INVESTIGATION OF THE RELATIONSHIP BETWEEN LIFELONG LEARNING TENDENCIES AND THE TECHNOLOGY LEADERSHIP COMPETENCE OF PUBLIC EDUCATION CENTER ADMINISTRATORS[1]

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Abstract

The aim of this study was to examine the relationship between lifelong learning tendencies and the technology leadership of public education center administrators. A relational survey model with two scales was used as the data collection tool in the research. A Mann Whitney U test and Kruskal Wallis tests were used for the analysis. It was concluded that lifelong learning tendency did not differ according to gender, age, and seniority variables. Similarly, technology leadership competence did not differ according to gender and seniority, but it did differ according to age. Furthermore, there was a moderate negative correlation between lifelong learning and technology leadership competence (r = -382).

Keywords: Lifelong learning tendencies, technology leadership competence, public education center administrators

INTRODUCTION

Lifelong learning is not new concept, and it constitutes an important part of human life. With the rapid development of science, individuals need to acquire the necessary skills, knowledge, and competencies to adapt to these changes. The concept of lifelong learning "refers to all kinds of learning activities attended throughout his/her entire life out of formal education in order to develop the individual's knowledge, skills and competences with an approach related to individual, social and employment" (Education Reform Initiative, 2012).

In recent years, several top policy documents have been published that pursue common strategies for the development of education and training systems in the field of lifelong learning, such as the Lisbon Strategy, established within the scope of the European Union (EU); the Education and Training 2010 Training Program; the Copenhagen, Maastricht, Helsinki, Bordeaux, and Bruges Declarations; Europe 2020; and the Education and Training 2020 Training Program. The strengthening of lifelong learning systems plays an important role in these common strategy documents.

Individuals can participate in lifelong learning activities for different purposes. For example, they may want to develop their knowledge and skills to advance in the labor market, improve their life skills, and/or become self-sufficient. Lifelong learning does not aim to develop a different learning culture, however. An approach is adopted that combines the different types of learning individuals experience throughout their lives and that leads to continued learning throughout adult life (The Lifelong Learning Development Project in Turkey Action Planning Guide, 2013).

In conjunction with the lightning progress of technology, a rapid transformation is also occurring across Turkey and the entire world. The field of education has also been affected by this

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transformation, and the technological competencies of teachers and administrators affect the quality of their services and their visions related to lifelong learning. Providing effective use of technology can only be achieved by teachers being technologically literate (digital competence) and applying the skills they acquire. In this way, educators have positive tendencies towards changing and developing technological innovations and reflect these tendencies in educational processes.

It is necessary to ensure the continuity of education to support the social and economic development of adults, to facilitate their adaptation to changing living conditions, and to ensure their transition from school to work. When thinking of such learning, non-formal education comes to many people's minds, such as educational activities that teach adults reading and writing or a little mathematics gaining basic citizenship information, courses that help people with sewing, embroidery, and handicrafts, and programs that inform citizens about various subjects through the mass media (Bülbül, 1987). Individuals take part in an ongoing learning process from the cradle to the grave, however.

In the 21st century, non-formal education has been transformed into lifelong learning. As the knowledge, skills, and competencies acquired in formal education cannot be kept up-to-date, individuals need to adapt to the current age to develop socially, culturally, and economically. Therefore, the achievements in formal education will be updated and completed with lifelong learning activities.

Variables such as globalization, increasing competition between countries, and the employment conditions of individuals reveal the importance of lifelong learning. The individual qualifications required by the labor market are changing day by day, and information is produced as quickly as it becomes out of date. Being a lifelong learning individual is not only important for individual development but also for the development of societies.

One of the most important skills expected from lifelong learners is being able to take technological opportunities and access technology. The people who make the necessary coordination in effective and efficient use of technology in the organization, influence, direct and manage the organization in this regard come to the forefront in business environments and become technology leaders (Akbaba-Altun, 2008). The use of information technology in school environments and the integration of these processes into education only occurs when managers actively learn these processes and support their staff. For example, Turan and Şişman (2000) stated that as standardization in education management is a very difficult process, it is important to determine the technology leadership roles of school administrators and to standardize these roles. Indeed, the amount of research looking at the identification and evaluation of the qualifications that school administrators should have in relation to technology leadership is continually increasing (Afshari et al., 2008; Can, 2008; Yu & Durrington, 2006).

A meeting of the Council of Europe was held in Lisbon in 2000 where a 10-year strategy was signed by the leaders of the member states of the council. The concept of lifelong learning was open for discussion with all member states and candidate countries in the Lifelong Learning Memorandum announced by the European Commission in 2000. In the memorandum, the scope of lifelong learning is defined as all formal and informal learning starting from preschool years to post-retirement. It has been mentioned about implementing lifelong learning is the top priority. This rationale as to Europe's knowledge-based society and the correct orientation of the economy, strengthening the competitiveness of individuals they want to be active in the community by planning their own lives and the differences (cultural, ethnic, linguistic) the necessity of learning to live together harmoniously is shown.

The following basic strategies are thought to be necessary for the definition and dissemination of lifelong learning:
1. New basic skills for everyone,
2. More investment in human resources,

3. Development of innovations and new methods in education,
4. Giving value to learning/documenting,
5. Review of guidance and counseling services.

The use of information and communication technology in order to reach those who have difficulty in access with bringing closer of education to the learners as far as possible is determined the approach for local and regional based initiatives of Lifelong Learning, multi-purpose learning centers and the utilization of the information networks for learning community (CEC, 2000; Counted, 2013; Güleç, Çelik, & Demirhan, 2012; Lifelong Learning Strategy Document, 2014).

Leadership characteristics such as developing school managers' vision for the school, generating ideas about the goals and priorities of the school, and creating support structures within the school culture have a direct impact on how technology is integrated into education in schools. In this context, determining the lifelong learning tendencies of managers is critically important. The lifelong learning tendencies of teachers and course managers who play an active role in the formation of lifelong learning processes help ensure the integration of individuals in social change processes and in becoming strong individuals in developing world conditions. Varış (1998) stated that 21st century teachers are expected to have a multi-faceted perspective, continuously renew themselves, and have the knowledge, skills, and behaviors required by the teaching profession in accordance with the changing conditions.

Znidarsic and Jereb (2011) found a positive relationship between the development of lifelong learning and the amount of investment in innovation. Therefore, the current research examines the relationship between the lifelong learning tendencies of public education center administrators and technology leadership. The main research questions are:

• Do public education center administrators' lifelong learning tendencies show significant differences according to gender, branch, age, and seniority?
• Does public education center administrators' technology leadership competence show a significant difference according to gender, branch, age, and seniority?
• What is the relationship between lifelong learning tendencies and the technology leadership competence of public education center administrators?

METHODS

This research was designed using a relational survey model, which is a quantitative research method.

Participants

The participants were 993 public education center administrators in Ankara, Turkey. One of the purposeful sampling methods criterion sampling and easily accessible status sampling were used.

Data Collection

Two scales were used for data collection. The first was the Lifelong Learning Tendencies Scale developed by Coşkun in 2009. Validity and reliability studies have been carried out for this scale on a sample of 2,100 people: 600 pilots and 1,500 principal applications. The scale consists of four dimensions:

• Motivation
• Persistence
• Lack of regulation in learning
• Curiosity deprivation

The first two dimensions consist of positive items, and the last two dimensions consist of negative items. The negative dimensions were reverse scored. The responses to the 27 scale items were made

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according to a six-point Likert scale: "1. very suitable;" "2. partly suitable;" "3. Very slightly suitable;" "4. Very slightly not suitable;" "5. partly not suitable;" and "6. not suitable." The minimum score that can be obtained from the scale is therefore (27x1) 27 and the maximum score is (27x6) is 162. The reliability of the scale was determined by calculating the Cronbach Alpha (µ) internal consistency coefficient. The reliability of the pre-trial scale of 74 items (µ) was calculated as .93. In the event that another study conducted in order to determine the reliability of the scale was to perform item analysis based on the differences of the highest and lowest score average of 27% group as the scale score. Therefore, the non-significant items according to the results of the t tests were removed from the scale. The reliability coefficient in this study was .934, which indicates high reliability.

The second scale used was the Technology Leadership of Education Administrators, which was developed by Banoğlu in 2011. This scale consists of 32 items and all the statements are positive. The maximum score that can be obtained is (32x5) 160. The reliability coefficient was .969, indicating high reliability. The sub-dimensions of the scale are:

- 1-12 Visionary leadership
- 13-15 Learning culture of digital age
- 16-23 Perfection on professional development
- 24-26 Systematic development
- 27-32 Digital citizenship

The necessary permissions were obtained for both scales. The two scales were given to the administrators of public education centers in Ankara in October 2019 by obtaining the necessary permissions from the General Directorate of Lifelong Learning. In addition, the managers who participated in the research were asked to fill in an information form regarding their gender, age, and seniority.

RESULTS

The results were –evaluated at the 5% significance level. Kolmogorov-Smirnov and Shapiro-Wilk tests were used to check the normality of the data. Tables 1 to 3 provide the demographic information of the participants, while Table 4 shows result of the normality tests. The data was found to be non-normally distributed (Table 5), therefore, non-parametric tests were used.

Table 1. Distribution of Managers by Gender

Gender	Frequency	Percentage
Female	7	24.1
Male	22	75.9
Total	**29**	**100**

Table 2. Distribution of Managers by Age

Age	Frequency	Percentage
25–34	7	24.1
35–44	10	34.5
45 and over	12	41.4
Total	**29**	**100**

Table 3. Distribution of Managers according to Seniority

Seniority	Frequency	Percentage
0–10	4	13.8
11–20	9	31.0
21–35	16	55.2
Total	29	100

Table 4. Descriptive Statistics Results

	n	Average	Median	Skewness	Kurtosis
LLL Tendencies	29	49.4	42.5	1.3	.972
Technology Leadership Competence	29	138.8	147	-1.1	.453

Table 5. Kolmogorov-Smirnov and Shapiro-Wilk Statistics Results

Scales	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistical value	df	p value	Statistical value	df	p value
LLL Tendencies Scale	.180	24	.042	.827	24	.001
Technology Leadership Competence Scale	.234	26	.001	.845	26	.001

In addition to the normality assumption is not supported in the Kolmogorov-Smirnov test, the histogram graphs and Q-Q plot graph examined also do not meet the normality assumption in the distribution of variables. When the tables are examined and the results of the tests are examined, non-parametric tests were applied since the total scores of both scales did not show normal distribution.

Mann Whitney U and Kruskal Wallis tests were applied to determine whether the managers' Life Long Learning tendencies and technology leadership competencies differ significantly according to gender, age and seniority.

As a result of the non-parametric Mann Whitney-U test conducted to determine whether the scores obtained by the Managers' Lifelong Learning Tendencies scale differentiated according to the gender variable, no statistically significant difference was found at the level of $p < 0.05$ (p value, 367).

As a result of the Kruskal Wallis test conducted to determine whether the Lifelong Learning Tendencies mean rank of differ according to age and seniority variables, the difference between the rank averages of age groups and seniority was not statistically significant (p value for age 480, p value for seniority .461) .

As a result of the non-parametric Mann Whitney-U test conducted to determine whether the scores obtained by the administrators from the Technology Leadership Competencies Scale differed according to the gender variable, no statistically significant difference was found at the level of $p < .05$ (p value, 461).

As a result of the Kruskal Wallis test conducted to determine whether the average of the Technology Leadership Proficiency Scale rankings differ according to age and seniority variables, a significant difference was found between the age groups (p value .031). Mann Whitney U test was applied to find out the difference is which groups favor? Managers between the ages of 25-34 have a higher rank average than those aged 35-44. Similarly, managers aged 35-44 have higher rank average than managers aged 45 and over. The difference between the mean rankings of seniority was not statistically significant (p value .868).

The Spearman correlation coefficient was calculated to determine whether there is a relationship between the total scores obtained from the two scales (r = -382). A negative number indicates that there is a reverse relationship .30 - .49 shows a medium level relationship.

DISCUSSION and CONCLUSIONS

This study aimed to determine the lifelong learning tendencies and technology leadership competence of public education center administrators. It was found that the public education center administrators' lifelong learning tendencies scores were below average and did not differ according to gender, seniority, or age. This suggests that public education center administrators are unwilling to search for

new information and are not open to learning. In contrast, the results of the technology leadership competence scale were at a generally good level, indicating that administrators consider themselves sufficient at technology leadership. The technology leadership scores also did not differ according to gender and seniority, but there was a significant difference according to the age of the participants.

Make informative and encouraging publications by written and visual media in order to expand of lifelong learning understanding for their executives for public education centers. Public education centers can conduct studies to increase the awareness of executives regarding lifelong learning. More generalizable results could be obtained by expanding the participant sample, and qualitative data could be collected for a more in-depth look at lifelong learning.

Various results can be obtained using different data collection tools. Analyses related to the sub-dimensions of the scales could be conducted, and the lifelong learning tendencies of teachers, administrators, and academics from different branches could be analyzed according to the sub-dimensions. The lifelong learning tendencies of administrators working in different countries could also be compared.

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