A scale of lifelong learning attitudes of teachers: The development of LLLAS

Cigdem Hursen *, Department of Computer Education and Instructional Technology, Near East University, Northern Cyprus, Via Mersin 10, Turkey.

Abstract

Knowledge, which is the most significant characteristic of today's knowledge society, has been changing and improving very rapidly. Particularly, the developments in science and technology have been influencing social, economical and cultural life; thus professions and descriptions of professions have been continuously renewed. In addition, the needed profile of man power relevant to the changing professions has been changing continuously and the learnt knowledge has not been prevalent. For this reason, there is a need for the individuals to update their knowledge and skills continuously in order to adopt themselves to the technological changes and new work conditions. Lifelong learning approach can provide societies and individuals with opportunities to catch up with these changes and developments. In raising individuals as lifelong learners, teachers play a big role. In order to establish lifelong learning societies, first of all teachers should have all the characteristics of lifelong learning. This is why it is extremely important to determine what the attitudes of the teachers are towards lifelong learning approach. However, there has not been developed any scale measuring teachers' attitudes towards lifelong learning approach so far. Therefore, in this current study, it is aimed to develop a scale to determine what the attitudes of the teachers are towards lifelong learning approach. The subject group is consisted of 300 teachers, working in the schools of the Northern Cyprus. The findings on the validity of the structure of the scale are measured by the factor analysis. As a result of the analysis, a lifelong learning attitude scale is developed with 19 items in three sub-dimensions (LLLAS). The sub-dimensions of the scale are formed in the following expressions: "reluctance to learn", "belief in the benefits of learning activities for professional development", "awareness of personal learning skills". As the result of the validity and reliability analysis, it was decided that the scale (LLLAS) would be appropriate in terms of its characteristics to be used in future studies.

Keywords: Teachers, lifelong learning, attitude, scale, validity, reliability

---

* ADDRESS FOR CORRESPONDENCE: **Çigdem Hürsen,** Department of Computer Education and Instructional Technology, Near East University, Northern Cyprus, Via Mersin 10, Turkey
E-mail address: cigdemhursen@gmail.com

1. Introduction

Recently, lifelong learning has become an interesting subject for research. The literature on lifelong learning contains many studies on lifelong learning from multiple fields and perspectives (Kilpatrick et al., 2003; Colardyn, 2004; Cantwell & Scevak, 2004; Peat et al., 2005; Longworth, 2006; Bath & Smith, 2009; Mandal, 2012). Based on the view that human beings constantly learn throughout their lives (Woodrow, 1999; Knapper & Cropley, 2000a), it is claimed that the interest on lifelong learning is due to the rapid changes in the world; particularly in the field of career (Jackson, 2003; Pak, 2013), science and technology (Bryce, 2004; Koper & Tattersall, 2004), in economics and in interpersonal human relations (Lynch, 2008; Evans, Schoon & Weale, 2013). Also, lifelong learning becomes essential, regarding the experienced changes towards the society expectations (Ozcan, 2011; Turan, 2005; Wang, 2008; Poizat, Haradji & Adé, 2013; Makino, 2013; Zhao & Biesta, 2012).

The lifelong learning concept (Aksoy, 2008) that for the first time started to be discussed in England in 1919 as the result of the need for education for the adults working for armed forces and industry, became a term in 1920s that was used particularly by John Dewey, Eduard Lindeman and Basil Yeaxle (Ersoy, 2009). It is also very interesting that in 1929 Basi Yeaxlee emphasized that lifelong learning would take place in many areas (in houses, libraries, churches, cinemas, theatres, concert halls, unions and politic societies), media and human communities (Hsieh, 2010).

There was a parallelism between the improvement of the concept of adult education in 1930s and the spread of "lifelong education" and "lifelong learning". In the "World Adult Education Conference" that was arranged by UNESCO, adult education was accepted as an education that continues lifelong and was stressed that adult education is based on lifelong education (Ozdemir, 2003). Alfred North Whitehead, on the other hand, underlined the process of lifelong learning by recognizing in 1931 (Akbas & Ozdemir, 2002) that individuals do not use what they learn at earlier ages throughout their lives. Education that is seen as conveying what known to the new generations remained insufficient; a rapid change in the area of science and technology, big innovations occurance and what people learnt in the past loose their validity in the rest of their lives were all effective passing into the process of lifelong learning.

"Passing into the information society", "Increasing competative capacity", "Free circulation of human power", "Increasing employment" are stated to be the basis of passing into lifelong learning process (Mac & Dede, 2008). The lifelong learning approach (Hake, 1999) that was started to be discussed, chiefly, in the beginning of 1970s is interpreted as a popularized slogan in the field of the educational policy of the European Union (Dehmel, 2006; Beycioglu & Konan, 2008; Aksoy, 2013). Additionally, the European Council, and the organisations of UNESCO and OECD have stated that in the changing and developing societies, it has become necessary to attach broader meanings to the education and they have also conveyd learning society's view to the world agenda with the reports they published (Tabak, 2005). In this period (in the beginning of 1970s), UNESCO, OECD and the European Council have started to take the concept of lifelong learning into their agendas (Beycioglu & Konan, 2008).

In the continuously changing world, lifelong learning that provides individuals with an opportunity to gain knowledge and competencies they need to be successful (Sharples, 2000); in 1973 after the Janne report, lifelong learning has been regarded as the main principle of the politics of the EU by taking place in Higher Education Memorandum in the European Community and Open-Distance Education Memorandum in the European Community that were successfully published in 1991 (Turan, 2005). Here it is worth mentioning that the year of 1996 was accepted as the year of lifelong learning and thus the significance of learning society is underlined. There is no doubt that this was an indicator of how rapidly lifelong learning has gained importance (Knapper & Cropley, 2000; Demirel, 2009; Zepke, 2013).

Lifelong learning that is necessary for individuals to renew their knowledge and competencies, also helps individuals to improve their abilities, to increase social union, to decrease crimes, to provide justice in income distribution (Demirel, 2005). Lifelong learning that

is focused on (Nind, 2007) how the learners' educational careers could be further improved, has a primary principle of continuing learning lifelong consciously and purposefully (Demirel, 2005). Dunlap and Grabinger (2003), likewise, in their studies, defined lifelong learning as a consciously group of learning to increase both individuals' life qualities and career developments. Bryce (2004) on the other hand, in his study, where he aimed to find out differenciated lifelong learning tendencies of secondary schools indicated that lifelong learning approach encourages students to learn lifelong. He also added that the negative manners of both family and teachers could prevent students to develop their learning skills. Fullan and Hargreaves (1996) stressed that lifelong learner teachers are academically successful and he also made a point by stating that as the teachers personally develop themselves their students could also develop.

Lifelong learning process is formed from three learning situation (Antikainen, 1998; Eneroth, 2008; Fahr, 2005; Turan, 2005; Woodrow, 1999; Nieto & Ramos, 2013; Preece, 2013; Boeren, 2011). They are; Formal education, nonformal education and informal education. Teachers, in this process should make students adapt to the changes they could face in their lives, gain lifelong learning habits for renewing themselves continuously and what is more not only students but also teachers themselves should be lifelong learners, too (Demiralay & Karadeniz, 2008; Finsterwalda, Wagner, Schober, Luftenegger & Spiel, 2013). In this process, the role of the teacher changes: instead of giving information, he/she guides students to get the knowledge (Goad, 1984).

Undertaking a significant role in the construction of a knowledge society, teachers should possess several characteristics to keep up with the experienced changes. The best way of coping up with the changes is the lifelong learning; the essential characteristics of teachers as lifelong learners should possess in this process are "self-planning of learning", "self-assessment of their learning", "active participation to the learning process", "ability of learning in all contexts", "ability of applying different strategies of learning in different contexts" (Knapper & Cropley, 2000b).

In addition, lifelong learners are individuals who could gain access to information through different ways and learn by attaching meaning to the data they have acquired; the profile of a lifelong learner depicts an individual, who enjoys learning and is equipped with qualifications that are essential of the era. Also, lifelong learners are at peace not only with themselves but also with their social environment; they are happy and flexible enough to adjust themselves to the changes they have experienced (Demirel, 2009). Aimed at development and learning throughout the whole span of life, lifelong learners should possess the competencies of critical thinking, creative thinking, research, communication, problem-solving, the utilization of information technologies, initiative and entrepreneurship, effective and proper use of the mother tongue, effective use of resources, cooperative and team work competencies, respecting to the differences and self-management skills (Deci & Ryan, 2000).

The most effective way of developing the competencies of lifelong learning is to desire learning and self-motivation in the process of learning. Motivation is defined as a concept of difference by many psychologists and educators (Urdan & Schoenfelder, 2006), affecting and contributing positively to the act of learning (Deci & Ryan, 2000; Iqbal, Kankaanranta & Neittaanmäki, 2011; Martin, 2012) leading to success at the highest level (Viljaranta et al., 2009); the successful realization of all acts of learning in the process is only possible with the willingness to learn and positive attitudes in learning.

An attitude is defined as "opinions, feelings and behaviours, systematically attached to a psychological object by a particular individual" (Smith, 1968) and is claimed to increase the competency of learning in the learning process. In order to become a successful lifelong learner, individuals should have willingness to learn and self-motivation in that direction besides the competency of learning how to learn, acquiring knowledge from different resources and developing positive attitude to learning (Ozer, 2001; Figel, 2006; Demirel, 2009). Teachers have an important mission for educating lifelong learners. Therefore, a research is essential for teachers' attitudes on lifelong learning process and also whether they develop positive attitudes on learning or not.

As the result of the literature review, it is discovered that there has not been developed any scale to determine what the attitudes of the teachers are towards lifelong learning approach. Only, Crick and his friends (2004) developed a scale that is formed from 7 sub-dimensions for students at different age groups. Also, Coskun and Demirel (2010) developed a scale to determine what the attitudes of the university students were towards lifelong learning approach. However, there is no scale developed so far measuring the lifelong learning attitudes of teachers working at different stages of education and having different work experiences and this is considered as a big gap in the literature. In other words, there is a need for a scale to collect data by determining the teachers' attitudes towards their career development and personal learning skills.

The main aim of this current study is to develop a Likert type scale to determine teachers' attitudes towards lifelong learning and find answers to the following questions:

1. Is the developed lifelong learning attitude scale valid and reliable?
2. Do different work experiences of teachers create a meaningful difference in their lifelong learning attitudes?

2. Method

2.1. Participants

Teachers are assigned the duty of keeping up with the changes and developments, therefore randomly selected teachers from the secondary schools in the Northern Cyprus form the study group of this research. Also, to obtain reliable results, volunteer teachers are selected as participants. Two hundred (66, 7 %) of the participants are female, whereas one hundred (33, 3%) of them are male. The distribution of participants genders, ages and the work experiences they have are given in Table 1 below.

Table 1. Profile of the participants

Gender	Frequency	Percentage (%)
Female	200	66.7
Male	100	33.3
Total	300	100
Work Experience	Frequency	Percentage (%)
1-5 years	119	39.7
6-10 years	62	20.7
11-15 years	67	22.3
16 and above	52	17.3
Total	300	100
Age	Frequency	Percentage (%)
23-30	147	49.0
31-40	72	24.0
41 and above	81	27.0
Total	300	100

As it could be easily seen in Table 1 above, 119 (39.7 %) of the teachers that participated in the study have between 1 and 5 years of experience, 62 (20.7 %) of them have between 6 and 10 years of experience, 67 (22.3 %) of them have between 11 and 15 years of experience, 52 (17.3 %) have 16 years and over work experience. In addition, 147 (49.0 %) of the teachers are between the age range of 23 and 30, 72 (24.0 %) of them are between 31 and 40 and 81 (27.0 %) of the teachers are over 41.

2.2. Instrument

The lifelong learning attitude scale (LLLAS) is consisted of two parts which are called "demographic data" and "lifelong learning attitudes". In the first part, -"demographic data"- the participants' gender, age and work experiences are determined, whereas in the second part, their attitudes to lifelong learning are indicated.

2.2.1. Lifelong Learning Attitude Scale (LLLAS)

During the process of developing lifelong learning attitude scale (LLLAS), literature on "lifelong learning" is primarily reviewed to diagnose the problem in the research and therefore establishing aims in the light of these problems. At this stage, the research particularly on lifelong learning attitudes is taken into consideration and the lacks and deficiencies of this field are attempted to be identified. 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 attitudes'. 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 re-revised by the academicians (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. The stages that were gone through in order to develop the lifelong learning attitude scale are summarized in Figure 1 below.
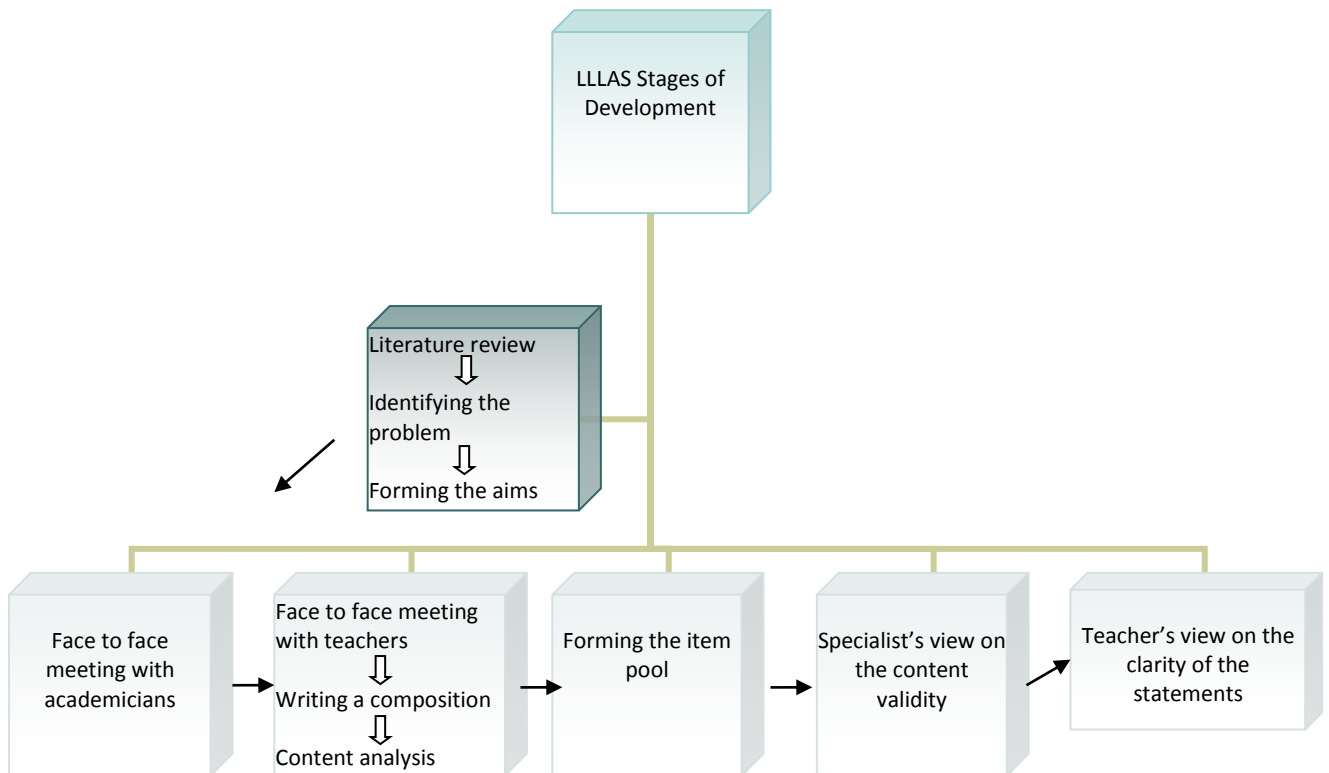

Figure 1. The stages of developing lifelong learning attitude scale

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. Examining the resources, it is observed that the specialists' views in demand is minimum 5, and maximum 40, which is necessary for the validity of the context of the questionnaire (Yurdugul, 2005). In this study, therefore, consulting 17 specialists' views is considered sufficient to determine the validity of the context.

35 item draft version is revised, and after re-consulting the views of academicians and teachers, the second draft with 30 items is prepared. Next, the validity and reliability analysis of the scale are completed with the application of the scale to 300 teachers. Having done the statistical analysis, the eleven items, whose load factor is estimated below 0.40 are taken out of the scale; the scale's final draft version contains 19 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 (Neale & Liebert, 1980; Stevens, 1996; Tuan et al., 2000; Johnson & McClure, 2004; Ozcınar, 2006; Coklar & Odabası, 2009; Gurbuztur & Sad, 2010). 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 LLLAS is 5 point likert-type; it is designed as "Strongly disagree", "Disagree", "Neutral", "Agree" and "Strongly agree". Also the scale contains two types of statements- positive and negative. The positive statements are graded as 5, 4, 3, 2, 1 whereas the negative ones are graded as 1, 2, 3, 4, 5.

2.3. Procedure

At the stage of applying the LLLAS, first of all, the necessary permission is granted from the Ministry of Education. And then, teachers from the randomly selected schools are briefly instructed on the significance of lifelong learning in the contemporary era. Keeping in mind the principle of volunteer selection, the participants are told about all necessary information about the instrument. The reasons of the responding the questions sincerely are justified.

2.4. Data Analysis

The data obtained from the application of LLLAS is analyzed by the SPSS 16 packet program. The 0.05 level estimated value is interpreted as meaningful. For the LLLAS 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 (Tokihan, 2010; Crick et al., 2004; Namlu & Odabası, 2004; Yazıcı et al., 2009; Ekici, 2005; Peterson et al., 2000) KMO (Kaiser-Mayer-Olkin) and Bartlett's test of sphericity (BTS) are applied and Principal Component Analysis and Varimax Rotation are calculated. The factor analysis, which is a flexible data analysis, is considered as the most powerful method for the application of structure validity (Kerlinger, 1973; Kahn, 2006). In this study, the structure validity factor analysis of the scale and internal consistency reliability test are examined by coefficient of Cronbach Alfa. Analysis of the attitudes of teachers towards lifelong learning according to their work experiences is also calculated with means, standard deviations, One-way Anova and LSD test.

3. Results

3.1. Validity and Reliability

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 47 whereas the maximum value is 144 and 97 is calculated for the range. Also the mean value is 144.57, the median is 117, Standard deviation 14.164, Skewness value is -,995 whereas the Kurtosis value is calculated as 2.170. The results of normal distribution analysis of the scale are presented in Table 2.

Table 2. LLLAS normal distribution analyses

N	Valid	300
	Missing	0
Mean		114,5767
Std. Error of Mean		,81780
Median		117,0000
Mode		118,00
Std. Deviation		14,16473
Variance		200,640
Skewness		-,995
Std. Error of Skewness		,141
Kurtosis		2,170
Std. Error of Kurtosis		,281
Range		97,00
Minimum		47,00
Maximum		144,00
Sum		34373,00

In order to determine the obtained data from the study group for the appropriateness of the factor analysis, KMO (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity (BTS) are utilized. In the analysis, KMO value is estimated at 0.904. 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 & Odabası, 2007). And thus, in this study the KMO value of (0.904) can be considered as complete.

In the Bartlett's test of sphericity results (2256.201, df: 171, p: 0.00) in this study is estimated as significant. It is observed that the obtained results of the KMO and Bartlett's tests are appropriate for the factor analysis. The results of KMO and Bartlett's tests are presented in Table 3.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,904
Bartlett's Test of Sphericity	Approx. Chi-Square	2256,201
	Df	171
	Sig.	,000

It is shown in the results of the analysis that the common variances differ from 0.42 to 0.70. Also, the initial Eigen values 3 out of 19 items, which are added in the analysis, are over 1. Three factors are gathered in the scale. The Total Variance of the scale is presented in detail in Table 4.

Tablo 4. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,735	35,448	35,448	6,735	35,448	35,448	3,703	19,491	19,491
2	2,182	11,482	46,930	2,182	11,482	46,930	3,657	19,247	38,738
3	1,349	7,099	54,029	1,349	7,099	54,029	2,905	15,291	54,029
4	,961	5,056	59,085						
5	,856	4,504	63,589						
6	,737	3,881	67,469						
7	,692	3,643	71,113						
8	,656	3,452	74,565						
9	,631	3,323	77,888						
10	,574	3,019	80,907						
11	,557	2,930	83,837						
12	,513	2,701	86,538						
13	,461	2,427	88,964						
14	,424	2,230	91,195						
15	,407	2,144	93,338						
16	,365	1,918	95,257						
17	,329	1,731	96,988						
18	,305	1,604	98,592						
19	,268	1,408	100,000						

Extraction Method: Principal Component Analysis.

As it is observed in Table 4, the cumulative percentage for 3 factors is estimated as 54.029 percent. The results obtained for Total and loadings percentage of variance are as follows; the first factor is 6.735 and 35.488 percent. The second factor is 2.182 and 11.482 percent. The third factor is 1.349 and 7.099 percent.

It is stated that in the social sciences the variances might differ from forty percent to sixty percent (Namlu & Odabası, 2007; Hoe-Lau & Woods, 2009). 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 percentage with 3 factors is stated as follows; 19.491 percent for the first factor, 19.247 for the second, 15.291 percent is calculated for the third. In the analysis, the calculated mean for each scale item is between 3.68 and 4.19 whereas the standard deviations are between 0.79 and 1.22. In the literature, it is claimed that the acceptable limit of the item total correlations is generally above 0.20 (Namlu & Odabası, 2007).

In this study, the value of the item total correlations is above 0.20 which is an acceptable value. Table 5 presents the calculated value of the mean, standard deviations and total item correlations for each of the 19 items in the LLLAS.

Table 5. LLLAS mean, standard deviation and item total correlations

Items	Mean	Std. Deviation	Item Total Correlation
1.The adjustment to information change in professional life is a personal responsibility	3.9900	1.09570	.476
2.Self-motivation during learning process is necessary for professional development	3.6800	1.08081	.348
3. An attempt to relate a new subject to the former knowledge during the process of learning is time-consuming	3.9967	.93786	.521
5. It is not necessary to learn new things in all stages of life	3.9700	1.22506	.442
7. Benefiting from mass media tools enriches the learning process	4.1367	1.00066	.574
11. Relating a new subject one learns to former experiences increases learning	4.1667	.88023	.542
13. It is not necessary to spend time to access information in the fields other than the professional ones	3.7400	1.18197	.512
15. Struggling to learn difficult subjects is time-consuming	3.8633	1.14120	.508
16. Individuals should have a constant desire to learn in order to be successful	4.1633	.97972	.524
17. Individuals who have promotion in their career do not need to participate to the professional development activities	3.8933	1.16611	.584
18. The use of technological tools such as computers and mobile phones enriches the learning process	4.1600	1.03180	.536
20. Individuals' lack of knowledge in their career field must be disregarded	3.8833	1.16372	.454
21. Individuals should do planning for their professional development	3.7133	.86428	.393
22. The research skills individuals possess increase their professional development	4.0833	.76047	.588
24. Exchanging information with colleagues in learning a new subject increases success	4.1867	.84511	.616
25. Forming a bridge between life and knowledge is essential for professional development	4.1067	.84320	.626
26. Individuals should have the conscience of the constant change of information in their career field	4.1900	.89996	.604
27. Individuals do not need to follow the changes in their career field	4.0000	1.11241	.629
28. Individuals' participation to the professional development activities increases the professional creativity	4.0600	.79908	.514

The reliability of LLLAS is calculated by Cronbach Alpha reliability formula. The total coefficient of Cronbach Alpha reliability of the 19 -item scale is calculated as 0.89. Studies show that estimated value of 0.70 and above for the coefficient of reliability value for each test is counted satisfactory (Van de Ven & Ferry, 1979; Ozdamlı, 2009; Hung et al., 2010). According to the results obtained, it can be said that the scale is reliable. The reliability of the three-sub dimensions of the scale is illustrated in Table 6.

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science.* *11*(1), 21-36.

Table 6. Coefficient of reliability of the cronbach alpha in accordance to the sub-dimension of LLLAS

Sub-dimensions	Coefficient of reliability
Reluctance to learn	0.84
The belief in the benefit of learning activities for professional development	0.85
Awareness of personal learning skills	0.78

As it is illustrated in Table 6 the coefficienct 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 attitude scale are illustrated in Table 7.

Table 7. LLLAS factors and factor load values

Item no-Items	Factor 1	Factor 2	Factor 3
1. Dimension			
Reluctance to learn			
15. Struggling to learn difficult subjects is time-consuming	.780		
17. Individuals who have promotion in their career do not need to participate to the professional development activities.	.732		
27. Individuals do not need to follow the changes in their career field	.674		
3. An attempt to relate a new subject to the former knowledge during the process of learning is time-consuming	.673		
13. It is not necessary to spend time to access information in the fields other than the professional ones	.664		
5. It is not necessary to learn new things in all stages of life	.656		
20. Individuals' lack of knowledge in their career field must be disregarded.	.603		
2. Dimension			
The belief in the benefit of learning activities for professional development			
25. Forming a bridge between life and knowledge is essential for professional development		.793	
26. Individuals should have the conscience of the constant change of information in their career field.		.756	
24. Exchanging information with colleagues in learning a new subject increases success.		.712	
22. The research skills individuals possess increase their professional development.		.685	
21. Individuals should do planning for their professional development.		.603	
28. Individuals' participation to the professional development activities increases the professional creativity		.603	
3. Dimension			
Awareness of personal learning skills			
11. Relating a new subject one learns to former experiences increases learning			.703
16. Individuals should have a constant desire to learn in order to be successful.			.683
7. Benefiting from mass media tools enriches the learning process.			.668
2. Self-motivation during learning process is necessary for professional development			.628
1. The adjustment to information change in professional life is a personal responsibility			.625

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science.* *11*(1), 21-36.

18.The use of technological tools such as computers and mobile phones enriches the learning process	.474

We observe that the factor load value of the lifelong learning attitude scale varies from 47 to 79. The title of the obtained three factors are stated as follows; "reluctance to learn", "the belief in the benefit of learning activities for professional development" and "awareness of personal learning skills".

3.2. The Attitudes of Teachers towards Lifelong Learning According to their Work Experiences
Table 8 illustrates the statistics results of the attitudes of teachers towards lifelong learning according to their work experiences.

Table 8. The Attitudes of Teachers towards Lifelong Learning According to their Work Experiences

Dimension	Work Experience	N	M	SD
Reluctance to learn	1-5 years	119	3.28	.946
	6-10 years	62	3.35	.949
	11-15 years	67	2.98	.882
	16 and above	52	3.35	.825
	Total	300	3.24	.919
The belief in the benefit of learning activities for professional development	1-5 years	119	3.90	.841
	6-10 years	62	3.76	.986
	11-15 years	67	3.72	.928
	16 and above	52	3.92	.640
	Total	300	3.83	.863
Awareness of personal learning skills	1-5 years	119	2.97	1.015
	6-10 years	62	3.03	1.061
	11-15 years	67	2.75	1.053
	16 and above	52	3.35	.696
	Total	300	3.00	1.000

The results of One Way ANOVA is shown below in Table 9 in order to find out whether there is a difference or not between the attitudes of teachers with different work experiences.

Table 9. The ANOVA Results of Attitude Scores of Teachers towards Lifelong Learning According to Their Work Experiences

Dimension	Source of Variance	Sum of Squares	Sd	Mean Square	F	P	Explanation
Reluctance to learn	Between Groups	6.065	3	2.022	2.425	.066	p>0.05 Insignificant
	Within Groups	246.793	296	.834			
	Total	252.858	299				
The belief in the benefit of learning activities for professional development	Between Groups	2,086	3	,695	,933	.425	p>0.05 Insignificant
	Within Groups	220,682	296	,746			
	Total	222,769	299				
Awareness of personal	Between Groups	10,876	3	3,625	3,721	.012	1-4, 3-4 Significant

learning skills	Within Groups	288,399	296	,974
		299,274	299	
	Total			

As it could be seen in Table 9, there is no difference identified for the teachers with different work experiences in terms of their work experiences and reluctance to learn ($F_{(3;296)}$=2.425, p>0.05) and of their work experiences and the belief in the benefit of learning activities for professional development) ($F_{(3;296)}$=.933, p>0.05). However, there is a meaningful difference between the teachers work experience and their awareness of personal learning skills ($F_{(3; 296)}$ = 3.721, p<0.05).

When the results of the LSD Test that was carried out to find out between which groups the group difference exists, it was discovered that there is a meaningful difference in favour of teachers with 16 years and over work experience when compared with the teachers who have between 1 and 5 years of work experience. Additionally, when the teachers having between 11 and 15 years of work experience compared with the ones having 16 years and over work experience it was found that there is a meaningful difference in favour of the group with 16 years and over work experience. Apparently, the findings obtained indicated that teachers with more work experience have higher level of awareness of personal learning skills than other teachers. So, this situation clearly shows that work experience has a positive influence on the personal learning skills.

4. Discussion and Conclusion

In today's knowledge society, it is considerably important to raise individuals who could search, question, and have the spirit of entrepreneurship and willing to learn. So, in raising those individuals who would have the required characteristics of the era several roles fall to the teachers. In our developing and changing world, as it is in almost every field of profession, the definition of the profession of teaching changes, too and thus both the duties and roles of the teachers gain new meanings.

There is a need for teachers who have the spirit of entrepreneurship, could change and open to development, cares about professional and personal development with willingness and excitement instead of teachers who only transmit the knowledge. Teachers could only reach those characteristics by adopting the approach of lifelong learning. It should not be forgotten that raising lifelong learners could only be possible with lifelong learning teachers. This is why it is crucial to scientifically find out what the attitudes of teachers are towards lifelong learning and offer necessary recommendations accordingly. This is why the aim of this current study is to develop a scale for finding out the attitudes of teachers towards lifelong learning. The test that was gone through the validity and reliability analyses was given to 300 teachers working in the Northern Cyprus. These teachers took place in the study voluntarily.

The scale that is formed from 19 items is limited with 3 sub-dimensions. The sub-dimensions of the scale are given names by associating with the literature; "Reluctance to learn", "the belief in the benefit of learning activities for professional development" and "awareness of personal learning skills". The first sub-dimension of the scale has statements like; "Struggling to learn difficult subjects is time-consuming", "Individuals who have promotion in their career do not need to participate to the professional development activities" and "It is not necessary to spend time to access information in the fields other than the professional ones". This dimension that has negative statements aims to identify teachers' willingness to learning. In the lifelong learning process, all individuals should be willing to learn and should also be in search of more efficient way of learning (Ozer, 2001).

The second dimension, on the other hand, is named as "The belief in the benefit of learning activities for professional development" and has the statements of; "The research skills individuals possess increase their professional development" and "Forming a bridge between life and knowledge is essential for professional development". In this dimension of the scale it is

planned to find out whether the teachers get benefited or not from the learning activities for their professional development. In the process of lifelong learning that is in fact from the cradle to the gave (Woodrow, 1999), the professional development of individuals is quite significant in terms of keeping up with the changes that the era brings with it. In addition to the choice of profession that is regarded as one of the most important decisions an individual takes in their life (Hamamcı & Hamurcu, 2005), the professional development is also noteworthy. To carry the professional development a step forward is only possible with effective learning activities. The lifelong learners are individuals who try to understand the learning process, try to discover their personal choices, try to be aware of their strong sides and try to improve them, ask questions to reach the unknown, use the learning tools appropriately and try to create a positive learning environment by establishing a set of learning strategies (Demirel, 2009). All these personal learning activities will enable individuals to have an effective learning, promote in their professions and reach the era.

In the third dimension of the scale there are statements like "Individuals should have a constant desire to learn in order to be successful" and "The adjustment to information change in professional life is a personal responsibility". This dimension is established to identify the teachers' awareness towards personal learning skills. Teachers who attach importance to the personal skills are more successful in their professions than the other teachers. Korkmaz (2010) pointed out that teachers with more qualifications have a stronger impact on the school success of the students than the teachers with fewer qualifications. It is quite obvious that this situation proves the importance of teacher qualification and professional development for the success of a student.

As a result, from the findings obtained, one could conclude that the lifelong learning attitude scale has a reliable and consistent structure. It is also thought that the scale of attitude towards llifelong learning will provide correct findings for the field.

Furthermore, the findings indicated that the work experiences of the teachers who have different work experiences did not show any meaningful difference in favour of the willingness to learn and learn for professional development activities. However, the teachers' work experiences created a meaningful difference in terms of awareness concerning their personal learning skills. It is also quite significant to point out that teachers with more work experience have more awareness towards learning skills

The differences occurred as the result of teachers' work experiences should be searched in detail in the future studies. In addition, researchers should offer recommendations in that direction and should organize seminars to increase the awareness towards personal learning skills of the teachers with less work experience. Also, teacher training institutions should follow the scientific studies concerning lifelong learning approach and should develop their curricula accordingly.

The lifelong learning attitude scale should be applied to a larger sampling group. Furthermore, the lifelong learning attitude scale should be applied to different teacher groups at different education levels. Additionally, not only teachers but also the students receiving education at different levels and parents' lifelong learning attitudes should be examined and the findings that would be obtained should be associated with the literature.

References

Akbas, O., & Ozdemir, S.M. (2002). Lifelong learning in the European Union. *Milli Egitim Dergisi*, *150,* 155-156.

Aksoy, M. (2008). *Lifelong learning and the impact of career guidance on the principles of employability: An application on the hotel managements.* PhD.Thesis, Gazi University, the Institute of Educational Sciences, Ankara.

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science.* *11*(1), 21-36.

Aksoy, M. (2013). Lifelong Learning as a Concept and the European Union Adventure of Lifelong Learning. *BILIG*, *64,* 23-48.

Antikainen, A. (1998). Between structure and subjectivity: Life-histories and lifelong learning. *International Review of Education*, *44*(2-3), 215-234.

Bath, D.M., & Smith, C.D. (2009). The relationship between epistemological beliefs and the propensity for lifelong learning. *Studies in Continuing Education*, *31*(2), 173-189.

Beycioglu, K., & Konan, N. (2008). Lifelong learning and education policies of the European Union, *Electronic Journal of Social Sciences*, *7*(24), 369-382.

Boeren, E. (2011). Gender differences in formal, non-formal and informal adult learning. *Studies in Continuing Education, 33*(3), 333-346.

Bryce, J. (2004). Different ways that secondary schools orient to lifelong learning. *Educational Studies, 30*(1).

Cantwell, R.H., & Scevak, J.J. (2004). Engaging university learning: The experiences of students entering university via recognition of prior industrial experience. *Higher Education Research and Development*, *23*(2), 131-145.

Coklar, A.N., & Odabası, H.F. (2009). Educational technology standards scale (ETSS): a study of reliability and validity for Turkish preservice teachers. *Journal of Computing in Teacher Education, 25(4).*

Colardyn, D. (2004). Lifelong learning policies in France. *Int. J. of Lifelong Education*, *23*(6), 545-558.

Crick, R.D., Broadfoot, P., & Claxton, G. (2004). Developing an effective lifelong learning inventory: the ELLI Project. *Assessment in Education*, *11*(3).

Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227-268.

Dehmel, A. (2006). Making a European area of lifelong learning a reality? Some critical reflections on the European Union's lifelong learning policies. *Comparative Education*, *42*(1), 49-62.

Demiralay, R., & Karadeniz, S. (2008). Developing information literacy skills for lifelong learning in elementary education. *Cypriot Journal of Educational Sciences*, *2*(6), 89-119.

Demirel, O. (Ed.) (2005). *Egitimde yeni yonelimler (New trends in education).* Ankara: Pegem A Yayıncılık.

Demirel, M. (2009). Implications of lifelong learning on educational institutions. *Cypriot Journal of Educational Sciences*, *4*, 199-211.

Dunlap, J.C., & Grabinger, S. (2003). Preparing students for lifelong learning: A review of instructional features and teaching methodologies. *Performance Improvement Quarterly*, *16*(2), 6-25.

Ekici, G. (2005). The validity and reliability of the biology self-efficacy instrument. *H.U. Journal of Education*, *29,* 85-94.

Eneroth, B. (2008). Knowledge, sentience and receptivity: A paradigm of lifelong learning. *European Journal of Education*, *43*(2).

Ersoy, A. (2009). *Lifelong learning and Public libraries in Turkey*. Master's thesis, Hacettepe University, the Institute of Social Sciences, Ankara.

Evans, K., Schoon, I., & Weale, M. (2013**).** Can lifelong learning reshape life chances?. B*ritish Journal of Educational Studies*, *61*(1), 25-47.

Fahr, R. (2005). Loafing of learning? The demand for informal education. *European Economic Review*, 49, 75-98. Retrieved from: http://www.adelaide.edu.au/clpd/materia/leap/leapinto/LifelongLearning

Figel, J. (2006) Key competences for lifelong learning, *Education and Training*. Retrieved from http://ec.europa.eu/dgs/education_culture/publ/pdf/ll-learning/keycomp_en.pdf

Finsterwalda, M., Wagner, P., Schober, B., Luftenegger, M., & Spiel, C. (2013). Fostering lifelong learning e Evaluation of a teacher education program for professional teachers. *Teaching and Teacher Education*, *29,* 144-155.

Fullan, M., & Hargreaves, A. (1996). What's worth fighting for in your school. *New York: Teachers College Press.*

Goad, L.H. (1984). Preparing teachers for lifelong education. *Advances in lifelong education*, 8, 188 (Oxford: Pergamon/ Hamburg: Unesco Institute For Education).

Gurbuzturk, O., & Sad, S.N. (2010). Turkish parental involvement scale: validity and reliability studies. *Procedia Social and Behavioral Sciences, 2,* 487-491.

Hake, B. (1999). Lifelong learning policies in the European Union: developments and issues. *Compare: A Journal of Comparative and International Education*, *29*(1), 53-69.

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science. 11*(1), 21-36.

Hamamcı, Z., & Hamurcu, M.K. (2005). Parents' attitudes on professional development assistance and the relation of their level of literacy to their children's indecision on profession. *Journal of the Faculty of Education*, *6*(10), 55-69.

Hoe-Lau, S., & Woods, P.C. (2009) Understanding learner acceptance of learning objects: The roles of learning object characteristics and individual differences. *British Journal of Educational Technology, 40*(6), 1059–1075.

Hsieh, H.J. (2010). Museum lifelong learning of the aging people. *Procedia Social and Behavioral Sciences*, *2,* 4831-4835.

Hung, M.L., Chou, C., Chen, C.H., & Own, Z.Y. (2010). Learner readiness for online learning: scale development and student perceptions. *Computers & Education*, *30*, 1-11.

Iqbal, A., Kankaanranta, M., & Neittaanmäki, P. (2011). Participation of the young ones in virtual worlds: a look at experiences and motivations. *World Journal on Educational Technology, 3(1), 16-27*

Jackson, S. (2003). Lifelong earning: working-class women and lifelong learning. *Gender and Education*, 15(4).

Johson, B., & McClure, R. (2004). Validity and reliability of a shortened, revised version of the constructivist learning environment survey (CLES). *Learning Environments Research*, 7, 65-80.

Kahn, J.H. (2006). Factor analysis in counseling psychology research, training and practice: principles, advances and applications. *The Counseling Psychologist*, *34,* 684-718.

Kerlinger, F.N. (1973). *Foundations of behavioral research*. New York: Holt McDougal.

Kilpatrick, S., Field, J., & Falk, I. (2003). Social capital: An analytical tool for exploring lifelong learning and community development. *British Educational Research Journal*, *29*(3), 417-433.

Knapper, C., & Cropley, A. J. (2000a). "Leap in to lifelong learning. Retrieved from http://www.adelaide.edu.au/clpd/materia/leap/leapinto/Lifelong Learning.pdf

Knapper, C., & Cropley, A.J. (2000b). *Lifelong learning in higher education*. USA: Stylus Publishing Inc.

Koper, R., & Tattersall, C. (2004). New directions for lifelong learning using network technologies.*British Journal of Educational Technology*, *35*(6), 689-700.

Korkmaz, İ. (2010). The study on teachers' stages of professional development. *9. National Symposium on Teacher Education,* 447-450.

Longworth, N. (2006). L*earning cities, learning regions, learning communities: Lifelong learning and local government*. New York: Routledge.

Makino, A. (2013). Changing grassroots communities and lifelong learning in Japan. *Comparative Education, 49*(1), 42-56.

Lynch, H. (2008). Lifelong learning, policy and desire. *British Journal of Sociology of Education*, *29*(6), 677-689.

Mac, N., & Dede, A. (2008). Informal learning at work and the role of informal learning in employment. *Konya Chamber of Commerce*, retrieved 5 July 2010, from: http://www.kto.org.tr/dosya/rapor/informel.pdf

Mandal, S. (2012). From policy to guidelines: metamorphosis of lifelong learning in India. *International Journal of Lifelong Education*, *32*(2), 190-208.

Martin, G. (2012) Motivation for lifelong learning: a biographical account of efficacy and control. *International Journal of Lifelong Education*, *31*(6), 669-685.

Namlu, A.G., & Odabası, H.F. (2007). Unethical computer using behavior scale: a study of reliability and validity on Turkish university students. *Computers & Education*, *48,* 205-215.

Neale, J.M., & Liebert, R.M. (1980). *Science and behavior: an introduction to methods of research.* London: Prentice Hall.

Nieto, S., & Ramos, R. (2013). Non-formal education, overeducatıon and wages. *Revista de economia aplicada*, *21*(61), 5-28.

Nınd, M. (2007). Supporting lifelong learning for people with profound and multiple learning difficulties. *Support for Learning*, *22*(3), 111-115.

Ozcan, D. (2011). Evaluation of 4th and 5th classes teachers' competence perceptions towards lifelong learning*. International Journal of Learning and Teaching*, *3*(1), 1-9.

Ozcınar, Z. (2006). Developing a scale on the instructional communicative qualification of parents with teachers. *Cypriot Journal of Educational Sciences*, *1*(1).

Ozdamlı, F. (2009). A cultural adaptation study of multimedia course materials forum to Turkish. *World Journal on Educational Technology*, *1*(1), 30-45.

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science.* *11*(1), 21-36.

Ozdemir, S.T. (2003). Medicine education and adult learning. *Uludag University Faculty of Medicine Journal*, *29*(2), 25-28.

Ozer, B. (2001). Teaching how to learn. Planning and evaluation in teaching (M. Gultekin. Ed., 1Issue). Eskisehir: *Anadolu University Open Education Faculty Publications*, 161-174.

Pak, T.N. (2012). An examination of lifelong learning policy rhetoric and practice in Singapore. *International Journal of Lifelong Education*, *32*(3), 318-334

Peat, M., Taylor, C.E., & Franklin, S. (2005). Re- engineering of undergraduate science curricula to emphasize development of lifelong learning skills. *Innovations in Education and Teaching International*, *42*(2), 135-146.

Peterson, K.D., Wahlguist, C., & Bone, K. (2000). Student surveys for school teacher evaluation. *Journal of Personnel Evaluation in Education*, *14*(2), 135-153.

Poizat, G., Haradji, Y., & Adé, D. (2013) When design of everyday things meets lifelong learning..., *International Journal of Lifelong Education*, 32(1), 68-79.

Preece, J. (2013). Africa and international policy making for lifelong learning: textual revelations. *International Journal of Educational Development,* 3*3,* 98–105.

Sharples, M. (2000). The design of personal mobile technologies for lifelong learning. *Computers & Education, 34,* 177-193.

Smith, M.B. (1968). *Attitude change. International Encyclopedia of the Social Sciences.* Crowell and Mac Millan.

Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. New Jersey: Erlbaum Associates Publishers.

Tabak, R.S. (2005). Continous education and continous professional development in Health Services. *Turkish Hij Den Biyol Journal*, *62*(1, 2, 3), 59-66.

Tacman, M. (2010). The Expectations of Teacher Candidates from Ataturk Teacher Training Academy in North Cyprus. *International Journal of Learning and Teaching, 2(1), 1-8*

Tokinan, B.O. (2010). Ozel Ogretim Yontemleri Dersine İliskin Tutumları Olcmeye Yonelik Olcek Gelistirme Calısması. *Eurasian Journal of Educational Research (EJER)*, 41.

Tuan, H.L, Chang, H.P, Wang, K.H., & Treagust, D.F. (2000). The development of an instrument for assessing students' perceptions of teachers' knowledge. *International Journal of Science Education*, *22*(4), 385-398.

Turan, S. (2005). Towards Information Societies: The lifelong learning in European Union's educational policies. *Ankara Journal of European Studies*, *5*(1), 87-98.

Urdan, T., & Schoenfelder, E. (2006). Classroom effects on student motivation: Goal structures, social relationships and competence beliefs. *Journal of School Psychology, 44,* 331-349.

Van de Ven, A., & Ferry, D.L. (1979). *Measuring and assessing organization*. New York: John Wiley & Sons Inc.

Viljaranta, J., Lerkkanen, M.K., Poikkeus, Aunola, K., & Nurmi, E.J. (2009). Cross-lagged relations between task motivation and performance in arithmetic and literacy in kindergarten. *Learning and Instruction, 19,* 335-344.

Wang, C.Y. (2008). Enhancing the interactive relationship between lifelong learning and social changes to carry out a learning society in Taiwan. *International Journal of Lifelong Education*, *27*(5), 535-542.

Woodrow, M. (1999). The struggle for the soul of lifelong learning. *Widening Participation & Lifelong Learning Journal*, *1*(1). Retrieved from http://www.staffs.ac.uk/journal/voloneone/editorialtwo.htm

Yazıcı, S., Basol, G., & Toprak, G. (2009). Teachers' attitudes toward multicultural education: a study of reliability and validity. *H.U. Journal of Education*, *37,* 229-242.

Yurdugul, H. (2005). The utilization of valid context indexes in the studies of scale development for the validity of context. *XIV. National Congress of Education Sciences*, 28-30 September.

Zepke, N. (2013). Lifelong education for subjective well-being: how do engagement and active citizenship contribute?. *International Journal of Lifelong Education*, *32*(5), 639-651.

Zhao, K., & Biesta, G. (2012). The Moral Dimension of Lifelong Learning Giddens, Taylor, and the "Reflexive Project of the Self". *Adult Education Quarterly*, *62(4), 332-350.*

Hursen, C. (2016). A scale of lifelong learning attitudes of teachers: The development of LLLAS *Cypriot Journal of Educational Science.* *11*(1), 21-36.