In-Service Training with Adult Learning Features

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ABSTRACT : *Problems such as impracticability and ineffectiveness are encountered in practice in-service training for teachers in Turkey.Although several suggestions have been proposed, the problems still remain. This study illustrates a new way for the development of in-service training, with high school teachers' opinions, which is in-service trainings enhanced with adult learning characteristics. The participants were determined randomly and administered a 25-item Likert type survey. Results of the survey evaluated statistically by applying t-test and ANOVA. It is found that there is statistically significant difference between teachers in terms of gender, age, seniority and subject field variables. On the basis of the whole paper, teachers are enthusiastic to take part in in-service trainings enhanced with adult learning features rather than traditional ones. At the end of the paper, it is recommended that while preparing in-service training, demographic differences among teachers should be taken into account.*

KEYWORDS *: teachers, in-service training, adult learning.*

I.   INTRODUCTION

The formal education given, from preschool to higher education, becomes insufficient after a while no matter how adequate and qualified it is because of the advances in science and technology. It is also a reality for individuals who choose the teaching as a professional job.Ulus [1] states that compared to other occupational groups, teachers should develop themselves more constantly with renewed scientific and technological resources because teachers are not only responsible for themselves but also to students, their families and indirectly to the society. That's why policy-makers, politicians and non-governmental organizations have increasingly focused on the necessity to raise the quality and capacity of education recently. The attempts to change educational systems arise from to narrow the gap between traditional capacities of education systems and appearing demands of the information age [2]. James and McCormic [3] state that there are two main challenges for teachers and schools nowadays; the first one is teaching the substance of subjects and the other is helping students to learn the ideas and practices related with the process of learning. Therefore, teachers need to overtake ongoing professional development.

Lately, when the educational development or professional improvement is uttered, it is generally perceived as information and communication technology (ICT) [4]. For instance, Twining and Henry [5] argue that only in the UK, an estimated £567.8 million was spent on ICT in schools. However, it is not only the technology but also the human source in other words, the teachers. The Education for All Global Monitoring Report (2013/14) emphasizes that an education system is only as good as its teachers. Similarly, in the same report it is stated that developing teachers' capability to enhance the quality of learning is essential and it is proved that quality of education develops if teachers are supported and declines when they are not [6].

Because the in-service trainings are organized for adults-in this case for teachers-, it is important to take into consideration the adult learning features and characteristics during the whole process of in-service training programs. Knowles [7] defines the adult learning assumptions as andragogy, and these are: readiness to learn, self-directedness, active learner participation and being solution-centred. More or less all adult learning processes should include a few of these elements. For Trivette et al. [8], four main effective adult learning methods are; a) Accelerated learning: a kind of holistic adult learning process includes role playing, skits, video etc. [9]. b) Coaching: reflection on learners' experiences and feedback of experienced coach [10]. c) Guided design: a self-directed and problem solving orienteered method for adult learning. d) Just-in-time training: a kind of on-the-job training anywhere and anytime to complete a target task [11].

In Turkey, every year thousands of teachers attend to in-service training programs. When the schedule of the programs is designed, students' term holidays are taken into account. Therefore, 15-day winter break and 2.5-month summer breaks are considered the most suitable time period for the in-service trainings for teachers. Table 1 illustrates the number of teachers in Turkish education system:

Table1. Teachers in Turkish School System

Number of teachers	Primary School	Junior High School	High School
		280.804	278.641
	288.444		
Total number of teachers		847.889	

Resource: National Education Statistics, Turkey [12].

According to In-service Trainings Report of Ministry of Turkish National Education [13], in academic year of 2013, 19.332 in-service training programs took place in Turkey for teachers. 359.951 teachers attended to these trainings. In other words, %42.45 teachers participated in the in-service trainings programs organized by Turkish government. Contents of the trainings both include subject field issues and information technologies. Besides, language learning and some personal development topics were set out.

Three main features of a learning process are planning, application and deep understanding [8]. Besides, evaluation can be added as another stage. Contributing the adult learning features to this learning process is really significant to get the efficient and effective outcomes. In Turkey, even though there are studies that recommend future improvements in in-service trainings for teachers [14, 15], Karasolak et al. [16] state that a lot of in-service trainings in Turkey are assumed as not effective, motivational and impractical by teachers. Moreover, there is no difference between teachers who attend to in-service trainings and who do not. In other words, in-service trainings in Turkey do not promise any promotion, higher salaries and any other opportunities. Government determines the programs and in a lot of cases it assigns the teachers. In a few of the programs, teachers are volunteers and eager to attend because the locations of the programs are seaside holiday spots in Turkey and they are generally organized in summer. Therefore, the reason of teachers' enthusiasm is probably not the training program but the charm of the location.

There is no evidence to prove that in Turkey adult learning features are taken into account. Thus, it is a kind of shortcoming for Turkey's education system and it could be a solution for teachers to change their minds about in-service trainings when some adult learning characteristics enhance the program. In this present study, it is aimed to determine the opinions and views of high school teachers about in-service trainings enhanced with adult learning features and methods. The specific objective is to ascertain whether there is a meaningful difference in opinions of teachers about in-service trainings enhanced with adult learning features in terms of gender, age, seniority and subject area.

II. METHODOLOGY

Research Design and Sample

In this study, quantitative methods are used in order to illustrate the attitudes of high school teachers towards in-service trainings enhanced with the components of adult learning characteristics. Sources of information for the study include surveys and informal observation. The samples involved six different districts of capital city of Turkey, Ankara. All the teachers were selected randomly from high schools for structured surveys and informal observation. The survey, which consisted of scaled response questions, provided baseline information about teachers' demographic features, and these features connections with the opinions of teachers about in-service trainings. Also, it supplied information about the differences with respect to demographic variables (age, gender, seniority, and subject area).A total of 280 teachers completed the structured and scaled surveys. The average age of the samples was 37. Over 60% of the respondents were female and the rest of the teachers were male. The average teaching experience of participants was around 13-14 years. Nearly half of the respondents had master's degree or teaching certificate after their bachelor's degrees. The greatest number of samples was teachers of Turkish language, followed by mathematics and English language.

Procedure

In 2013, around 200 teachers were administered surveys on in-service training enhanced with adult learning characteristics. The subject area of teachers was the only variable that was researched. According to the results of this first draft, it was only the arts teachers who created statistically significant difference. In other words, arts teachers were not volunteers to participate in any in-service training enhanced with adult learning characteristics.

In the spring term of 2015, the research was decided to be expanded in terms of samples, survey items and variables that are planned to be inquired. Therefore, for this present study, after leading a literature review on the research topic, features of adult learning were listed. Afterwards, a structured and scaled survey for teachers was designed according to this list. This database was evaluated and converted into a 5-point Likert-type format [17]. Afterwards, the first draft of survey was administered 31 teachers for a validity and reliability analysis. This procedure was conducted with SPSS 15.0 for factor analysis. Items with 0.36 and more factor loading were picked up for the final version of the survey. Cronbach's Alpha reliability coefficient of the scale measured .89 and its Kaiser-Meyer-Olkin (KMO) value was calculated as 0.84 and its Bartlett Sphericity test was computed at 2202.4. Thus, the Bartlett test results were statistically significant at 0.05 level. After all these process, the structured and scaled survey with 25 items was conducted to the samples.

Data Analyses

Quantitative data were analyzed using basic descriptive statistics, independent samples t test and the one –way analysis of variance (ANOVA). The Tukey Honest Significant Difference (HSD) multiples comparison test was conducted to determine the groups that created difference in ANOVA. Analysis of the qualitative data was in an iterative process [18]. First of all, compiling, coding, annotating the date, and creating data were taken place. To use the survey results, participants' responses were classified into 5-point Likert type scale, from Strongly Agree to Strongly Disagree. Statistical calculations were organized at a 0.05 significance level.

III.　　RESULTS

Results are grouped into four sections based on demographic features of teachers which are gender, age, seniority and subject area. Thus, 25 items in the survey were analyzed referring these four parameters. The following are the findings that obtained from the research through data analysis.

Table 2 illustrates the results of high school teachers' view on in-service trainings with regard to gender variable. According to independent sample t-test results, there is a statistically significant difference between the two groups ($p<0.05$). Male teachers are found to be more positive and interested compared to female teachers.

Table 2. Results of t-test for the role of teachers' gender on in-service training enhanced with adult learning features

Gender	$\overline{x}$	s.s	t	p
Male	3.11	1.34		0.000[*]
Female	2.00	1.19	5.73	

[*]$p<0.05$

In Table 3, data obtained from teachers' opinions about in-service training according to the variable of age is represented:

Table 3: Results of ANOVA test for the role of teachers' age on in-service training enhanced with adult learning features

	Age				p
	29 and below	30-39	40-49	50 and above	
$\overline{x}$	3.03	3.64	2.38	2.20	0.000[*]
s.s.	1.37	1.63	1.21	1.39	

[*]$p<0.05$

ANOVA test was conducted in order to examine view differences among teachers about in-service training according to the age variable. A statistically significant difference was found in terms of age variable ($p<0.05$). Results of Tukey HSD multiple comparison test show that teachers who are between the age of 30-39 are found to be the group that generates the difference among the sample groups. This group has a more positive attitude towards in-service trainings which are in the scope of adult learning features.Table 4 provides the results of teachers' views about in-service training according to the variable of seniority.

Table 4. Results of ANOVA test for the role of teachers' seniority on in-service training enhanced with adult learning features

	Seniority				p
	10 years and below	11-15years	16-20 years	21years and above	
$\overline{x}$	3.14	3.83	3.16	2.25	0.02[*]
s.s.	1.35	1.26	1.15	0.97	

[*]p<0.05

The teachers who have teaching experience between 11 and 15 years are the participants create statistically significant difference according to the results of survey. Tukey HSD multiple comparison test results illustrate that this sample group is really more eager to the in-service training programs than the other groups.Table 5 illustrates the results of teachers' views with regard to subject area.

Table5. Results of ANOVA test for the role of teachers' subject area on in-service training enhanced with adult learning features

	Subject Area				p
	Social Sciences&Turkish Literature	Arts&Musics	Science&Maths	Foreign Lang.	
$\overline{x}$	2.94	2.00	4.00	4.17	0.03
s.s.	1.06	1.35	1.00	1.23	

[*]p<0.05

According to the results of ANOVA test, it is found out that there is a statistically significant difference among teachers in terms of subject area. In order to identify which group(s) create difference, Tukey HSD multiple comparison test was applied. Science and math teachers are really eager to be a part of in-service training backed up with adult learning features whereas arts and music teachers are really reluctant.

IV.   DISCUSSION

This study indicates that female participants are more reluctant than the male participants to incorporate in the training programs enhanced with andragogical principles. According to the results of the survey and informal observations, it is found out women do not want to leave their basic life routines. This result supports the hypothesis that most of the women are really occupied with looking after household and children therefore they are not eager for getting out of their routines [19]. Working mothers exhibit a deep sense of motherhood in that; they perceive their children and family as the number one priority. Hoffman and Youngblade[20], Fine-Davis et al. [21] and Guendouzi[22] also state similar findings in their studies. Researches in Turkey have more or less the same results. For instance, in their papers Kocacik and Gokkaya[23] and Kakici et al. [24] emphasize that working women in Turkey compared to men are really worn-out an even though they are quite willing to participate in new and different training programs, time constraints make it nearly impossible.

Another interpretation is that the participants who are in their 30s are more confident to be a part of a training programs enriched with adult learning features. The weakest age group is 50 and above. In their study Kiranli and Yildirim[25] imply that employees whose retirement periods are approaching, are not much enthusiastic about attending training programs any more. Similarly, at the age of 50 and above participant group in this study provided negative responses to the questions concerning the in-service training enhanced with adult learning features.

Based on the results obtained from the present study, participants who have between 11 and 15 years of teaching experience provide difference among the teachers. This evidence is consistent with the data about age variable since this is the same group with the age of 30s.

The findings of the study indicate that science and math teachers are really eager to be a part of training programs enriched with adult learning features whereas arts and music teachers have a quite the opposite view. Karagoz[26] states in his study that arts teachers are not willing to participate in subject area oriented trainings but they are enthusiastic for trainings about language teaching and ICT. While preparing an education or training program, it is important to integrate the participants to every stage of the adult learning process [7]. In Turkish in-service trainings, it is generally not a common practice to ask opinions, interests of teachers while arranging the schedule and elements of it. Therefore, it is probable that arts teachers are the most affected group among the others.

On the basis of the whole study, majority of the participants have positive attitude towards educational training programs and evaluating both the programs and the tutorials or instructors. However, nearly all of the participants refused to be evaluated. Moreover, participants prefer real life classroom environments rather than online or package programs. In Turkey, at the end of the each academic year, teachers have to have in-service training program at least 10 working days. Therefore, participants are in favour of attending to in-service trainings within those days. Moreover, participant teachers demand for new institutions to be the part of the in-service training programs such as universities and non-governmental organizations alongside with Ministry of Education. In his study, Kul [27] also argues the similar findings. He states that including universities and other nongovernmental legal personalities to the process would be advantageous not only for teachers but also for all parties.

V. CONCLUSION

This present study focuses on the views of teachers in Turkey about the in-service trainings which are enriched with adult learning features. Since the trainees are adults in in-service trainings, it is a shortcoming not to apply any of the adult learning features. The participants in the research have positive attitudes towards this kind of renovated trainings. However, there are some statistically significant differences in terms of gender, seniority, age and subject area variables. Male participants who are in their 30s and have around 10 years of teaching experience and finally teachers of maths and science are more willing to take part in new remodelled in-service training programs than other groups.

Finally, the findings of the study provide that nearly none of the teachers are willing to be evaluated arithmetically. Thus, it should be taken into consideration that while preparing an in-service training program, it is better to evaluate only those who are eager to be assessed numerically.

VI. RECOMMENDATIONS

From pre-school to university, all the teachers in Turkey are managed and held through two central institutions by government. Therefore, it is important for government to revise the in-service training programs in order to improve them in terms of adult learning features. During the in-service programs in stages of preparation, implementation and evaluation, it is better for authorities to work in coordination with specialized adult educators. One of the most important features of adult education is to involve the learners to the educational environment. In this way, they could feel themselves as a part of the whole process. Therefore, interests, needs and demands of participants or trainees should be taken into consideration. Besides, it is significant to remember that teachers from different subject areas, different age groups and different genders can have different needs and demands.

In this present study; age, gender, seniority and subject area variables were applied to teacher samples in Turkey. In the future, with similar or different variables, different job fields can be searched for the sake of improving in-service trainings in terms of adult learning features and andragogical principles.

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