scale, is consisted of 51 items. Following the results of the factor analysis, the scale is confined to 6 factors. The sub-factors of the scale is related to the literature and given the following titles in order. “Competencies of self-management”, “Competencies of learning how to learn”, “Competencies of the initiative and entrepreneurship”, “Competencies of acquiring information”, “Digital competencies” and “Competencies of decision-taking”. The eight key competencies European Union determined is the source of inspiration for the titles of the sub-factors of the scale (Commission of the European Communities 2005).

The dimension of self-management competencies is consisted of statements such as “group leadership in the activities related to the career field”, “Taking responsibility individually in team-work”, “ability to conduct projects on career development” etc. As these statements entail, those individuals, who possess the self-management competencies, are responsible for their learning, and are aware of the deficiencies. Upon reviewing the literature, we also observe that individuals with self-management competencies have qualifications such as ethical behavior, goal-setting, self-knowledge, following the self development, control of emotions, career planning, responsibility, proper perception of time and space, participation, sharing, co-operation, doing team-work, leadership, self-motivation, real-life problem solving and showing respect to differences (Deci & Ryan 2000; Wallace 2008). Besides, individuals should also learn how to learn in order to become life-long learners.

Individuals’ active participation is quite important in the learning process. The act of learning primarily necessitates their learning of how to learn; those who become familiar to the features of learning, the strategies of learning together with the ability to choose and utilize, also turn out to be learners in real sense. The competencies of learning how to learn are consisted of a process, which is made up of several skills such as understanding the learning process, forming of an individual model regarding how one learns, being aware of personal choices and strengths and the significance of constant development of them, posing questions, and appropriate use of learning tools, forming a set

of learning strategies and creating a positive learning environment (Demirel 2009b). The second dimension of LLLCS, “competencies of learning how to learn” is consisted of statements such as “posing questions without hesitation during the learning process”, “ability to form concept maps in acquiring new information in the related subject area”, “ability to choose documents easily that contribute to career development”, “Ability to choose materials that facilitate learning in the learning process”, “paying attention to the new subject one is learning”.

The third dimension, which is called “competencies on the initiative and entrepreneurship” includes statements such as “the ability of adjusting oneself to the change of information in career”, “the ability of noticing the need of information in the career field”, “the ability of applying the created opinions into action”, “the ability of self-direction to reach the targets”, “the ability to produce solutions one encounter in the career field”, “the ability to transform the accumulation of information into daily life” the consciousness of initiative and entrepreneurship is about individuals’ ability of applying opinions into action. Besides the ability of planning and conducting projects to achieve targets, this dimension also incorporate creativity and adjustment to novelties and is quite significant since it requires keeping up with the social changes.

Being the most important feature of the era, the information age refers to a period of time in which knowledge, science and technology is in the process of rapid change. In the process of lifelong learning, individuals should also possess the competency of acquiring information (Demirel 2009a). The fourth sub-dimension of the scale, the competencies of acquiring information contains statements such as, “ability of forming healthy relations in the process of acquiring information”, “Access to information on internet through search engines such as Google”, “Utilizing mobile phones in accessing to new information”. Digital competencies are quite effective in acquiring information. The digital competencies are about to salvage and to save the data on computer, in addition to creation and presentation and the exchange of information (Figel 2006; Uzunboyly & Tuncay 2010). Digital competencies form the fifth dimension of LLLCS and contains statements such as “Ability to save data in computer”, “Use of internet”, “facilitate sharing information on internet with colleagues”.

In the process of learning, one of the most important competencies that lifelong learners should possess is the ability of decision taking. The competency of decision- taking, which is one of the upper level of behaviors of the cognitive field (analysis, synthesis, evaluation), (Isaacs 1996) is indispensable in all stages of life especially in solving the problems one encounters. Being the last dimension of the scale, the competency of decision- taking includes statements such as, “Ability to solve problem that hinder promotion in your career field”, “Ability of pre-planning each stage to reach targets in career development process”, “Ability to guess how much time is required in learning a new subject”, “Ability of pre-planning each stage to reach targets in career development process”.

The obtained results of the research illustrate that the scale has a reliable, consistent structure in all dimensions. It is believed that lifelong learning competencies scale will provide healthy and sound findings in the field. In the future studies, it is suggested that the scale would be applied to a larger sample group. The application of LLLCS should not be confined to teachers group with different subjects only but also to all teaching branches and multiple branches of work.

LLLCS we have developed in this study has merit as it helps analyzing lifelong learning competencies and determining the lacks in this field. Therefore, it is suggested that this research is to be supported by other different studies. Also LLLCS should be utilized and applied by other researchers for different studies from other disciplines and the results should be compared.

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## Genişletilmiş Özet

Yaşam boyu öğrenme, gerek formal gerekse informal eğitim yoluyla bireylerin kişilik, sosyal ve mesleki alanda gelişimini sağlayan tüm öğrenme faaliyetleridir. Bireylerin tüm hayatları boyunca ihtiyaç duydukları gereksinimlerini karşılayabilmeleri ise ancak bilgi, beceri ve tutumların bir kombinasyonu olarak tanımlanan yaşam boyu öğrenme yeterlikleri ile mümkün olmaktadır.

Bu araştırmada, yaşam boyu öğrenme yeterliklerine yönelik bir ölçek geliştirmek ve ölçeğin geçerlik ve güvenirlik yapısını incelemek amaçlanmıştır. Bu nedenle, araştırmanın çalışma grubunu, Kuzey Kıbrıs sınırları içerisinde bulunan ortaokullarda görev yapan 300 ortaokul öğretmeni oluşturmaktadır. Araştırmaya alınan ortaokullar ise rastgele seçilmiştir. Ayrıca yaşam boyu öğrenme yeterlik ölçeği (YBÖYÖ), “demografik bilgiler” ve “yaşam boyu öğrenme yeterlikleri” olmak üzere iki bölümden oluşmaktadır. Ölçeğin birinci bölümü olan demografik bilgilerde katılımcıların cinsiyet ve mesleki kıdemleri belirlenirken, ikinci bölümde yaşam boyu öğrenme yeterlik düzeyleri saptanmaktadır.

Yaşam boyu öğrenme yeterlik ölçeği (YBÖYÖ)’nin geliştirilmesi sürecinde sırasıyla dört adım dikkate alınmıştır. Öncelikle araştırma problemini tanımlamak ve bu probleme yönelik amaçlar oluşturmak için “yaşam boyu öğrenme yaklaşımı” ile “yaşam boyu öğrenme yeterlikleri”ne yönelik literatür detaylı olarak taranmış ve yaşam boyu öğrenme yeterliklerine yönelik 8 başlık belirlenmiştir. Araştırmanın problem durumu belirlendikten sonra ikinci aşamada, alanında uzman olan akademisyenler (N=17) ve öğretmenlerle (N=10) görüşmeler yapılarak “yaşam boyu öğrenme yeterlikleri” ile ilgili düşünceleri tartışılmıştır. Ayrıca görüşme yapılan öğretmenlerden (N=10) “yaşam boyu öğrenme yeterlikleri”ne yönelik düşüncelerini ifade eden birer kompozisyon yazmaları istenmiştir.

Ölçek geliştirme sürecinin üçüncü aşamasında literatür taraması, uzmanlar ve öğretmenlerle yapılan görüşmeler sonucunda ankete yönelik bir madde havuzu oluşturulmuştur. Özellikle madde havuzu oluşturulurken öğretmenlerin yazmış oldukları kompozisyonlar üzerinde içerik analizi yaparak anket için soru ifadelerinin oluşturulmasına da özen gösterilmiştir. Çalışmanın dördüncü aşamasında oluşturulan madde havuzu ise uzmanlara (N=17) tekrar incelettirilerek, her maddeye ilişkin görüşleri yeniden alınmıştır. Ayrıca madde havuzu öğretmenlere de incelettirilerek maddelerin anlaşılabilirliği yönünde dönüt sağlanmış, ön uygulama yapılarak istatistiksel işlemler gerçekleştirilmiştir.

70 maddeden oluşan taslak form, uzman ve öğretmen görüşü tekrar alındıktan sonra 66 madde olarak yeniden düzenlenmiş, 300 öğretmene uygulanmış ve ölçeğin geçerlik ve güvenirlik analizi yapılmıştır. Yapılan istatistiksel analizler sonucu faktör yükü 0.40’ın altında olan 15 madde de ölçekten çıkarılarak, 51 madde ile ölçeğe son şekli verilmiştir. Araştırmada alt kesme noktası ise 0.40 olarak kabul edilmiştir. Ayrıca yüksek iki yük değeri arasındaki farkın .10 olmasına özen gösterilmiştir. Bu şekilde faktörler arasında bağımsızlık sağlanmıştır.

Yaşam Boyu Öğrenme Yeterlik Ölçeği 5’li Likert tipi derecelendirme ölçeği olup, “Tam”, “Çok”, “Orta”, “Az” ve “Hiç” seçeneklerinden oluşturulmuştur. Ayrıca ölçek içerisinde yer alan ifadeler “Tam” seçeneğinden “Hiç” seçeneğine doğru 5’ten 1’e sayısal değerler verilerek puanlanmıştır.

YBÖYÖ’nün uygulanması aşamasında öncelikle Milli Eğitim ve Kültür Bakanlığı’ndan gerekli izin alınmış ardından da rastgele olarak belirlenen okullarda görev yapan öğretmenlere veri toplama aracı uygulanmıştır. Bu uygulamada katılımcılara araçla ilgili gerekli açıklamalar yapılmış ve soruları içtenlikle yanıtlamalarının önemi belirtilmiştir. Elde edilen veriler ise, SPSS 16 paket programında çözümlenmiş ve 0.05 anlamlılık düzeyi ile yorumlanmıştır. YBÖYÖ’nün geçerlik ve güvenirlik analizi için öncelikle normal dağılım analizi yapılmış ve bu analiz içerisinde ortalama, medyan, moda, standart sapma, en yüksek ve en düşük değerler, çarpıklık değeri ve basıklık değerleri hesaplanmıştır. Ayrıca KMO (Kaiser-Mayer-Olkin) ve Bartlett’s test of sphericity (BTS) uygulanarak, Temel Bileşenler Analizi (Principal Component Analysis) ve Varimax Döndürme (Varimax Rotation) tekniği hesaplanmıştır.

Ölçeğin yapı geçerliği faktör analizi ve iç tutarlık güvenilirliği de Cronbach alfa katsayısı ile incelenmiştir. Ayrıca ölçek maddelerine yönelik ilişkiyi belirlemek için madde toplam korelasyon (item total correlations) hesaplanmıştır. Faktör analizi sonuçlarına göre, ölçek 6 boyut ile sınırlandırılmıştır. Ölçeğin alt boyutları literatür ile ilişkilendirilerek “Öz yönetim yeterlikleri”, “Öğrenmeyi öğrenme yeterlikleri”, “İnisiyatif ve Girişimcilik yeterlikleri”, “Bilgiyi elde etme yeterlikleri”, “Dijital yeterlikler” ve “Karar verebilme yeterlikleri” olarak isimlendirilmiştir. Özellikle, ölçeğin alt boyutlarının isimlendirilmesinde Avrupa Birliği’nin belirlediği 8 anahtar yeterlikten esinlenilmiştir.

51 maddeden oluşan bu ölçeğin toplam Cronbach alpha güvenilirlik katsayısı 0.95 olarak bulunmuştur. Ölçekte bulunan 6 alt boyutun güvenilirliği ise; Öz yönetim yeterlikleri faktörü için 0.93, Öğrenmeyi öğrenme yeterlikleri faktörü için 0.91, İnisiyatif ve Girişimcilik yeterlikleri faktörü için 0.89, Bilgiyi elde etme yeterliği için 0.83, Dijital yeterlikler için 0.85 ve Karar verebilme yeterliği faktörü için 0.75 olarak hesaplanmıştır.

Araştırmadan elde edilen sonuçlar, ölçeğin gerek bütün gerekse alt boyutlar açısından güvenilir ve tutarlı bir yapıya sahip olduğunu göstermektedir. Ayrıca elde edilen sonuçlardan, yaşam boyu öğrenme yeterlik ölçeğinin alana yönelik sağlıklı bulgular sağlayacağı düşünülmektedir.

Gelecekte yapılacak olan çalışmalarda, yaşam boyu öğrenme yeterlik ölçeğinin daha fazla kişiden oluşan daha geniş bir örneklem grubuna uygulanması önerilmektedir. Öğretmenlere uygulanan yaşam boyu öğrenme yeterlik ölçeği farklı öğretmen gruplarına da uygulanmalı, ayrıca sadece öğretmenlik mesleği ile sınırlı kalmamalı, tüm meslek alanları için uygulanmalıdır.

Geliştirilen yaşam boyu öğrenme yeterlik ölçeği, bireylerin yaşam boyu öğrenme yeterliklerini analiz etmeye ve bu yöndeki eksiklikleri saptamaya yardımcı olacağından dolayı önem kazanmaktadır. Bu nedenle, bu ölçeğin farklı araştırmalar tarafından desteklenmesi önerilmektedir.