# DEVELOPING A SCHOOL BASED PROFESSIONAL DEVELOPMENT PROGRAM FOR IMPROVING TECHNOLOGICAL SKILLS AND ANDRAGOGICAL KNOWLEDGE OF TEACHERS IN PRIVATE NIGHT HIGH SCHOOLS

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Approval of the Graduate School of Social Sciences

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## ABSTRACT

DEVELOPING A SCHOOL BASED PROFESSIONAL DEVELOPMENT PROGRAM FOR IMPROVING TECHNOLOGICAL SKILLS AND ANDRAGOGICAL KNOWLEDGE OF TEACHERS IN PRIVATE NIGHT HIGH SCHOOLS

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To improve the effectiveness of teachers in Private Night High Schools (PNHS), the main purpose of this study was to make the teachers in a particular PNHS participate in a School Based Professional Development (SBPD) program for their needs in educational technologies and adult learning theory (andragogy). This was a case study including quantitative and qualitative data collected through Principles of Adult Learning Scale (PALS), Questionnaire of Educational Technologies (QEdTech), classroom observations, group meetings, and interviews. 25 schools selected via cluster random sampling, PALS and QEdTech were administered to 227 teachers working at those schools. The target school was chosen through convenient sampling, and 17 teachers working in this school participated in a SBPD process. 4 teachers out of 17 teachers were selected through criterion sampling for classroom observation. Descriptive statistics for quantitative data and content analyses for qualitative data were utilized for data analyses.

The results of QEdTech unfolded that knowledge level of teachers in PNHSs in terms of educational technologies was very low, and classroom use level of them was

even lower. PALS results revealed that those teachers had problems in adult learning theory as well. The findings of classroom observations and group meetings were also consisted with the above mentioned results. After needs assessment process, professional development programs on social media in teaching and adult teaching practices were developed and implemented in the target school. Views of the teachers were taken related to whole SBPD process and they acknowledged that they found it both informative and beneficial.

**Keywords**: School based professional development program, andragogy, adult learning principles, educational technologies, private night high schools

# ÖZ

ÖZEL AKŞAM LİSESİ ÖĞRETMENLERİNİN ANDRAGOJİKBİLGİLERİNİ VE TEKNOLOJİK BECERİLERİNİ GELİŞTİRMEK İÇİN OKUL TEMELLİ MESLEKİ GELİŞİM PROGRAMI GELİŞTİRME

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Özel Akşam Liseleri'nde (ÖAL) çalışan öğretmenlerin etkinliğini artırmak için yapılan bu çalışmanın temel amacı, eğitim teknolojileri ve yetişkin öğrenim teorileri (andragoji) alanındaki ihtiyaçları için belirli bir ÖAL deki öğretmenlerin Okul Temelli Mesleki Gelişim (OTMG) programına katılmalarını sağlamaktır. Bu, Yetişkin Öğrenme İlkeleri Ölçeği (PALS), Eğitim Teknolojileri Anketi (QEdTech), sınıf gözlemleri, grup toplantıları ve görüşmeler yoluyla toplanan nicel ve nitel verileri içeren bir vaka çalışmasıdır. Küme örneklenmesi yolu ile seçilen 25 okuldaki 227 öğretmene PALS ve QEdTech araçları uygulanmıştır. Hedef okul kolaylıkla bulunabilen örnekleme yoluyla seçilmiştir ve bu okulda çalışan 17 öğretmen bir OTMG sürecine katılmıştır. Sınıf içi gözlem için ölçüt örnekleme yoluyla 17 öğretmenden 4 öğretmen seçilmiştir. Veri analizinde nicel veriler için tanımlayıcı istatistikler ve nitel veriler için içerik analizleri kullanılmıştır.

QEdTech'in sonuçları, eğitim teknolojileri açısından ÖAL'lerdeki öğretmenlerin bilgi düzeyinin çok düşük olduğunu ve sınıf kullanım düzeylerinin daha da düşük olduğunu ortaya çıkarmıştır. PALS sonuçları, bu öğretmenlerin yetişkin öğrenme teorileri ile ilgili de sorun yaşadıklarını ortaya koymuştur. Sınıf gözlemleri ve grup

toplantıları bulguları da yukarıda belirtilen sonuçlarla tutarlıdır. İhtiyaç analizi sürecinden sonra, hedef okulda öğretimde sosyal medya kullanımı ve yetişkin öğretme uygulamaları üzerine mesleki gelişim programları geliştirilmiş ve uygulanmıştır. Öğretmenlerin tüm OTMG süreci ile ilgili görüşleri alınmış ve öğretmenler bu süreci hem bilgilendirici hem de faydalı bulduklarını belirtmişlerdir.

**Anahtar Kelimeler**: Okul temelli mesleki gelişim programı, andragoji, yetişkin öğrenme ilkeleri, eğitim teknolojileri, özel akşam liseleri

*"In a world of universal deceit, telling the truth is a revolutionary act."*

*George Orwell*

To the ones who still have the courage of telling the truths…

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SBPD School Based Professional Development

PNHS Private Night High School

SPNHS Spring Private Night High School

MoNE Ministry of National Education

# CHAPTER 1

# INTRODUCTION

In this introduction chapter the background, purpose, and significance of this current study are presented. In the last section of this part, there are the definitions for the key terms of the study.

## 1.1 Background of the Study

Effective teachers are the main figures of successful schools, and it can be easily said that making investments for developing teachers' skills and knowledge is very crucial. As teachers are one of the most significant people of the process of education, it can be claimed that for increasing the quality of educational system, one must begin with the quality of its teachers (Altun & Gök, 2009). Therefore, professional development programs for teachers are constantly offered in almost all the education systems and although they vary greatly in their contents and formats, they mostly share one common purpose; to change occupational practices, attitudes and knowledge of teachers towards a determined end which is the improvement of students' learning in most of the cases (Griffin, 1983). It would not be wrong to define professional development programs as organized efforts to create change in the classroom application of teachers, in their general views, and in achievement of students (Guskey, 2002). The actual content of these professional development programs varies based on the individual needs and circumstance of particular educational setting.

With the new advancements in technology, preparing students to be ready for their future jobs can have some challenges for teachers, because they need to find suitable ways to make students use this technology and be open to those changes while meeting the other obligations of teaching (Pine-Thomas, 2017). Teachers should feel confident that their skill levels in technology are adequate and administrators will

need to make sure that teachers have the required knowledge to use technology because when we look at the today's students, we see very different profile from the past. Today's students were born into this technology and they grew up with it as they are surrounded by and using various tools of the digital age (Prensky, 2001). Considering field of education, this new technology welcomes great number of changes from objectives to evaluation activities. Prensky (2010) stated that for the digital age, we need new educational programs, new institutions with required equipment, new teaching methods, new evaluation techniques, new family contributions and new other things related to education.

Moreover, the advances in information and communication technologies (ICTs) influenced the whole educational system in all over the world (Voogt, Erstad, Dede, & Mishra, 2013). There are new jobs that we did not have a decade ago and there should be enough number of qualified people to get these jobs (Voogt, Erstad, Dede, & Mishra, 2013). Integrating technology into their curriculum has become an obligation for the teachers of 21st century (Pine-Thomas, 2017). Prensky (2008) asserted that technology suggests new techniques and methods and teachers should be aware of these things and should not insist on old methods. Teachers should serve as a guide or a facilitator, not the one lecturing or the knowledge provider. However, teachers confronted many challenges in this issue and the main reason behind is the lack of training in integrating technology into curriculum (Diaz, 1999).

As previously mentioned, the actual content of these professional development programs varies based on the individual needs and circumstances of particular educational setting. Private night high schools (PNHS) are one of the significant examples considering these educational settings. PNHSs are the institutions (non-formal) where people who could not continue their regular high school education (formal) for some sort of reasons can enroll and receive high school diploma (Official Gazette no: 25292, 2003).There is no age restriction in these schools. The schools start after work hours in week days or any time at weekend, but the other things like the curricula, classroom attendance, absenteeism and discipline applied at regular high schools are also applied at PNHSs. As there is no age restriction in these schools almost all students are young adults or adults. So, teachers of these schools have to be aware of that they are the instructors of adult learners and although most

of the things are same with the other high schools, they have very different students profile from these regular schools. These adult educators have to be aware that there are some principles of adult learning, if they want to be effective in the teaching and learning process. Effective adult education, because, seems rely on the fact that adult learners are quite different from young learners, as they can have independent decisions on their own educational needs (Darkenwald & Merriam, 1982).

Knowles proposed the term "andragogy" and defined it, by taking the definition of pedagogy as the starting point, as "art and science of helping adults learn" (1990, p.54). For the past four decades, adult learning theory (andragogy) has had a significant impact on adult teaching practices (Wilson, 2005). For instance, Lawson (1997, p.10) stated that "the paradigm of andragogy continues to be a powerful influence in the field (of adult education) by its influence on shaping how we think about the delivery of services to adults". Andragogy is based on six assumptions (Knowles, Holton, & Swanson, 2005); the need to know, the learners' self-concept, the role of learners' experiences, readiness to learn, orientation to learning, and motivation. Andragogy offers special teaching practices, and these interactive approaches to learning are considered as both suitable and effective (Blackwood & White, 1991). Considering the pre-service teacher education in Turkey it would not be wrong to state that teachers of PNHSs are not different from the teachers in other high schools, as none of them gets both pre-service and in-service education on adult learning principles. Together with integrating technology into their curricula, the unique situation of PNHSs creates a new demand for teachers of these schools; integrating adult learning principles into their teaching.

A variety of theories and models have been used to both describe and prescribe how professional development programs for teachers should be implemented. However, with a few minor exceptions, the models generally do not specifically highlight principles of adult learning theory (andragogy). Knowles (1990) proposed that the way we teach children (pedagogy) also becomes the way that we teach adults. However, if the theoretical models used to create professional development for teachers do not specifically include elements of adult learning theory, then some models of professional development may not successfully engage all educators as learners.

Teachers are adult learners who have the same motivational needs as all adult learners, adult learners who need to have a sense of self-efficacy; adult learners who want to see the value of the subject they are being asked to learn (McFarlen, 2016). Therefore, it would be useful to consider andragogical principles while designing professional development activities for teachers instead of pedagogical principles. A research conducted by Darling-Hammond, Chung Wei, Andree, Richardson, and Orphonos (2009) found out that 90% teachers surveyed participate in professional development, and many teachers reported that that professional development was essentially useless.

Experts in the area of professional development are not in complete agreement about all of the various factors that need to be included in order for professional development to be effective, however there is some consensus that the opportunity of professional collaboration between teacher participants is likely to be important. If teacher personal development takes place in his occupational space, it can bring about beneficial changes both in his skills and his school (Lieberman, 1995). School based professional development program (SBPD) is one of the important examples of these professional learning communities in which teachers can work collaboratively in order to learn from one another and to support each other's efforts (McFarlen, 2016). Through SBPD, teachers' professional development needs will be covered within the school place with an aim to providing more chances to enable efficient usage of human and material features at school (MoNE, 2007). Valli and Hawley (2002) stated that to be effective, professional development activities must be school based, continuing, and have relation directly with teachers' efforts to implement new or revised strategies within the classroom.

### 1.2 Purpose of the Study

In Turkey, central in-service trainings (INSET) have been conducted by the Ministry of National Education's (MoNE) Department of In-Service Teacher Training, and local trainings have been conducted by the Provincial Directorates for National Education (PDNE) since 1993. The training activities are arranged cooperatively by the MoNE and the PDNE. They are conducted face-to-face, either centrally or locally (Koç, 2016). Although these activities can be regarded as professional development,

they are mostly evaluated as to gain more points regarding obligations posed by administrations (Yolcu & Kartal, 2017). Considering research done about the effectiveness of these INSETs, it is really hard to find enough information. However, there is a general consensus that these trainings are found to be ineffective for various kinds of reasons (Yolcu & Kartal, 2017).

For example, in a recent research conducted by Göksoy (2014), it was found out that many teachers participating in INSET activities were not happy with the process, and they stated that they did not want to participate in such kind of activities again in the future. In another study, Karasolak, Tanrıseven and Yavuz-Konakman (2012) revealed that the teachers had negative feelings and attitudes towards INSET activities, because new approaches and developments were not considered in those trainings, and they were not adequate enough to satisfy the particular needs and problems of teachers as well. Therefore, teachers' participation in these programs does not always mean that these programs satisfy teachers' needs, and teachers may follow these trainings because they are just available and they just have to. Ben-Peretz (1990) stated that teachers participated in 'content' courses which they found important, but they also thought that they did not meet their priorities for their teaching. To Zepeda (2012), despite established legislation calling for professional development to improve teacher quality, much of the professional development that is implemented in schools is ineffective, and does not address the needs of teachers.

In order to eliminate these kinds of problems and make the professional development activities effective and relevant for teachers, there have been conducted many studies that determine the qualifications of effective professional development. To Guskey (2003), in order to have an effective professional development, one must be careful about including training on the content that the teacher teach and the ways of teaching it better for the students. Moreover, promotion of collegiality and collaborative exchange and providing educators at all levels of the opportunities to work together, reflect on their practices, exchange ideas, and share strategies and expertise are also noted as important (Guskey, 2003). Occupation improvements for teachers can have a powerful effect on teachers' skills and knowledge and on student success, if it is provided in the environment of school community that support ongoing developments in teachers' practice (Darling-Hammond et al., 2009). For

instance, it has been supported by many studies that effective SBPD can help attract and retain excellent teachers (Avalos, 2011; Gayton, & McEwen, 2010; Mahon, 2003). Moreover, when the professional development activities are grounded in adult learning theory, they are considered as valuable as teachers learn their craft through experience, model themselves on others and reflect on their own practice (Cranton & King, 2003).

Considering the importance of addressing teachers' current needs and problems and the qualifications for the effective professional development, SBPD model was chosen for the study to provide collaboration for the teachers in their own context. Moreover, needs of teachers in technology adoption and adult teaching practices were prioritized regarding current advances in educational technologies and unique context of PNHSs. Therefore, as the major aim was to improve the effectiveness of teachers in PNHS, the main purpose of this study was to make the staff in a PNHS develop and implement a SBPD program for their needs and preferences in technology adoption and adult teaching practices. Based on this main purpose, there were also several purposes of this study. Firstly, it was aimed to explore needs and preferences of PNHSs regarding technology adoption and adult teaching practices. Secondly, following a SBPD process with the teachers in a PNHS and conducting group meetings were intended. Lastly, development and implementation of a professional development program based on the determined needs was aimed.

In relation with these purposes stated above the following research questions were investigated and tried to be answered appropriately;

1. What are the needs of teachers in PNHSs in terms of educational technologies and adult teaching practices?
2. What are the preferences of teachers in SPNHS for content and delivery methods for the professional development related to educational technologies and adult teaching practices?
3. What are the views of teachers in SPNHS related to the changes and improvements in using educational technologies and adult teaching practices in their teaching after they completed a SBPD program?

## 1.3 Significance of the Study

The main goal of professional development is to increase teacher effectiveness and student achievement (Gylenne, 2015). MoNE invests money to provide access to professional development for teachers, and teachers spend time participating in various forms of professional development. MoNE provides professional development programs for teachers, but most of them are in-service training activities which are mostly one-time workshops or seminars, and they are mostly related to the specific content area (Özdemir, 2013). These professional development activities are not found to be effective due to various reasons such as; ignoring needs and preferences of the teachers, problems with timing and duration, lack of opportunities to put the learning into classroom practice, insufficient equipment and places, and inappropriate instructional methods and materials (Uçar & İpek, 2006). Moreover, MoNE does not organize enough INSET activities considering the number of in-service teachers in Turkey. For instance, the number of INSET activities organized by MoNE between 2001 and 2004 was nearly 2,500. When we consider that there almost 550 thousands of teachers in public schools at that time, one teacher can participate in these activities only once in every 22 years (Yolcu & Kartal, 2017).

Considering the current situation regarding professional development, this study provided a PNHS with a professional learning opportunity which includes some of the effective qualities of professional development through SBPD model. The SBPD model has almost all the qualifications that are listed for effective professional development such as providing cooperation and collaboration, adequate timing and duration, and addressing the actual needs of teachers. Although this study was designed as a case study including one of the PNHSs as the site where SBPD was conducted, the other teachers had the chance of stating their own opinions about their needs regarding technology adoption and adult teaching practices. Then, teachers of the determined school discussed those needs and came to a final agreement. Throughout this process, this study provided an opportunity to develop an in-depth understanding of how SBPD is practiced and integrated into teachers' classrooms in a PNHS.

An understanding of teachers' views of SBPD may provide insight about the quality of that professional development, and that may help all stakeholders related to education and professional development of teachers make informed decisions regarding future professional learning practices. In addition, this understanding potentially may help school administrators integrate into their training models SBPD that is both meaningful and effective in improving teacher practice. Although professional development is delivered to teachers, the real beneficiaries of effective professional development are the students. Ultimately, the implementation of an effective, relevant professional development program in a PNHS could not only improve teacher performance, but student performance as well.

This case study is significant because by conducting it the gap in the literature by providing information from PNHS teachers regarding the improvements in technology adoption and andragogical knowledge will be closed. By checking relevant data bases it was found out that there is no other study related to PNHS conducted before, this study will be the first in the field. First of all, database of thesis written in Turkey which was provided by Higher Education Council was examined. Then, for the academic articles, METUnique Search was used and, some databases such as Education Research Complete, Education Source, ERIC, and ULAKBIM were chosen. Both Turkish and English equivalents of PNHS were searched and any study could not be found.

As there are numerous developments in technology, it seems obvious that the education system will have to make some changes especially in the school curriculum in order to integrate this new technology into their school. Informing teachers on that issue is the first step. Through this study teachers identified their needs regarding technology adoption and then they improved themselves accordingly. This activity could also provide opportunities for both teachers and principals of improving the professional development activities for educational technologies, and teachers could develop their skills for necessary integration and in the end students could get better ways of using technology in their classroom (Pine-Thomas, 2017).

Another significant perspective taken by the study is andragogy. PNHSs are different from other regular high schools in terms of student profile, as the students are all adults or young adults. Therefore, the instruction should be different from general high schools. Teachers should be aware of the andragogical principles and adult teaching practices that can help them in their teaching. Moreover, they should have an idea about the issues hindering them from moving forward with incorporating adult teaching practices into their classrooms. At the end of this study, teachers found the chance of determining their needs regarding andragogy and they satisfied those needs with the help of SBPD. Moreover, SBPD may provide a meaningful professional development for teachers which could be designed in the future, as it considers adult learning principles and involve teachers' needs, values, beliefs and assumptions about teaching and their ways of seeing the world.

Lastly, this study made a contribution to the literature on both educational technologies and adult learning theory. Turkish adaptation of Principles of Adult Learning Scale was done by the researcher and through factor analysis a new scale in Turkish was constructed. Therefore, from now on this scale could be used in Turkish adult education settings. Moreover, Questionnaire on Educational Technologies was developed by the researcher thus this new questionnaire can be use any educational setting in order to assess teachers' needs and educational technologies through investigating their knowledge and classroom use level of determined hardware and software.

### 1.4 Definitions of the Terms

**Andragogy (Adult Learning Theory):** Art and science of helping adults to learn (Knowles, 1990, p. 54).

**Adult:** A fully grown person who is formally in charge of their actions (Oxford Advanced Learner's Dictionary, 2000, p.16). The person who considers herself/himself to be primarily accountable for her/his own life and decisions (Knowles, 1970, p. 24).

**Adult Learning Principles:** Six basic principles of adult learning (the need to know, the learners' self-concept, the role of learners' experiences, readiness to learn,

orientation to learning, and motivation) based on adults' characteristics outlined by Knowles (1970) and they are still widely recognized and accepted in the adult education framework.

**Technology:** According to Ornstein and Behar (1995) technology has some useful purposes in our current knowledge. Thus, technology uses progressive information (whether about a laundry or a classroom) to adapt and improve the system to which the information applies (such as a washing machine or educational computing).

**Educational technologies:** For the main purpose of this study, educational technologies defined as "A combination of the processes and tools involved in addressing educational needs and problems, with an emphasis on applying the most current tools: computers and other electronic devices" (Cifuentes, Maxwell, & Bulu, 2011, p.60).

**Technology integration:** The actual use of technology in the curriculum program (Bielefeldt, 2001). In this study, the researcher refers to technology integration as the use of technology, such as computers, as a part of the normal instructional process as opposed to the teaching of technology.

**Professional development:** In-service education, a crucial and orderly effort to engage a group of teachers who work together as a staff, in activities designed particularly to increase the effect and influence of their shared work (Maurer & Davidson, 1998). For the purpose of this study, professional development, staff development, and teacher training will be used interchangeably to refer to the entire process of planning, implementation, and follow up/support in efforts to improving teachers' technological skills and andragogical knowledge.

**Traditional professional development:** Refers to professional development activities that have short duration, that are not related to content, curriculum purposes, that do not have deep purposes and do not satisfy cooperation (Maurer & Davidson, 1998).

**Effective professional development:** Refers to professional development that is "intensive, ongoing, and connected to practice; focuses on the teaching and learning of academic content; is connected to other school initiatives; and builds strong relationships among teachers" (Maurer & Davidson, 1998).

**Private Night High Schools:** PNHSs are the institutions (non-formal) where people who could not continue their regular high school education (formal) for some sort of reasons can enroll and receive high school diploma (Official Gazette no: 25292, 2003).

**School Based Professional development:** It is a type of professional development that proposes (MoNe SBPD Manual, 2007);

1. Teachers can develop their own professional development regarding their students' needs and school obligations
2. Teachers' professional development needs will be covered within their professional community
3. Teachers will be in charge of their own development.
4. Teachers will share their experiences and they will be encouraged to support less-experienced colleagues.
5. Schools will make use of teachers' experiences

# CHAPTER 2

# LITERATURE REVIEW

The reviewed literature related to adult learning theory, professional development and educational technologies are presented in this chapter. It starts with the detailed examination of adult learning theory and its relation to professional development of teachers. Then, the professional development and its models are presented. In the third section, educational technologies issue is handled.

## 2.1 Adult Learning Theory (Andragogy)

### 2.1.1 What is adult learning theory (andragogy)?

Taking the definition of pedagogy as the starting point, Knowles defined andragogy (adult learning theory) as “art and science of helping adults to learn” (1990, p.54). Therefore, to understand andragogy, one must begin with what it means to be an ‘adult’. There is the dictionary definition: “a fully grown person who is formally in charge of their actions” (Oxford Advanced Learner’s Dictionary, 2000). However, from educational point of view Knowles (1970) suggested that these two questions should be answered: (1) who behaves as an adult (social definition) and (2) whose self-concept is that of an adult (psychological definition). For the first question, the person has roles (such as parent, teacher or a doctor) that have been generally known as adult roles. For the second one, a person becomes an adult psychologically at the point at which his concept of himself changes from one of dependency to one of autonomy. It means an adult "perceives herself or himself to be primarily responsible for her or his own life, actions and decisions" (Knowles, 1970, p. 24).

For the past 40 years, andragogy has become a fundamental adult education framework for the adult teaching practices (Wilson, 2005). There are six assumptions of andragogy and define an adult learners as someone who (1) wants to learn the

things that they think they need to learn, (2) has an independent self-concept and who can direct his or her own learning, (3) has accumulated a reservoir of life experiences that is a rich resource for learning, (4) has learning needs closely related to changing social roles. (5) is problem-centered and interested in immediate application of knowledge, and (6) is motivated to learn by internal rather than external factors (Merriam, 2001). Instructors of adult learners have to be aware that there are some principles of adult learning if they want to be effective in the learning process, and they can be explained as the following (Knowles, et al., 2005);

(1) *The need to know:* adults want to learn that why they are learning something in particular, and also why they need to learn that thing.
(2) *The learners' self-concept:* adults think that they responsible for their own actions, decisions, and their own lives. The idea of taking responsibility for learning is one of the basic ideas of andragogy which suggests that adults are, and should be, capable of managing, planning, implementing, and evaluating of their own learning (Wilson, 2005).
(3) *The role of learners' experiences:* adult learners come into an educational setting with both a greater number of and a different quality of experience from that of young learners. For adults, life experience carries significant meaning to learning; to think about a subject and reflect through logic and theory is not sufficient for the adult mind (Santos, 2012). The adult learner's life experience identified by Knowles (1970) is also shared by Paulo Freire's (1970) analogy of "banking" as an approach to adult education. According to these ideas, it is crucial to involve adults into learning process by considering their prior experiences. The idea that learners are like empty bank accounts that need to be filled by instructors with information is not applicable for adult learning. It is essential that instructors connect theoretical concepts to the adult learner's life and that they acknowledge the value of experience in learning (Santos, 2012).
(4) *Readiness to learn:* Adults become ready to learn those things they need to know and be able to do in order to cope effectively with their real life situations. Darkenwald and Merriam (1982) found readiness is influenced by the need to "perform the roles and tasks inherent in adulthood" (p. 99). They also stated that readiness is influenced by freedom of choice, in that "adults

are not only volunteers in the learning process, but the subjects or skills they learn are voluntarily chosen and it is this freedom of choice in regard to what is learned that is a characteristic of adult education" (Darkenwald & Merriam, 1982, p. 123).

(5) *Orientation to learning:* adults learners are task/life/problem centered in their orientation to learning, while young learners are more subject centered. Therefore, it can be claimed that adult learners have better learning experiences when these experiences are transferred to real life problems (Wilson, 2005).

(6) *Motivation:* adults are affected by external motivation, but their basic motivation source is their internal forces. Smith (2001) found that if an adult learner makes a connection between his learning and his life or work, his degree of motivation increases.

Although there are considerable amount of criticism about the andragogy, Lawson (1997) stated that "the paradigm of andragogy continues to be a powerful influence in the field (of adult education) by its effects on shaping how we think about the delivery of services to adults" (p. 10). However, between 1970 and 1980 Knowles revised his idea of andragogy for adults and pedagogy for children, and proposed a continuum ranging from teacher-directed to student-directed learning. He stated that both approaches are appropriate with children and adults, depending on the situation. For example, if an adult knows very little about some certain topic he will be more dependent on his teacher, but if a child who is naturally curious can be more self-directed (Knowles et al, 2005). This acknowledgment by Knowles resulted in andragogy being defined more by the learning situation than by the learner. Therefore, Hadley (1975, p.123) described the situation of integrating andragogical principles into adult learning activities results in learning experiences that "challenge students to choose increasingly complex objectives which induce the learner to test and expand their abilities rather than settling for compliance with fixed standards".

There are at least three ways in which andragogy is contributing to our understanding of adult learning; (1) the adult learner should be seen as a whole, (2) the learning process is much more than the systematic acquisition and storage of information, and (3) the context in which learning occurs has taken on greater importance (Merriam,

2001). Andragogy embraces adult specific instructional strategies that utilize an interactive and facilitative approach to learning that is said to be one of the most effective methods of adult learning (Blackwood & White, 1991). Effective adult education, therefore, seems dependent upon recognition of the fact that specific adult learners' needs differ from children, who are learning dependent; whereas adults are assumed to be independent decision-makers who have control over their educational needs (Darkenwald & Merriam, 1982).

Based on these assumptions, Knowles stated the importance of teacher in the adult learning process, claimed that teacher is the most significant member of an educational setting, and the teacher has the most influence on this learning environment (Knowles, 1970). Despite the existence of different teaching styles, a considerable amount of the adult education literature supports the collaborative and cooperative mode as the most effective and suitable style for teaching adults (Conti, 1985). In this view, the writings of Lindeman, Bergevin, Kidd, Houle, Knowles, and Freire exhibit many commonalities in the basic assumptions of adult teaching and learning. They all argue that the curriculum should be learner-centered, that learning episodes should emphasis the learner's experience, that adults are self-directed, that the learner should participate in needs assessment process, goals formations, and outcomes evaluation, that adults are problem-centered, and that the teacher should serve as a facilitator rather than a knowledge person providing the facts (Conti, 1985).

However, adult learning research has failed the education community in several areas (Wilson, 2005); (1) First, it has not yet produced a standardized, psychometric measurement tool that isolates and measures the six principles of andragogy, (2) Secondly, research has also failed to rigorously and empirically test the theory of andragogy, and (3) Thirdly, research efforts have produced too few studies that have adequately examined andragogy and its impact on actual learning outcomes.

In 1994, Rachal made a review of the research literature on andragogy and looked at 18 studies (15 unpublished dissertations and 3 journal articles). 10 of these studies found no significant differences between control and experimental groups and 2 of them found the control or "traditional" group performed better than the "andragogy"

group considering cognitive gain or skill performance. Then, one study found significant differences favoring the andragogical group; three found no significant differences regarding satisfaction with the learning variable.

However, regarding these studies reviewed there is a problem of andragogical "purity". Most of the studies can claim that they are testing andragogy without a clear description of what an andragogical treatment includes. For instance, Richardson and Birge (1995) compared an "andragogical" university class in physiology with a more traditional pedagogical approach to the same course. The "andragogical" class still used 75% of class time in "didactic teacher-centered lecture format"; the remaining time was spent in group discussions of instructor-selected topics. Students were required to write essays rather than take the multiple-choice exams of the controls. There were no differences in learning, although students liked the "andragogical" class more. In this study, the essential features of andragogy were missing. Indeed, this study was not a fair test of andragogical effectiveness, because it was not clear that andragogical principles were actually being tested.

Similar to this, Rachal (1994) included the study by Black (1989) that nine college mathematics instructors used learning contracts and they taught one control class and one experimental class. Students both took pre-test and post-test as their final exam. There were no statistically significant differences in achievement in mathematics when comparing the mean differences of scores for the control sections and the mean differences of scores for the treatment sections. Although using learning contracts can be considered as one of the features of andragogy as it provides the learners with self-direction, the writer claims that the contract was an agreement between learner and the instructor which specified a minimum test average and the study just testing learning contracts rather than andragogy. Moreover, In Rachal's systematic review (1994) operational definitions of andragogy varied greatly. For instance, for one study andragogy meant small group discussion while pedagogy defined as lecture. For another study, pedagogy again meant classroom lecture while andragogy defined as programmed instruction sheets that students studied on their own.

Clardy took this situation as a problem and made another systematic review in 2005 and review experimental and quasi-experimental studies that manipulated some or all

of the critical features of andragogical methods. For example, DiVesta (1954) tested the effects of instructor-centered and student-centered approaches to teaching on learning achievement tests, attitudes about leadership and behaviors in a 20-hour human relations training program for 118 Air Force personnel. While not a test of andragogy per se, the student-centered program included many of the elements of andragogical practice, including extensive student involvement in planning and carrying out learning activities, experiential learning, individual problem focus and extensive peer interaction. Both methods produced more learning, attitude and behavior change than the control group. However, there were no significant differences in learning between the two instructional approaches, although the instructor-centered program did tend to produce more learning and change than did the student-centered program. Of 11 experimental and quasi-experimental studies, 7 found no difference between andragogical and pedagogical methods, 1 favored pedagogical orientation and 3 found higher learning in andragogical group in Clardy's study.

When we consider the systematic reviews of Rachal (1994) and Clardy (2005) together, we can conclude that the research results are very inconsistent. Studies tend to show that andragogical approaches to adult learning and education often do not perform as predicted and while some studies find andragogical gains over other approaches, it is not clear when or why these differences exist. In general, the findings from available studies on the effectiveness of this adult educational technique are weak and inconclusive at best. Indeed, the evidence suggests that andragogical approaches are, as often as not, no better than and often less effective than the more traditional pedagogical alternative when it comes to learning. Likewise, the effects of andragogical programs on affective attitudes about the program are inconsistent. There was some little evidence that andragogical programs improved learner motivation.

However, at this point it is important to consider the publication years of this reviewed studies. In Rachal's study there are studies published before 1991 and in Clardy's study, the latest one was published in 1994. Therefore, for better interpretation of the effects of andragogy on achievement it is required to consider recent studies as advances in educational technologies create a change in teaching

practices and more interactive and constructivist environments are favored (Sharifi, Soleimani & Jafarigohar, 2017). It means there is a shift from pedagogical practices to andragogical practices in the educational setting.

In one of the studies, the influence of electronic portfolio evaluation was investigated. For this aim, 66 students who were randomly assigned to the e-portfolio group and the traditional assessment group and the experimental group kept an e-portfolio while the traditional assessment group did not, and then it was found out that experimental group have better results in post-test that traditional group on vocabulary learning (Sharifi, Soleimani & Jafarigohar, 2017). When we look at the andragogical assumptions of e-portfolio it can be said that it is a learner-centered method and it increases students' engagement.

To compare students' achievement on a pharmaceutical topic, one group of students were taught in traditional lecture (pedagogical model) and other group was taught in flipped classroom (andragogical model) and it was found out that means of students' exam scores in the flipped classroom model were better than those in the lecture model (Anderson, Frazier, Anderson, Stanton, Gillette, Broedel-Zaugg & Yingling, 2017). The flipped classroom model leverages the collaborative learning process. Classroom time provides students opportunities for concept application through active processes. Students complete problem sets, solve cases, participate in debates, or engage in a variety of other active learning methods during course meetings. These active processes provide students with chances of using benefits of group learning as they can discuss their problems, compare and contrast the ideas, and determine the possible outcomes and these are all opportunities provided by an andragogical model (Anderson et al., 2017).

In another study, randomly assigned groups were used and they were traditional lecture (C), face-to-face demonstration (DP), on-line lecture capture (OP), and the combination of the last two (OP+DP) groups and the aim was to enhance culinary arts students' application skills related to sodium usage in food preparation. There was no statistically significant difference in performance between DP, OP, and OP+DP groups on each subscale. However, each of these methods performed significantly better than the control group (C). DP, OP, and OP+DP methods were

superior to the control group (C). Thus, it can be argued that a program based on andragogical principles is far more suitable for the culinary arts professionals as compared to lecture-style material delivery, and it is effective for improving learning outcomes for culinary arts students (Abdulsalam, Condrasky, Bridges & Havice, 2017).

### 2.1.2 Adult learning theory (andragogy) and professional development of teachers

Research that describes how adults acquire and use new information, collectively called adult learning theory (andragogy), has potentially important implications for facilitating such adult learning experiences as educators' professional development. The lack of attention to these adult learning principles may provide one explanation of why current professional development efforts have not necessarily realized intended changes in educators' outcomes (Weber-Mayrer, 2016). Professional development has been identified as an opportunity for educators to learn and improve on aspects of research-based practices through the advancement of knowledge and reflective practice (Guskey, 2002). Therefore, Zepeda (2012) define professional development as an adult learning process which have influence on administrator, teacher and student.

Educators' professional development is a form of adult learning that happens while they are working on their job, on seminars or trainings (Zepeda, Parylo, & Bengston, 2014). As adult learners, teachers also should be given responsibility of their own professional development. What encourages them? What would they like to learn in deep? What do they think about their needs? Having teachers to identify what route their professional development will take will greatly improve the success of the teachers in their experience to be lifelong learners as adults (Trotter, 2006).

Andragogy as one of the theories of adult learning suggests that integrating adult teaching practices such as a disorienting dilemma (trigger event), prior experiences, reflection, motivation and engagement, and relationships would lead to increased engagement, changes in teachers' knowledge, beliefs, and classroom practices. Addressing how best to facilitate the learning of teachers may reveal opportunities

for educators to examine and improve current professional development practices (Weber-Mayrer, 2016). However, several studies made it obvious that most of the practices for adult teachers did not include adult learning principles and they treat them as they are young learners therefore teachers could not satisfy the knowledge transfer to their teaching setting (Puteh, Kaliannan, & Alam,2015).

Schwandt and Tobin (1999) refer to three basic principles in addressing adults' needs in staff development programs. First, such programs must include self-directed needs of adults. Second, because teachers use practice and knowledge in their practice, staff development programs must have reflective activities which provide them with the opportunity of practicing and internalizing what they have learned. Finally, these professional development activities should involve teachers' past experiences which are valuable for them. Although there is a significant call for having more authentic and cooperative learning models for teachers, staff development is surprisingly traditional. One-shot workshops which are mostly on general topics and little reflective activities still compose of the majority of professional development experiences.

Several sources indicate that teachers have little or no input in either the topics or the format of their professional growth programs (Karagiorgi, Kalogirou, Theodosiou, Theophanous, & Kendeou, 2008). In a study by Kember, Kam-Por, and Ledesma (2001), although instructors viewed teachers as adult learners different from other types of learners, they continue to teach them as the way they consider as good. For instance, Beder (2001) stated that teacher educators expressed learner-centered practices are more suitable with teachers, but when they were observed it was seen that they still used teacher-centered methods. Thus, although instructors were observed that they used learner-centered methods in their personal relationships with the teachers, their teaching was still teacher-directed and they considered learner-centered teaching issue as an expression of values, but not a teaching method (Karagiorgi, et al., 2008).

Contrary of what is believed; teachers often are disappointed with the trainers' teaching style and the format of the lesson, rather than the ideals of staff development. Because of these poor teaching strategies executed by the presenters,

teachers constantly overlooked or unheard the valuable information, as they were not included in the decision process. Brookfield cites the "disjunction of learning and teaching styles" and "apparent irrelevance of the learning activity" as two reasons that can attribute to resistance to learning (Brookfield, 1990, pp. 151-152). Certainly, having an effective professional development program is the main purpose of any educational institution. There are considerable number of sources and studies about the features of effective professional development; however, these models can be quite extensive and potentially overwhelming to an administrator who already has enough other tasks to occupy their time, but only taking a few basic principles established within the field of adult education into consideration, teacher professional development can enormously increase its effectiveness (Beavers, 2009).

A study was investigated the adult learning principles issue for teachers professional development and found out that teachers want to cooperate with their colleagues, have problem-solving activities, and learn the things which they can integrate their classroom practices (Trotter, 2006). Providing that environment that teachers need and offering them the opportunity of sharing experiences, brainstorming, building a community atmosphere and considering teachers as unique adult learners are some of the keys of effective professional development for teachers. There are lots of theories for the best professional development. However, that most of the schools are not eager to use these strategies as they have many other daily struggles. However, Beavers (2009) suggested that just by integrating some adult learning practices into the professional development programs they already have in place may be developed and these following these guidelines may be helpful in this case;

1. Allow teachers to have decisions about the topics of professional development
2. Use teachers' past experiences
3. Topics should be practical rather than theoretical
4. Facilitate dialogue and direct them to problem-solving
5. Consider different learning styles
6. Encourage teachers to direct the learning activities
7. Create a comfortable atmosphere
8. Support all the reflections

Teacher professional development must understand that teachers have different needs and appreciate that practicing is an important dimension for teachers. If directors of professional development want to better teaching practices, they should be aware of the fact that teachers are also self-directed. Ultimately, educators, as Houle urges, "should involve learners in as many aspects of their education as possible and in the creation of a climate in which they can most fruitfully learn" (Merriam, 2001, p. 6).

## 2.2 Professional Development and Its Models

### 2.2.1 Definitions and characteristics of effective professional development

It is necessary to clear what is meant by professional development of teachers before writing about its effective characteristics. Guskey is known throughout the world for his work related to professional development in education and he defines professional development as a organized effort to satisfy change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the achievement of students (1986). He also adds that professional development is an "intentional, ongoing and systemic process" in one of his later works (Guskey, 2000, p.16). Therefore, it can be stated that effective professional development is not an accidental process. It requires planning in the beginning, needs analysis of teachers, clear aims and measurable goals and objectives (Linn, Gill, Sherman, Vaughn, & Mixon, 2010).

Professional development is the personal improvement of one's occupational role. Avalos (2011) pointed out that teachers can gain experience through professional and personal development. Professional workshops and formal meetings help define professional development experiences (Ganzer, 2000). Professional development mostly occurs through periods of job training activities (Avalos, 2011). Moreover, professionally designed in-service trainings support the growth of teachers, evaluate the content of practices, assess the occurrence of each process, and evaluate each developing progression (Guskey, 2000).

When it comes to the effective characteristics of professional development, it can be stated that there are different views on that issue. In their comprehensive work,

Birman, Desimone, Porter, and Garret (2000) surveyed 1,000 teachers who participated in a professional development program and they determined six features of professional development as form (type of the program), duration (necessary time needed for the program), participation (teachers involvement), content focus (subject of the program), active learning (interactive techniques) and coherence (relevancy of the program) and they specified characteristics of each feature for an effective professional development. Traditional formats are less effective compared to reform approaches such as learning communities, mentoring or coaching. Although traditional forms of professional development are quite common, they are widely criticized as being ineffective in providing teachers with sufficient time, activities, and content necessary for increasing teacher's knowledge (Loucks-Horsley, Hewson, Love, & Stiles, 1998).

When it comes to duration, the researchers stated that longer durations have more opportunities for active learning and coherence compared to shorter durations, and longer activities provide more opportunity for teachers to have discussions and absorb the content (Birman, et al., 2000). Collective participation is more meaningful for teachers and there is an increasing attention in professional development that is designed for groups of teachers who are working in the same school or same department, or same grade level (Birman, et al., 2000). Participants find activities that emphasis teaching methods without regarding their content area also useless and Holland (2005) also stated similar importance and specified that effective professional development develops teachers' knowledge related to their specific content area that they are teaching, and also it raises teachers' awareness about their students thinking in that subject matter.

Teachers who experienced active learning such as observing an expert teacher, to be observed by another teacher, developing new curriculum materials, planning new teaching methods, reviewing students works, leading discussions, engaging in written work, and giving reflections report enhancement in their knowledge and skills (Lieberman, 1995). Relevancy with other professional experiences is also found to be effective and professional development for teachers is frequently criticized that the provided activities are not linked to each other and in other words,

individual activities do not provide a coherent program that support teachers learning and development (Garret, Porter, Desimone, Birman, & Yoon, 2001).

Guskey (2002) developed a consensus perspective. He took 11 different lists about the features of powerful professional development. He determined the characteristics that are common in all of these lists and they are as following;

a) Increasing the content and pedagogical knowledge of teachers
b) Ensuring enough time
c) Supporting cooperation
d) Containing evaluation procedures
e) Making it school or site based

### 2.2.2 Professional development models

The area of teachers' professional development has always been an area of interest in the field of education, but while there are important number of studies on professional development of teachers, there is a shortage in addressing the models of these programs (Kennedy, 2005). Professional development of teachers can be structured and organized in a number of different ways, and for a number of different reasons. Most professional development experiences of teachers might be considered as means of knowledge, skills and attitudes enhancement, but they are all doing this in their own way (Kennedy, 2005).

If the purpose of professional development of teachers is development of attitudes of teachers then changes in intellectual and motivational aspects as well as functional development are also considered, thus we should consider how they can be facilitated (Evans, 2002). Therefore, Kennedy (2005) provided an analytical framework and suggested that professional development of teachers can be located along a continuum and through this way, models can be categorized as 'transmissive', 'transitional' or 'transformative'. Models of professional development of teachers where the purpose is considered to be transmissive, they put emphasis on teacher development by externally delivered knowledge mostly by the ones who are accepted as expert in that area and these transmissive ones focus on technical aspects of the

teaching rather than issues relating to values, beliefs and attitudes (Fraser, Kennedy, Reid, & McKinney, 2007). Models that can be named under this category include the training model, the award-bearing model, the deficit model, and the cascade model (Kennedy, 2005). Coaching/mentoring can be classified under the transitional models as these types of professional development can be both transmissive and transformative based on the form and philosophy that is aimed (Kennedy, 2005).

At the other end of this continuum of professional development models, there are transformative professional learning activities and they provide strong connection between theory and practice, internalization of concepts, reflection, construction of new knowledge and its application in different situations, and an awareness of the professional and political context. Transformative models of professional development of teachers have the capacity to support considerable professional autonomy at both individual and profession-wide levels (Fraser, Kennedy, Reid, & McKinney, 2007). The action research model and the school based professional development model can be listed under this category (Kennedy, 2005).

#### *2.2.2.1 The Training Model*

The training model is universally known and has always been the dominant model in professional development of teachers (Little, 1994; Kelly & McDiarmid, 2002). This model supports a skills-based and technical view of teaching whereby it provides teachers with the opportunity to develop their skills in order to be able to demonstrate their competence. It is commonly given by an expert to the teacher and its agenda identified mostly by this expert and it places teachers into a passive role throughout the process. Generally, training takes place separate from other professional activities, and it is based on the input provide by the expert who is also an outsider (Burbank & Kauchak, 2003). While the training can take place within the educational institution of the teachers participated, it is generally delivered in different places, and because of this situation trainings are criticized not having connection with the classroom context and teachers' daily practices (Kennedy, 2005).

#### *2.2.2.2 The award-bearing model*

An award-bearing model underlines the importance of completing a program mostly given by the universities and having an award at the end of it (Kennedy, 2005). This is similar with the training model to some extent, but there is an outcome such as accreditation or award from an outsider in this model, and this outcome ensures the credibility in terms of quality. Therefore, this model provides the opportunity of introduction of new areas but the impact of top managers in this model is too high as they get easily auditable evidence of training and development (Kennedy, 2005).

#### *2.2.2.3 The deficit model*

Professional development can be designed particularly for addressing a determined deficit in the performance of teachers (Kennedy, 2005). This professional model can be called as performance management and Rhodes & Beneicke (2003) pointed out that performance management can be viewed as a means of raising standards or 'as an element of government intervention to exact greater efficiency, effectiveness and accountability' (p. 124). Nonetheless, performance management requires that somebody takes charge of evaluating and managing change in teacher performance, and this includes, where necessary, attempting to remedy perceived weaknesses in individual teacher performance (Kennedy, 2005).

However, Rhodes & Beneicke (2003) suggest that the root causes of poor teacher performance are related not only to individual teachers, but also to organizational and management practices. Also, blaming only the teacher for poor performance means that neglecting the collective responsibility (Kennedy, 2005). Boreham (2004, p.9) discusses this issue of individual and collective responsibility issue and suggests some leadership features which supports specific situations such as; (1) making collective sense of events in the work environment; (2) improving and using a collective knowledge; (3) developing a sense of interdependency

#### *2.2.2.4 The cascade model*

In order to have development in school curriculum and more powerful teaching and learning methods, cascade model is widely preferred by educational ministries as it provides large-scale changes in the classroom level (Hayes, 2000). Cascade model is widely used when something major in education will be introduced as training first is conducted at several levels. In this model, trainers are chosen from the system and they train the level below and it has a number of advantages which make it attractive to planners of change on a large scale such as (1) it is cost effective, (2) it does not require long periods out of service, and (3) it uses existing teaching staff as co-trainers (Gilpin, 1997, p.185).

There are three crucial criteria that should be considered while designing cascade training; (1) the training should be reflective and experiential, (2) the training must be open to reinterpretation, and (3) a cross-section of stakeholders must be involved in the preparation of training materials (Kennedy, 2005).

#### *2.2.2.5 Coaching/mentoring*

Both coaching and mentoring are learning and development activities that share similar roots and based on the situation and the relationship a good coach will also mentor and a good mentor will coach too (Serrat, 2017). Unlike traditional training, coaching and mentoring suggest these ideas; (1) they focus on the learner not on the subject, (2) they focus on development not on imposing, (3) they support reflection rather than direction, (4) they are mostly not one time events. For any coaching and mentoring practices, there should be cycle of these six steps (Kennedy, 2005);

1. The mentor/ coach and the client should know each other very well in order to have clarity in the process
2. They should discuss the coaching and mentoring style
3. They should explore available options
4. They should have a pace the client is comfortable with
5. The client should engage in the agreed actions with the support of and clear feedback from the mentor/coach

6. The mentor/coach and the client consider what has been learned and how they might build on that knowledge

#### *2.2.2.6 The action research model*

Action research is a model that has most of the features of powerful professional development and it gives teachers the role of scientific researcher by which they can make decisions based on the needs of their schools and students (Burbank & Kauchak, 2003). Action research is considered as a strategy that provides teachers with more professional work and to accomplish this, teachers can get benefit of research methods in social sciences and improve their classroom practices (Ponte, Ax, Beijaard, & Wubbels, 2004). Creating knowledge both personally relevant and meaningful for teachers is often missing in research studies conducted by others, but by action research teachers can provide this necessary knowledge for themselves (Kennedy, 1997).

#### *2.2.2.7 School based professional development*

Professional development of teachers can be an individual process, such as acquiring higher education or attending professional workshops outside of the school (Feiman-Nemser, 2001). However, in recent years there has been a strong emphasis on professional development as a learning process that takes place on the school environment (Bleicher, 2013). This model is the most comprehensive one as it has some certain types of implications almost from all types of professional development activities and models. Joyce and Calhoun (2010) put this model under the family of collaborative and cooperative models, and state that the school as an organization is on stage in this model with the development of teachers and principals into learning communities. In 2008, SBPD was presented as the main model of teacher development in Turkey by MONE.

In this model teachers develop a personal and professional development plan by analyzing their needs, capabilities, observation and self-assessment. Teachers make several meetings with the school administrator at the beginning, middle, and end of the process with regard to their needs for improvement. Teachers who implemented

their plan and completed the activities by compensating the related need could plan and implement another activity for a different kind of need, thus a cyclical process is created to ensure continuity of development (Kaya & Kartallıoğlu, 2010). This model was piloted in 2010-2011 educational year and there are very few research studies on this implementation. Moreover, the implementation of this model could not be continued as it requires more efforts compared to one-shot professional development models like training and workshops (Yüksel & Adıgüzel, 2012).

Investigating the effectiveness of SBPD by looking at perceptions, attitudes, and suggestions of teachers or school administrators has been the major research area. In one of the studies, a SBPD program for Tanzanian primary school teachers launched and then evaluated. It set out to investigate the effectiveness and efficiency of the pilot program in changing pedagogical practices before it was scaled up nationally. It was found that teachers who had participated in the school-based training showed significant differences in their pedagogical practices. They demonstrated a positive attitude towards their training and their pupils, and saw teaching and learning as an interactive, communicative process (Hardman, et al., 2015). In Turkey, one of the studies aimed to determine the views of teachers regarding SBPD model. The participants of the study were 114 primary school teachers from different fields. Data of the study were collected through self-evaluation survey and it was found out that majority of the participants recommended the further use of SBPD in other schools as well (Yüksel & Adıgüzel, 2012)

Effects of SBPD on students' achievement are also investigated. In one of the studies, the relationship between teacher participation in SBPD and student achievement in science were investigated. Findings in this study revealed the positive influence of SBPD on student achievement, and this result pointed out that this kind of professional development may eliminate the problems in teaching and learning science (Johnson, Kahle, & Fargo, 2006).

Avidov- Ungar (2016) examined the relations between SBPD and the organizational learning of the teachers working at that school. 196 teachers participated in the study and teachers' involvement in SBPD process was found to be positively and significantly related to the level of organizational learning at school. Examination of

the school-based program's effects on specific learning organization characteristics revealed that SBPD contributed to a more effective learning process, particularly for the dimension of distribution of information and knowledge. This study sheds light on SBPD not only as a tool for advancing teachers' learning and development but also on the organizational level as a tool that can help create organizational learning processes at school. Thus, a SBPD program has the potential to facilitate a transition from "individual learning" to "organizational learning" (Austin & Harkins, 2008).

Professional development increases curiosity, motivation of teachers and provides new ways of thinking (Kent, 2004). For sustaining this, the focus must move from a location being primarily outside the school through training by experts to being in school where learning is embedded in the classroom (Hutchens, 1998). Successful professional development must be continuing and directly related to everyday teaching practices of teachers (Mahruf, Shohel, & Banks, 2012). Continuous professional development is efficient in the most educational systems when it is implemented in the setting where teachers are working because it creates the opportunity of including all the people in the school especially in any time they needed (Inasaridze, Lobzhanidze, & Ratiani, 2015).

Professional development which are conducted in an outside environment might have many drawbacks such as (1) they are less based on specific personal needs, (2) they are identified by external authorities, (3) they take place in various locations and these locations are mostly far from the place where teachers work and live and (4) they take place in a time that is generally inconvenient for the participants (Inasaridze, Lobzhanidze, & Ratiani, 2015). It is considered that SBPD encourages creating new knowledge and improving teachers' practice, also creating shared professional language that is understandable for all members of teaching community, vision and standards, having sustainable school culture (Mancera & Schmelkes, 2010). Externally taken professional development activities, such as trainings, seminars or workshops, were dominant in Georgia and in order to change this system SBPD that was initiated by National Center for Teacher Professional Development and at the beginning piloting process took place in 206 public schools of Georgia and approximately 10% of schools throughout of Georgia were chosen to participate in

the program from applied motivated schools. The goal of the program was to delegate responsibility and autonomy of schools through:

1. Identifying teachers' professional needs and promote continuous professional development at school level.
2. Increasing teachers' involvement and responsibility in planning, conducting and evaluation process of their own professional development.
3. Establishing culture of collaboration among schools.
4. Increasing quality of teacher's work with help of mutual teaching way. And eventually it will improve the quality of teaching (Inasaridze, Lobzhanidze, & Ratiani, 2015).

Result of the monitoring showed that program was successful in166 schools (or 80%), where SBPD was in process stated that school culture enhanced, and other 40 school members can't recall the program activities and give an evaluation to the program as partially successful or even unsuccessful. 94% of the schools successfully implemented an ongoing practice of improving cooperation between the teachers, its mechanisms (teams used the training materials as a source for transferring knowledge from the trainings into practice). SBPD program was successful in this direction as within the first year, 74% of the schools conducted joint projects (Inasaridze, Lobzhanidze, & Ratiani, 2015).

### 2.3 Technology and Professional Development

In today's world it is really hard to reject the importance of technology presence in schools. Wenglinsky (1998) has lots of research studies considering field of technology and student achievement and in one of his studies; he found that students whose teachers used technological tools especially for the students' higher-order thinking skills performed better than students whose teachers did not use. Another interesting finding of this study is that students whose teachers received professional development in technology outperformed those whose teachers did not. At the end of his study, he suggested that one of the most crucial obstacles to influential usage of technology in educational institutions is a lack of professional development.

Bybee and Starkweather (2006) reviewed reports on recommendations related to what changes are required in the purposes, policies, programs, and practices for better technology integration in education? If the educators wanted to prepare a 21st century workforce by using technology, this would require long-term changes in educational purposes, educational policy, school curricula, and classroom practices for teachers and teaching, content and curricula, and assessments and accountability. For instance, in order to have high quality teachers and teaching the purpose should be that teachers have adequate knowledge and skills to improve student achievement in technology. For programs, continued professional development should be supported and it should be aligned with curricula and assessment. For policies technology specialists should be hired, qualified technology teachers should be hired and differentiated pay for them should be provided. For practices, teachers should incorporate technology skills in their teaching.

However, before talking about train the main users of technology it could be better to mention the vicious circle presented by Cuban (1986) that we experienced in the presentation of new technology: "exhilaration, scientific credibility, disappointment, teacher-bashing" (p. 5). Cuban explained that each time a new technological tool was introduced for educational purposes, some people deeply advocated of it for the benefit of educational contexts. Then, considerable amount of studies were conducted in order to support its credibility and effectiveness. However, after the real users started to use this tool and saw that it failed to do what had been promised, there mostly occurred a tendency to find someone to blame. As it can be guessed the first person to blame was teachers in most of the cases because one of the major reasons for the failure of technology integration was teachers' resistance (Winn, 1991). This situation makes the teachers as easy targets. However, despite this tendency of blaming teachers, there are also other factors such as contextual variables, poor leadership, administrative problems, and lack of necessary professional development for teachers (Cuban, 1986).

Maurer and Davidson (1998, p. 225) describe professional development in technology as a "moving train, technology is the train, the train never stops. It never even slows down. Teachers who ride the train reap the benefits." Therefore, it is really hard to catch this train without technology-oriented professional development.

However, there is an important problem that for teachers learning the appropriate usage of technology and integrating this knowledge into their teaching is more difficult and time consuming than often thought (Meltzer, 2006). There is still not an agreement on what kind of professional development is most helpful (Norman, 1999). Maurer and Davidson (1998) reported that teachers attending professional development in technology do not always complete their learning and transfer these new skills to their everyday teaching in order to support their student achievement. Especially, when we look at the professional development activities related to technology integration, we can see very little number of reported successes (Meltzer, 2006).

The investigation area of researchers includes powerful models about professional development in educational technologies and also the requirement of having evaluation practices for the effectiveness of these models (Borko, 2004). The quality of professional development opportunities has long been an issue in the field of education. Corey (1957) reported that there was a recognized need for teacher professional development, but the things which are done for this purpose are still uninspiring and ineffective. Almost 60 years later, teachers continue to report lack and inefficiency of professional development related to technology integration (Borko, 2004).

Professional development in education has three major goals for Guskey (1986); enhancing classroom practices of teachers, changing their beliefs and attitudes towards teaching, and increasing the achievement of students. Ertmer, Flanagan, and Jacobsen (2003) outlined that effective professional development on technology integration is a key component of meaningful technology use for teacher in their classrooms. Although Herff Jones (2014) claimed that professional development is not the only reason that teachers chose to integrate technology into their curriculum, it does play a crucial part in supporting the appropriate design and delivery of a technology infused curriculum. Though not focused on technology, Borko (2004, p.4) discussed the requirements of a successful professional development program and outlined the elements needed in order to create a program that could be successfully implemented elsewhere;

1. The professional development model
2. The teachers as the learners
3. The facilitator who helps teachers in their constructing new knowledge and practices
4. The setting in which the professional development occurs

Similar to the Borko's study there are also some studies that focus on the elements needed in order to create an effective program for technology integration. Brand (1997) reviewed the current literature and identified the following features for an effective professional development in technology;

1. Allocate substantial time outside the school day.
2. Take into account varying individual differences of teachers.
3. Provide flexible professional development opportunities such as flexible scheduling, in-class collaborations, small group instruction and instructional variety.
4. Provide support such as a full-time technology resource teacher in the school or district.
5. Develop a collaborative environment that includes peer coaching and modeling.
6. Provide remuneration and teacher recognition.
7. Plan for long-term staff development that is ongoing and systematic.
8. Link technology and educational objectives so the teacher training has an instructional focus.
9. Develop staff development instruction to be a professional stimulation that engages teachers.
10. Administrators must take supportive action in the staff development

Bradford (1999) studied the elements that have influences on elementary school teachers' process of integrating technology into their teaching and he found out that although billions of dollars have been spent on computer technology few of the teachers were successful in integrating technology into their teaching. After a survey and interviews of teachers in 14 elementary schools, he also found out that schools administrative may fail to provide teachers with adequate equipment, training,

support and leadership. Therefore, Bansavich (2005, p.136) suggested that in order to improve professional development in technology; workshops where faculty can see examples of how technology can be integrated into the curriculum should be provided, additional technology training should be organized, best practices should be shared, and more opportunities for adjunct and full-time faculty to collaborate should be provided. Catchings (2000) also found out that if teachers have positive attitudes towards technology, if there is a school-based technology integration plan, and if the necessary leadership is provided, teachers' abilities to integrate technology into their teaching are enhanced.

Cuban (2001) argued that computers are sold widely and purchased by the schools, but teachers do not use these tools in the expected level, and Cuban added that although teachers are using computers in their daily lives commonly, they do not successfully integrate them in their daily teaching. From Cuban's perspective, the problem has two important faces; (1) teachers do not have clear understanding of technology integration and (2) schools do not provide necessary assistance for teachers in this case.

In another study, Cuban, Kirkpatrick, and Peck (2001) studied the technology usage in classroom issue with two high schools located in the heart of technological progress, Northern California's Silicon Valley. They found out that although teachers have wide access to equipment, they do not use them constantly, and when they use technology they do not change their occasional teaching methods. They offered two possible reasons for this case; firstly, despite the tremendous changes in educational technologies, traditional high school structure and the lack of time led teachers not use technology efficiently. Teachers stated in their interviews that they did not have adequate time to integrating computers into their daily teaching and they added that the technology itself is unreliable and they have fear about those machines that often break down (Cuban, Kirkpatrick, & Peck, 2001). Most of the researchers who studied the technology integration issue claimed that in order to integrate educational technologies into everyday classroom the biggest factor is the role of teachers because they are the direct influencer of what happens behind that closed classroom doors rather than the external factors (Bitner & Bitner, 2002).

Lam (2000) studied with ten second language teachers and made interviews with them in light of the following questions: (1) What are the reasons behind those teachers' decisions to use technology for teaching? (2) Why do some of those teachers choose not to use computers in their teaching? (3) What factors influence these decisions? Teachers mostly used technology for utilitarian perspectives such as simplifying their everyday tasks and they used it in supportive and supplementary roles. The reasons for not to use computers were; lack of knowledge about teaching L2 with computers, lack of access to computers, lack of confidence in computer skills, and the perception that computers could not meet the students' needs. And the biggest factor influence these decisions was the inadequate training for teachers on using and particularly on integrating technology into the classroom. Based on the results of this study it would be unfair to label the teachers as 'technophobic' as teachers never cited fear of using technology as a reason for not using it. It is likely that if they had the chance of training in technology, they would be willing to use them. There are also other studies which have consistent results with Lam's study. Al-Juhani (1991) found a correlation studied with 60 teachers of English as a foreign language in Saudi Arabia and after the teachers received in-service training on computer-assisted language instruction, they had more positive attitudes towards using technology in their teaching. Similarly, 12 American language teachers gained more confidence in their knowledge about technology after two-week workshop in technology (Leh, 1995).

Although it may seem computer and Internet are widespread in the educational contexts, there are lots of teachers that are reluctant to use computer technologies in their classrooms as they have crucial doubts and questions about them. Cuban (2001) lists some of these questions:

1. Can I learn the hardware and software tools quickly?
2. Can I use them more than one situation?
3. What can be impact of these tools for my students' motivation?
4. Do they have the skills that are related to things that I will be teaching?
5. Are they reliable?
6. Who will help me in case of a system break down?

7. Will the time I have to spend in learning to use those tools yield a comparable return in my students' learning?
8. Will student use of these tools decrease my classroom authority?

Based on these concerns and questions, it can be concluded that if a significant progress in technology integration is desired, they should be seriously considered especially in the designing process of professional development in technology for teachers (Wang & Reeves, 2003). Therefore, based on the literature reviewed particular features those contribute to successful models of technology related professional development can be summarized as following;

1. Professional development in technology design must focus upon content, be provided within context, and allow for active learning and collegial collaboration (Klingner, 2004).
2. Support, both technical and pedagogical, can be demonstrated in a number of ways: by administration, including technology leaders; through utilization of peer coaches or mentors; and by being aligned with organizational goals (Klingner, 2004).
3. Participant centered professional development in technology is focused but flexible, respects the autonomy of the teacher, provides time to practice and plan, is pedagogically driven, and encourages teacher ownership nourished by professional learning networks (Klingner, 2004).
4. There should be significant number of contact hours to influence pedagogy and practice to improve students' learning (Darling-Hammond et al., 2009).
5. Professional development in technology must not only be well designed and delivered, but must be maintained and fostered over time (Richardson et al., 2007)
6. Professional development in technology focusing on pedagogical applications of technology in the classroom, including time to collaborate, converse with peers, and reflects about successes and challenges of implementation, is what increases effective implementation and transforms teaching practices (Brinkerhoff, 2006).
7. Technology based professional development should provide hands-on practice, but not step-by-step instruction, as that does not allow for

internalization of skills for retrieval of that knowledge at a later date (Bowe & Pierson, 2008).

## 2.4 Summary of the Literature Review

Literature review part of this current study has three parts in particular; adult learning theory (andragogy), professional development and technology. In the adult learning theory part characteristics of adults and what is meant by being an adult were clarified first. And then, andragogy which is the main adult learning theory of this study was explained in detail with its crucial principles asserted by Knowles. There are six assumptions of andragogy and define an adult learners as someone who (1) wants to learn the things that they think they need to learn, (2) has an independent self-concept and who can direct his or her own learning, (3) has accumulated a reservoir of life experiences that is a rich resource for learning, (4) has learning needs closely related to changing social roles. (5) is problem-centered and interested in immediate application of knowledge, and (6) is motivated to learn by internal rather than external factors (Merriam, 2001). Related research studies especially on the effectiveness of andragogy were reported.

Later, importance of adult learning theory in terms of professional development of teachers was discussed as the teachers are already adult learners. The lack of attention to adult learning principles in professional development of teachers may provide one explanation of why current professional development efforts have not necessarily realized intended changes in educators' outcomes (Weber-Mayrer, 2016). Professional development has been identified as an opportunity for educators to learn and improve on aspects of research-based practices through the advancement of knowledge and reflective practice (Guskey, 2002). Therefore, Zepeda (2012) define professional development as an adult learning process which have influence on administrator, teacher and student.

In the second part of the literature part professional development issue and its models were examined. Definitions of professional development and effective characteristics of it were provided. Then, several professional development models (the training model, the award-bearing model, the deficit model, the cascade model,

coaching/mentoring, the action research model, and school based professional development model) based on the framework proposed by Kennedy (2005) were explained. SBPD model was explained in detail with the relevant research studies as it was also used in this study.

In the last part educational technologies issue was handled from the professional development perspective. Its importance for todays' students was discussed and how teachers can be able to successfully integrate technology into their classrooms was reported. Findings of the studies supported that students whose teachers received professional development in technology outperformed those whose teachers did not. Those studies also suggested that one of the most crucial obstacles to influential usage of technology in educational institutions is a lack of professional development.

# CHAPTER 3

# METHOD

This chapter is related to method followed in this study. It starts with the explanation of the design of the study and presentation of the research questions. After that, subjects of the study and their characteristics are provided. Then, detailed descriptions of all the instruments used are given. Finally, data collection and analysis procedures, trustworthiness and limitations of the study are presented.

## 3.1 Research Design

This research is a case study including both quantitative and qualitative data collected through principles of adult learning scale (PALS), questionnaire for educational technologies (QEdTech), semi-structured interviews, observations of group meetings, and classroom observations. Yin (2014) stated that when the focus is on the reasons; the researcher cannot manipulate the behavior of participants in the study; boundaries are not clear between the phenomenon and context, and the researcher wants to cover contextual conditions, case study should be used to investigate the phenomenon in its real-world context. This study was conducted at a particular PNHS in İstanbul. This school was renamed as Spring Private Night High School (SPNHS) by the researcher for the clarity of reporting. Therefore, this target school acted as a case for this study and educational technologies and adult learning theory issues were studied in this real life context. İstanbul was chosen the main province as there are lots of PNHSs (40 in total) and it is possible to work with considerable amount of students, teachers, administrators and other people in relation with PNHSs if necessary. In this study, SPNHS was purposefully chosen as it is a representative of typical PHNSs in Turkey. Teachers of SPNHS participated in a SBPD process aimed at developing their technological skills and andragogical knowledge. Procedure of the study is explained in Figure 3.1 explaining all the steps in detail.

| | | |
|---|---|---|
| **Step 1:** Identifying needs on educational technologies and adult learning theory | Review of Literature on educational technologies and adult learning theory | |
| | Construction and piloting of data collection instruments (semi-structured interview schedule, group meetings observation forms, classroom observation form, PALS, and QEdTech) | |
| | Observation: Observation of four teachers' classrooms from different fields and Administering PALS, and QEdTech to other PNHSs | |
| | Observation of group meetings related to needs of SPNHS | **Meeting 1:** Presentation of SBPD model by the researcher |
| | | **Meeting 2:** Discussing the results of PALS, and QEdTech |
| **Step 2:** Determining the features of professional development programs | Observation of group meetings related to features of desired program | **Meeting 3**-Educational Technologies |
| | | **Meeting 4**-Adult Learning Theory (Andragogy) |
| **Step 3:** Designing a professional development program based on the teachers' needs and decisions. | Using Silberman's five stage active training design | |
| **Step 4:** Implementation of the developed program | | |
| **Step 5:** Individual interviews with all teachers | | |

*Figure 3.1.* Procedure of the study

When it comes to the researcher role I am both an insider and outsider of the current study. First of all, I administered PALS and QEdTech to the teachers of other selected PNHSs. As an observer, I participated in the classroom of four teachers in the SPNHS. As an insider, I also participated in the group meetings of teachers (both with and without the school principal) and I directed those meetings. One of the teachers volunteered to take notes throughout the meetings and those notes were used as data sources for needs analysis and for designing a professional development programs for the target school. As a researcher, I had ethical responsibilities as I collected data and interpreted them, thus I also took an outsider perspective and made my interpretations.

### 3.2 Research Questions

In this study the following research questions were investigated and tried to be answered appropriately;

4. What are the needs of teachers in PNHSs in terms of educational technologies and adult teaching practices?
5. What are the preferences of teachers in SPNHS for content and delivery methods for the professional development related to educational technologies and adult teaching practices?
6. What are the views of teachers in SPNHS related to the changes and improvements in using educational technologies and adult teaching practices in their teaching after they completed a SBPD program?

### 3.4 The Context

Night schools for adult learners are not a new concept in Turkish education system. The first night high school was opened within the Vefa High School which was also the first non-military high school in Turkey. PNHSs are the institutions (non-formal) where people who could not continue their regular high school education (formal) for some sort of reasons can enroll and receive high school diploma (Official Gazette no: 25292, 2003). There is no age restriction in these schools. The schools start at 17.00 pm, but the other things like the curricula, classroom attendance, absenteeism and discipline applied at regular high schools are also applied at PNHSs. There is no age

restriction in these schools, and almost all students are either young adults or adults. However, private night high school issue is relatively new because they had been closed in 2000 by MoNE as it was claimed that these schools were just for getting high school diploma in return of considerable amount of money. However, with a new regulation in 2003, they were opened again. And since then PNHSs have attracted many middle school graduates who could not continue their high school education for some sorts of reasons.

By authorities from MoNe, it was stated that with this regulation opportunities would be provided for those who had to work while in the age of education, who failed at regular secondary education institutions, who dropped out of secondary education, and who passed the age of enrolling a regular secondary education institution. Some of the items from the regulation issued in November 17, 2003 regarding PNHSs are as follows (Official Gazette no: 25292, 2003);

1. These schools teach after work hours on weekdays or any hour on Saturdays and Sundays
2. Course schedules and educational programs of regular high schools are applied in these schools.
3. The duration of an academic year is the same with that of regular high schools.
4. In order for a student to be able to enroll these schools, he must have graduated from primary basic education, be older than 18 years of age, or be excluded from the regular (formal) education system.
5. The exams that are essential for the evaluation of student success in courses other than those requiring special skills such as visual arts, music and physical education are carried out centrally by the General Directorate of Educational technologies.

The 5$^{th}$ regulation article was added in order to get rid of the criticisms about the exams carried out in this school. However, in 2007 this article was changed and PNHSs started to prepare their own exams. And then, in 2013 MoNE decided to carry out the exams centrally by the General Directorate of Educational technologies again as there were again a lot of criticisms about the quality of the exams carried out

by the PNHSs. In two years, most of the PNHSs had to be closed because their students could not be successful in the central exams. In 2015, most of the founders of PNHSs became worried about this situation and with the negotiation carried out with MoNE, PNHSs started to prepare their own exams one more time. In conclusion, PNHSs have been responsible for carrying out their own exams since 2015.

The target school, SPNHS, is one of the PNHSs located in İstanbul. It has 17 teachers and 1 principal. There is not any vice-principal but one of the teachers comes to school earlier than others in order to help principal in administrative issues. There are two classrooms for each grade, thus there are eight classrooms in total. The classrooms have got projection machines but do not have any smart boards or computers. There is only one teachers' lounge in the school and there is also one small room besides it which can be also used by teachers. There is a small canteen for students at the top floor of the school. There is not any library or any other spot for students to use both for academic and social purposes.

### 3.4 Subjects/Participants of the Study

In this study, there were three different groups of participants and different sampling strategies were utilized namely; convenience sampling, criterion sampling and cluster random sampling. As there are different steps in this study it can be appropriate to call this study both as exploratory and descriptive. In the exploratory step, the needs of teachers in PNHSs were determined based on the quantitative data collected through PALS and QEdTech. There are 40 PNHSs in İstanbul and 25 of them were selected via cluster random sampling. The names of the schools were written on a piece of papers and they were pulled out one by one and each time a school was pulled out, it was put back into the bag in order to sustain the equal probability of being chosen. Researcher went to these 25 schools individually and 227 teachers in total answered the scale and the questionnaire. The numbers of the teachers participated in the study from each school were provided in Appendix N. The names of the school were not provided for ethical considerations.

This group of teachers consists of 227 teachers from other PNHSs in İstanbul. The number of female (*n*= 112, 49.3%) and male (*n*= 115, 50.7%) teachers is very close to each other. Majority of the teachers have undergraduate degree (*n*= 201, 88.5%). Moreover, teachers with experience years between 1 and 5 represented the majority of the participants (*n*= 134, 59%). PNHSs have 12 subjects in total and it can be said that participants are evenly distributed except Literature (*n*= 35, 15.4%), Math (*n*= 25, 11%), and Language (*n*= 26, 11.5%). Only 33 of 227 teachers of PNHSs have more than five years experiences (14.5%). When it comes to having professional development on technology, 140 teachers out of 227 did not have any experience (61.7%). Table 3.1 summarizes the demographics of the teachers in other PNHSs.

Table 3.1

*Demographics of Teachers in Other PNHSs, İstanbul*

| Background Information | *f* | *%* |
|---|---|---|
| *Gender* | | |
| Female | 112 | 49.3 |
| Male | 115 | 50.7 |
| *Education Level* | | |
| Undergraduate | 201 | 88.5 |
| Master | 26 | 11.5 |
| *Years of Teaching Experience* | | |
| 1-5 | 134 | 59 |
| 6-10 | 49 | 21.6 |
| 11-15 | 11 | 4.8 |
| 16-20 | 20 | 8.8 |
| 20+ | 13 | 5.7 |
| *Subject Field* | | |
| Literature | 35 | 15.4 |
| Math | 25 | 11 |
| Physical Education | 10 | 4.4 |
| Philosophy | 15 | 6.6 |
| History | 17 | 7.5 |
| Geography | 16 | 7 |

Table 3.1 (Cont'd)

| | | |
|---|---|---|
| Biology | 19 | 8.4 |
| Physics | 19 | 8.4 |
| Art | 14 | 6.2 |
| Chemistry | 16 | 7 |
| Religion | 15 | 6.6 |
| Language | 26 | 11.5 |
| *Years of Teaching Experience in PNHS* | | |
| 1-5 | 194 | 85.5 |
| 6-10 | 33 | 14.5 |
| *Professional Development on Technology* | | |
| None | 140 | 61.7 |
| 1-2 | 70 | 30.8 |
| 3-4 | 10 | 4.4 |
| 4-5 | 6 | 2.6 |
| 5+ | 1 | 0.4 |

Secondly, in the descriptive part of the study, SPNHS was acted as a case. The main study (classroom observations, SBPD process and interviews) was conducted in this school with 17 teachers and 1 principal. This target school, SPNHS, was chosen via convenient sampling as the researcher had an access to this school and its teachers. As a researcher, I was careful about including information on demographics and other characteristics of sample studied in order to prevent any researcher bias and for the generalizability of the results obtained from this sample. Lastly, for classroom observations 4 teachers out of 17 were selected based on determined criterion and this was a criterion sampling. The subject area of the teacher was the criterion. In order to have diverse data and observe different classroom practices four teachers from different branches were observed. Two teachers from social sciences and two teachers from science courses were chosen and each of them was observed for three course hours with ninth graders. For ethical considerations further information related to these four teachers like their subject fields were removed.

The main study group of participants includes 17 teachers of SPNHS. In this school female teachers ($n$= 10, 58.8%) slightly outnumbered male teachers ($n$= 7, 41.2%).

Majority of the teachers have undergraduate degree (*n*= 14, 82.4%) while only 3 (17.6%) of the teachers have master's degree. Teachers with 1 and 5 years experiences represented the majority of the participants (*n*= 10, 58.8%). When it comes to subject field, it can be stated that there is only one teacher for each subject except Literature (*n*= 3, 17.6%), Math (*n*= 2, 11.8%), History (*n*= 2, 11.8%), and Chemistry (*n*= 2, 11.8%). Only 2 of the teachers have experience in PNHS more than five years (11.8%). Lastly, none of the teachers had any professional development experience in educational technologies and adult teaching practices. Table 3.2 summarizes teacher demographics.

Table 3.2

*Demographics of Teachers In Spring Private Night High School*

| Background Information | *f* | *%* |
|---|---|---|
| *Gender* | | |
| Female | 10 | 58.8 |
| Male | 7 | 41.2 |
| *Education Level* | | |
| Undergraduate | 14 | 82.4 |
| Master | 3 | 17.6 |
| *Years of Teaching Experience* | | |
| 1-5 | 10 | 58.8 |
| 11-15 | 1 | 5.9 |
| 16-20 | 1 | 5.9 |
| 20+ | 5 | 29.4 |
| *Subject Field* | | |
| Literature | 3 | 17.6 |
| Math | 2 | 11.8 |
| Physical Education | 1 | 5.9 |
| Philosophy | 1 | 5.9 |
| History | 2 | 11.8 |
| Geography | 1 | 5.9 |
| Biology | 1 | 5.9 |
| Physics | 1 | 5.9 |

Table 3.2 (Cont'd)

| | | |
|---|---|---|
| Art | 1 | 5.9 |
| Chemistry | 2 | 11.8 |
| Religion | 1 | 5.9 |
| Language | 1 | 5.9 |
| *Years of Teaching Experience in PNHS* | | |
| 1-5 | 15 | 88.2 |
| 6-10 | 2 | 11.8 |
| *Professional development on Technology* | | |
| None | 17 | 100 |

## 3.6 Data Collection Instruments

Data collection instruments were QEdTech, PALS, observation forms for group meetings, observation forms for classroom observations, and semi-structured interview schedule for teachers. Except PALS, all the data collection instruments were constructed by the researcher.

### 3.6.1 Questionnaire for Educational technologies

First of all, the QEdTech was developed in order to depict the general picture of educational technologies usage by collecting data from as many teachers as possible. There are several questions for teachers to rate their knowledge and usage of some educational technologies (both hardware and software) in their classroom. This questionnaire has three separate parts. The first one is related to demographic information about the teachers and has several questions such as their branches and years in teaching.

The second part has items concerning hardware and software and it asks teachers to rate them according to their level of knowledge and usage in their classroom. In the level of knowledge part, the teachers were asked to rate their level of knowledge of the stated hardware and software from 0 (None) to 4 (Very Good). In the level of usage part, the teachers were asked to rate their classroom usage of the stated hardware and software from 0 (Never) to 4 (Always). Hardware includes Smart

phone, laptop, PC, smart boards, etc., and the software includes MOODLE, office programs, mobile applications, social networks, etc.

The last part is related to the type of professional development program that the teachers would like to attend. Teachers were asked whether they prefer to learn by themselves, with group work or if they would prefer someone else to teach them. They rated their preferences from 0 (No interest at all) to 2 (Very strongly interested). Expert opinions for the QEdTech were taken from three different experts in the field (two professors from Middle East Technical University in the Educational Sciences department, one professor from Middle East Technical University in Computer Education and Instructional Technology department, and one assistant professor from Başkent University in the Educational Sciences department) and necessary adjustments were made. For instance, number of the stated hardware and software programs were decreased considering the current context of PNHSs. Hardware and software programs were grouped under their general names for clarity. For the face validity of the instrument, seven teachers who are working in different PNHS had a look over the instrument and stated their comments related to its clarity, arrangement of the questions and the parts that they did not understand. Full version of the QEdTech consists of each three part is provided in Appendix B.

### 3.6.2 Principles of Adult Learning Scale

PALS was adapted to Turkish and was used to rate the teachers' andragogical knowledge and their usage of it in their classrooms. It is an instrument that was developed by Conti in 1978 and is a 6 point scale. Its factors were determined by a study in 1983 and the final versions of the factors were determined in 1998 by the researcher (Conti, 1978, 1998). The 7 factors of the scale were learner-centered activities, personalizing instruction, relating to experience, assessing students' needs, climate building, participation in the learning process, and flexibility for personal development. The PALS is based upon principles found in current adult education literature. With the help of this instrument, we can understand whether teachers in PNHS are using adult learning principles in their teaching or not. In order to be able to identify the specific classroom behaviors that make up an individuals' teaching style, PALS is divided into seven factors that are consistent with the literature. The

PALS instrument was chosen because of the dimensions that it measured and because it has been identified as a reliable and valid instrument regarding the adult education settings. The test-retest method established a reliability coefficient of .92 for the original instrument (Conti, 1978).

Turkish adaption of the scale was done by the researcher through backward translation method. First of all, the scale was translated into Turkish by the researcher who is also an English instructor at police vocational college in Ankara. This Turkish version was translated into English again by an English instructor working at Hacettepe University. Then, this English version was translated to Turkish by a research assistant at Middle East Technical University whose undergraduate degree was in English Language Teaching. Final Turkish version of the scale was reviewed by three experts in the field (two professors from Middle East Technical University in the Educational Sciences department and one assistant professor from Başkent University in the Educational Sciences department) for small adjustment regarding Turkish education context. For instance, as there is not any concept like learning episodes in the curriculum of PNHSs as in the original scale, the translation of the term 'units' were used instead of learning episodes.

The pilot study was conducted by the researcher with 193 teachers working in PNHSs. Exploratory factor analysis (EFA) was performed based on the data gathered from 193 PNHS teachers to analyze the factor structure of the Turkish version of the PALS. For this aim, EFA was conducted through principal axis factoring (PAF) with direct oblimin rotation. IBM SPSS 22.0 was used for data analysis. Correlation matrix was examined for preliminary judgments about the factorial structure. KMO, Bartlett's test of sphericity, and correlation matrix were examined to determine to conduct EFA for the data. Factor structure, and pattern matrices, total variance (eigenvalues-total/cumulative percentage), scree plot tables and graphs were obtained and examined to select and retain the factors. Interpretations and naming the factors were made. Finally, internal consistency was checked through required Cronbach's alpha tests.

The correlation matrix was examined to check the appropriateness of the factor analysis for this data set. According to Tabachnick and Fidell (2013), correlation

coefficients between the correlated items should be over .30. In this study, the correlated items had a correlation value over .30. Then, factor analysis is an appropriate statistical method to be utilized for this data set.

Two initial conditions of factor analysis are specified as adequate sample size and moderate relationships between factors. For the adequacy of sample size, Hair et al. (2010) and Nunnally (1978, as cited in Field, 2009) suggested that the number of participants should be at least three times more than the number of variables. For this study, adequacy of sample size for EFA was confirmed since the lower limit of advised sample size corresponded to 132. Adequacy of sample size was also verified by Kaiser-Meyer-Olkin (KMO) test value of .92 which refers to a ‘‘great’’ value for factor analysis (Field, 2013).

It was also questioned that if there were too high correlations among the items, this could cause multicollinearity. Since the correlation values of the correlated items were below the value of .90, we can say that there was not a highly correlated item pair (Field, 2009). More importantly, Bartlett’s test of sphericity, $\chi 2\ (561) = 4439.97$, $p = 000$, which was highly significant (Field, 2009) asserted that the correlation matrix is statistically different from the identity matrix; therefore, the correlations among the items are suitable for conducting factor analysis (Field, 2009). As the next step, multivariate normality was checked through Mardia’s test. As it is violated, PAF was preferred and due to the correlated nature of factors direct oblimin rotation was utilized.

In the next step, the most appropriate data extraction method was determined to reduce items into factors. Kaiser (1960) recommended retaining all factors with eigenvalues greater than 1. Based on this criterion, eight factors were extracted from this data set and the eigenvalues are provided in Table 3.3.

Table 3.3

*Eigenvalues, Percentages of Variance, and Cumulative Percentages*

| Factor | Eigenvalue | % of variance | Cumulative % |
|---|---|---|---|
| Factor 1 | 16.05 | 36.49 | 36.49 |
| Factor 2 | 4.71 | 10.70 | 52.51 |
| Factor 3 | 2.34 | 5.32 | 56.34 |
| Factor 4 | 1.69 | 3.83 | 56.34 |
| Factor 5 | 1.50 | 3.41 | 59.75 |
| Factor 6 | 1.31 | 2.97 | 62.72 |
| Factor 7 | 1.18 | 2.68 | 65.39 |
| Factor 8 | 1.04 | 2.37 | 67.77 |

However, since Kaiser's criterion is likely to overestimate the number of factors, items loaded these eight different factors were examined and the structure was founded to be problematic. Some of the factors had only two items and the items that were supposed to be grouped together theoretically did not load the same factor. As Field (2009) insistently advised the Cattell's scree plot test, the figure of it was also examined. Then, with the reference of inflexion point of the scree plot in Figure 3.1, four factors were determined as the strong contributor of the variance in the data set. Therefore, EFA was repeated with the fixed number of factors and four factor solution was founded to be meaningful both theoretically and statistically. As the variables that were loading on the same factor made sense together, they could be named the concept they represent thus, that is indicative that the four factor solution was a reasonable one.

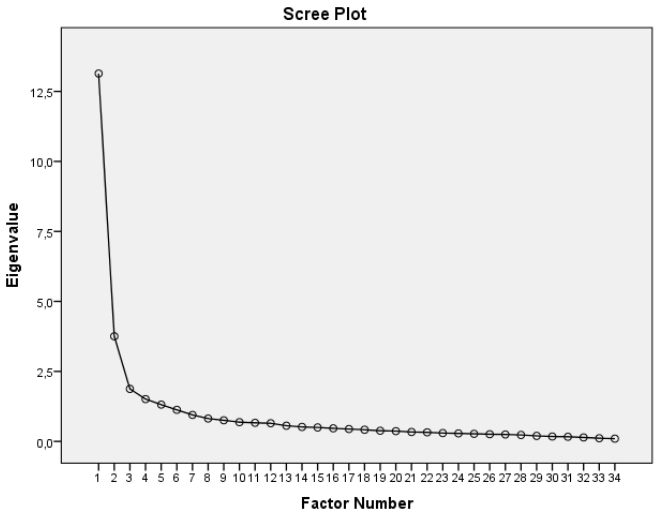


*Figure 3.2.* Scree plot of principles of adult learning scale

In order to interpret and name the factors, the pattern of the factor loadings was analyzed. According to Field (2009) factor loadings greater than .40 are considered necessary for practical significance. Regarding this reference items were loaded significantly on four factors. Items 3, 5, 11, 17, 24, 32, 35, 37, 41, and 42 were manifested under the factor "Personalizing Instruction" while the second factor, namely "Learner-Centered Instruction" consisted of items 2, 6, 7, 9, 13, 16 19, 26, 29, 30, and 38. Items 12, 14, 34, 39, 43, and 44 were manifested under the factor "Relating to Experience". Lastly, items 1, 10, 15, 23, 25, and 36 were grouped under the factor "Participation in the Learning Process". Items 4, 8, 18, 20, 21, 22, 27, 28, 31, 33, and 40 did not load to any of these factors and they were excluded from the scale. Modified version of the PALS is provided in Appendix C. Loaded items and their factor loadings are presented in Table 3.4.

Table 3.4

*Factor Loadings for the Items of Principles of Adult Learning Scale*

| | Factor Loadings | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| 35. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives. | **.85** | -.11 | -.04 | -.00 |
| 5. I help students diagnose the gaps between their goals and their present level of performance. | **.69** | -.01 | -.19 | -.05 |
| 42. I use different materials with different students. | **-.67** | .09 | .16 | .07 |
| 37. I give all my students in my class the same assignment on a given topic. | **.65** | .05 | -.04 | -.05 |
| 41. I encourage competition among my students. | **.65** | .03 | .06 | -.06 |
| 11. I determine the educational objectives for each of my students. | **.63** | -.08 | -.18 | .18 |
| 24. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept. | **-.59** | .12 | .28 | -.05 |
| 17. I use different techniques depending on the students being taught. | **-.55** | .18 | .37 | -.10 |
| 3. I allow older students more time to complete assignments when they need it. | **-.53** | .02 | .04 | .05 |
| 32. I gear my instructional objectives to match the individual abilities and needs of the students. | **-.53** | .12 | .39 | -.02 |
| 26. I maintain a well-disciplined classroom to reduce interference to learning. | -.21 | **.70** | .12 | -.35 |
| 13. I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions. | -.03 | **.64** | -.16 | .31 |
| 38. I use materials that were originally designed for students in elementary and secondary schools. | -.07 | **.63** | .03 | -.07 |
| 30. I use tests as my chief method of evaluating students. | .05 | **.58** | -.24 | .25 |
| 29. I use methods that foster quiet, productive desk work. | -.09 | **.53** | -.10 | -.02 |
| 2. I use disciplinary action when it is needed. | .22 | **.47** | .25 | -.07 |
| 16. I use one basic teaching method because I have found that most adults have a similar style of learning. | .37 | **.47** | -.17 | .28 |
| 9. I use lecturing as the best method for presenting my subject material to adult students. | .36 | **.47** | -.01 | .13 |
| 7. I stick to the instructional objectives that I write at the beginning of a program. | .14 | **.46** | .16 | -.16 |
| 6. I provide knowledge rather than serve as a resource person. | .39 | **.43** | .09 | .13 |

| Table 3.4 (Cont'd) | | | | |
|---|---|---|---|---|
| 43. I help students relate new learning to their prior experiences. | -.17 | -.13 | **.78** | -.02 |
| 12. I plan units which differ widely as possible from my students' socio-economic backgrounds. | .01 | .13 | **.71** | -.02 |
| 44. I teach units about problems of everyday living. | -.23 | -.14 | **.64** | -.19 |
| 39. I organize adult learning episodes according to the problems that my students encounter in everyday life. | -.27 | -.03 | **.59** | -.17 |
| 34. I encourage my students to ask questions about the nature of their society. | -.11 | -.19 | **.58** | -.04 |
| 14. I plan learning episodes to take into account my students' prior experiences. | .34 | .07 | **-.42** | -.27 |
| 36. I have my students identify their own problems that need to be solved. | -.04 | -.02 | -.16 | **.76** |
| 25. I help my students develop short-range as well as long-range objectives. | -.10 | .04 | -.24 | **.69** |
| 10. I arrange the classroom so that it is easy for students to interact. | -.14 | -.12 | -.14 | **.63** |
| 15. I allow students to participate in making decisions about the topics that will be covered in class. | .35 | .00 | -.22 | **-.46** |
| Table 3.4 (Cont'd) | | | | |
| 1. I allow students to participate in developing the criteria for evaluating their performance in class. | .37 | .10 | -.24 | **-.41** |
| 23. I have individual conferences to help students identify their educational needs. | .05 | .09 | -.36 | **.40** |
| Factor Correlations | | | | |
| Factor 1 | -- | | | |
| Factor 2 | .23 | -- | | |
| Factor 3 | -.53 | .04 | -- | |
| Factor 4 | -.23 | -.05 | .09 | -- |

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Direct Oblimin.

All these findings revealed that four factor-structure explains the connections among all the items of the scale. Therefore, the final interpretation on the factors and the relevant items can be concluded as the following;

- **Personalizing Instruction:** Items 3, 5, 11, 17, 24, 32, 35, 37, 41, and 42 significantly loaded on this factor. This factor includes items that are related

to meeting the unique needs of various learners by using different strategies and methods allowing the learners to progress at their own pace.

- **Learner-Centered Instruction:** This factor consists of the items 2, 6, 7, 9, 13, 16 19, 26, 29, 30, and 38. This factor includes items that are related to arranging the classroom environment so that the learners can initiate action, help set their own learning objectives, and take responsibility for their own learning.
- **Relating to Experience:** Items 12, 14, 34, 39, 43, and 44 are identified as the items of this factor. This factor includes items that are related to encouraging the learner to relate new material to their previous experiences and planning lessons to relate to the everyday problems of the learners.
- **Participation in the Learning Process:** Items 1, 10, 15, 23, 25, and 36 were grouped under this factor. This factor includes items that are related to allowing learner to identify the problems to be solved and materials to be included thus encouraging high levels of learner involvement in decision making.

Finally, to check the internal consistency of the scale Cronbach's alpha coefficients were calculated as .84 for Personalizing Instruction factor, .71 for Learner-Centered Instruction factor, .86 for Relating to Experience factor, and .89 for Participation in the Learning Process factor. Cronbach's alpha coefficient was .89 for whole instrument. Each item also revealed high correlation with the corresponding factor, as a confirmation for the internal consistency of the scale regarding criterion of .70 stated by Nunnanly (1978). Cronbach's alpha if item deleted values for each item are not above the Cronbach's alpha coefficients of relevant factors which means no item causes a substantial decrease in $\alpha$ value. Therefore, there does not seem any problem regarding internal consistency of the factors.

### 3.6.3 Group Meetings Observation Forms

Observation forms for group meetings were constructed by the researcher based on the type of group meetings held by teachers and the principal. The researcher directed all of the meetings and a volunteer teacher took notes via these observation forms. First two group meetings were on determining the needs of the teachers, and the third and fourth meetings were related to features of desired program, thus there

were several observation forms for each type of meeting. The second meeting was related to the needs of the teachers thus there were different parts in the form such as 'technology needs stated by the teachers', 'andragogy needs stated by the teachers', and 'discussion of the results of QEdTech and PALS'. There were also parts for general issues such as problems encountered or general attitudes of teachers towards the meeting (see Appendix D). The features of desired professional development program were discussed in the third and fourth meetings. In the observation form there were several parts such as opinions related to delivery of the program, duration of the program, and general features of the program. There were also parts regarding general issues such as contribution of each teacher to the meeting (see Appendix E).

### 3.6.4 Classroom Observation Form

Classroom observation form was developed by the researcher. It was prepared as a detailed form, not to miss any important point in the flow of the lesson. It has several parts such as teaching methods used, students' responses, and appropriateness of the classroom for technology use, educational technologies used, adult learning principles used, and problems encountered (see Appendix F). Furthermore, for the practices of teachers for their adult learners a checklist was prepared for each time the teacher showed the determined behavior. The checklist includes practices such as s/he includes students in the learning process, s/he acts like a facilitator, s/he checks students' previous learning, and s/he provides clear and understanding learning objectives and so on (see Appendix G).

### 3.6.5 Semi-Structured Interview Schedule

As the last instrument, semi-structured form for individual interviews with each of the teacher about their views related to the SBPD program process was used, and it was developed by the researcher. For validity and reliability of these instruments, expert opinions were taken after construction of the necessary items and for the face validity of the form and clarity of the questions seven teachers who are working in different PNHS had a look over the instrument and stated their comments related to its clarity, arrangement of the questions and the parts that they did not understand (see Appendix H). In order to answer the research questions of this study seven

different instruments were used and three different groups of participants were selected. They are summarized in Table 3.5 below.

Table 3.5

*Research Questions, Participants, and Data Collection Instruments*

| Research Questions | Participants | Data Collection Instruments |
|---|---|---|
| What are the needs of teachers in PNHSs in terms of educational technologies and adult teaching practices? | 227 teachers in PNHSs, 17 teachers in SPNHS, and 4 teachers out of 17 | QEdTech, PALS, observation forms of group meetings and classroom observation |
| What are the preferences of teachers in SPNHS for content and delivery methods for the professional development related to educational technologies and adult teaching practices? | 17 teachers in SPNHS | QEdTech and observation forms of group meetings |
| What are the views of teachers in SPNHS related to the changes and improvements in using educational technologies and adult teaching practices in their teaching after they completed a SBPD program? | 17 teachers in SPNHS | semi-structured interview schedule for teachers |

## 3.7 Data Collection Procedures

In February 8, 2018 permission from the Ethics Committee of METU (Appendix A) was taken and data collection process began in March 2018. In this study, there were five different steps, and different data collection procedure for each step was explained in detail below.

*Step 1*: The main aim of this step was to identify the needs of teachers in PNHS on technology use and principles of adult learning. This step consists of several sub-steps. It started with review literature to have an idea about the general situation of the field. Literature on educational technologies and adult learning theory was examined in detail in order to understand the overall pattern and practices. This review was also beneficial for construction data collection instruments (semi-structured interview schedule, group meetings observation forms, classroom observation form, PALS, and QEdTech)

Then, observations of four teachers' classrooms from different fields were conducted with the help of classroom observation form and checklist prepared. In order to depict the general practices of teachers in SPNHS, initial classroom observations were done between 12 and 30 March 2018. Four different teachers were chosen from different subject fields. Each of the teachers was observed for three hours. Observation forms which were prepared in advance were filled. The teaching methods used, students' reactions, appropriateness of classroom for technology use, educational technologies used, problems encountered, practices regarding adult learners, and the flow of the lesson were observed. For the practices of teachers for their adult learners a checklist was prepared for each time the teacher demonstrated the determined behavior. The checklist includes practices such as, s/he includes students in the learning process, s/he acts like a facilitator, s/he checks students' previous learning, and s/he provides clear and understanding learning objectives and so on.

After this, Turkish adoption of the PALS was done by the researcher and piloting of the Turkish version was conducted between 12 and 30 March 2018. The researcher contacted with each of these schools individually (15 in total) and eventually 193 teachers were reached. Later, exploratory factor analysis was performed based on the data gathered from 193 PNHS teachers to analyze the factor structure of the Turkish version of the PALS. After the pilot study of PALS, other 25 PNHSs in İstanbul participated in the main study. The researcher contacted with each of these schools individually and eventually 227 teachers were reached. The main study was conducted between 31 March and 15 April 2018.

The first meeting was held on April 11, 2018 in the teachers' lounge of the SPNHS. There are 17 teachers in this school and all of them participated in the first meeting. The researcher prepared a power point presentation about SBPD and it lasted for almost 40 minutes. Necessary hand-outs were given for future use. Actually, this meeting served as a presentation session in which teachers were informed about SBPD.

The second meeting was held on April 18, 2018 in the teachers' lounge of the SPNHS after the main study of QEdTech and PALS was conducted. All of the teachers participated in the second meeting. The meeting lasted for almost 2 hours. First of all, they were asked about their opinions related to possible results of the QEdTech and PALS. Later, the prepared documents for the results were distributed and each of the items in these instruments was discussed one by one. In this process one of the teachers volunteered to take notes about the contribution of each teacher as they did not give permission to record the meetings.

*Step 2*: In this step, the features of desired professional development program were determined through two meetings. The third meeting was held on April 19, 2018 in the teachers' lounge of SPNHS. 15 of the teachers participated in the third meeting. The meeting lasted for almost 50 minutes. The fourth meeting was held on April 20, 2018 in the teachers' lounge of SPNHS. 14 of the teachers participated in the fourth meeting. The meeting lasted for almost 75 minutes.

*Step 3*: This step was quite different from other steps because it required development of professional development program based on the teachers' needs and decisions by the researcher alone. It is important to highlight that the program was developed based on the teachers' needs and decisions determined through four group meetings conducted previously. This step will be explained in the professional development program design in the next part.

*Step 4*: This step was related to implementation of the developed professional development programs. The professional development for technology session was held on 28-29 April 2018, almost 2 hours for each day. A friend of the researcher who is a research assistant in Computer Technology Education Department in one of

the universities in Turkey gave the training. All of the teachers participated in both trainings. Almost all the teachers brought their laptops and some of them followed the lesson from their smart phones. The first lesson for adult teaching practices was held on May 2, 2018 and it was lasted for almost 2 hours. The researcher gave the training and it was about mainly the learning characteristics of adult learners. Moreover, their physical and psychological characteristics were mentioned. The second lesson was held on May 8, 2018 and it was related to activities that can be used with adult learners.

*Step 5*: Individual teacher interviews was conducted on 14-31 May 2018. There was a small room next to the teachers' lounge in SPNHS and the interviews were conducted in this room. At the beginning of each interview, the teachers were provided with the information and permission form and they were asked whether they accept the session to be recorded. All of them gave the permission, and all the interviews were recorded. The interviews lasted between 17-45 minutes.

### 3.8 Designing Professional Development Programs

After needs assessment process done by classroom observations, application of PALS and QEdTech, and four different group meetings, development of professional development programs started. Because of the model (SBPD) used in this study, findings gained by group meetings (especially third and fourth ones) acted as basic sources of information for the designing process. Teachers of SPNHS are adult educators, but they are also adults as well. That is also why SBPD model was chosen and implemented in this study. Besides, it was very crucial to consider adult learning principles, while designing both the technology and adult teaching practices professional development programs. The process suggested by Silberman (2006) in his popular book *Active Training* was followed, because it was found suitable for this specific case of professional development process of SPNHS's teachers. At the beginning of his book, Silberman (p. 2) made an interesting entrance and stated that he changed the Confucius's popular wisdom as follows for the adult learners;

"*When I only hear, I forget.*
*When I hear and see, I remember a little.*

*When I hear, see, and ask questions and discuss with someone else, I begin to understand.*
*When I hear, see, question, discuss, and do, I acquire knowledge and skill.*
*When I teach someone, I master what I have learned."*

As the brains of adults have a vast number of networks because of their previous learning experiences, they do not just receive the information and keep it; they process this information and this processing has an effect on their learning style (Silberman, 2006). That's why it is crucial to integrate active learning into professional development programs of adult learners. Silberman (2006) proposed the following sequence for designing an active training program and this sequence was followed in this study;

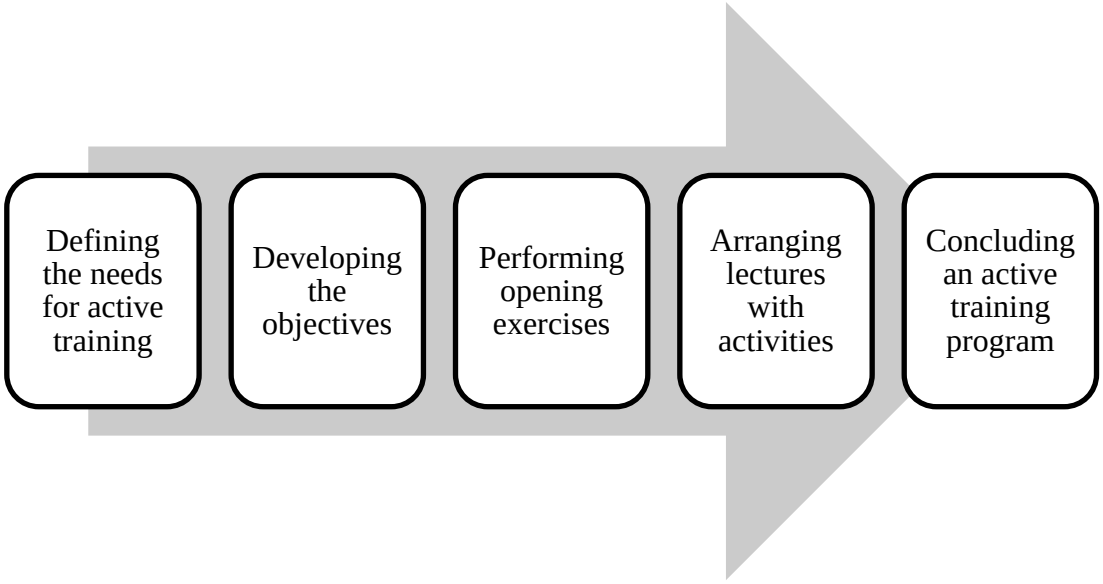


*Figure 3.3.* Silberman's design

### 3.8.1. Designing a Professional Development Program on Social Media in Teaching

In this part, the process of designing active professional development program on Social Media in Teaching is reported based on the Silberman's developing active training framework (2006).

#### *3.8.1.1 Defining the needs for active training*

This step was fulfilled through Step 1 and 2 of the study which included classroom observations, application of QEdTech, and four different group meetings and the findings gathered from this process were reported in the first part of the Result section.

#### *3.8.1.2 Developing the objectives*

After need assessment process, program objectives were written considering all the aforementioned points that are believed to help teachers reach certain proficiency in terms of using social media in teaching. For this purpose, a total of 23 cognitive and affective objectives were created and they are provided in Appendix I and J, in the complete presentation of lesson plans. These objectives were written based on the teachers' views stated in the group meetings regarding social media. Moreover, as none of the observed teachers used educational technologies in their teaching during classroom observations, this was also considered in writing objectives.

#### *3.8.1.3 Performing opening exercises*

Opening exercises are very crucial in designing an active training program because it allows participants to get the initial knowledge about the program (Silberman, 2006). As this group of teachers have already known each other, activities including team building were not suitable for the group; therefore, the method called active knowledge sharing was chosen for the first day of the program. It is a good way to engage participants directly into the subject matter. At the beginning of the program, teachers were asked to make meaningful guesses about the interesting statistics regarding social media tools (Twitter, Instagram, YouTube, Facebook, Blogs and Podcats) in order to make them realize the great impact of these technological tools and platforms especially on adults and young adults. For instance, how much of the Facebook users check their account at least 5 times a day or which type of people are the most active on social media were asked to the teachers and they made several guesses and then the correct statistics were provided. All of the questions are provided in Appendix I in the complete presentation of the lesson plan of Day 1.

In the second day of the program as the teachers got already familiar with the topic opening a discussion method was used to make them think more about using the social media tools that they learned previous day in their teaching. Teachers tried to find different answers to the question of "What are the possible ways of integrating a particular social media tool in to your teaching regarding the content you teach?" All of the questions are provided in Appendix J in the complete presentation of the lesson plan of Day 2.

#### *3.8.1.4 Arranging lectures with activities*

In such kind of professional development programs, after opening exercises usually there is a need to present the information that should be covered. If you want to convey general information to a large group, lecturing is the most powerful and efficient way (Silberman, 2006). However, lectures have the potential problem of putting participants into a passive mode. Nonetheless, by using interactive and participative techniques, lecturing can have an important place in the active training program (Thiagarajan, 2005). Therefore, in order to convey crucial information about social media in teaching, lecture format was used through PowerPoint presentation by integrating some participative techniques for the teacher.

At the beginning of the presentation of Day 1, interesting and funny cartoons about social media addiction were used in order to gain the audience interest through showing the impact of the social media in our lives. In order to maximize understanding and retention of the participants, opening summary method was also used. At the beginning of the presentation of Day 2, a short video clip showing how to use social media in teaching was showed. Then, the lecture's major points and conclusions were stated to help participants organize their listening in both days. In order not to put the participants into a mode of passive listeners, some ways to involve participants into lecture can be used. In the first day, after the presentation of each social media tool, teachers were asked to repeat the procedures on their own laptops or cell phones such as opening an account on Facebook or if they have an Instagram account, sharing a photo on Instagram, etc. In the second day, teachers were encouraged to be active listeners by being asked how they can adapt the presented activity to the content of their course. All of the procedures used in lectures

of both days are provided in Appendix I and Appendix J in the complete presentation of the lesson plan of Day 1 and Day 2.

#### *3.8.1.5 Concluding an active training program*

Silberman (2006) proposed that when a program is about to finish, participants are not willing to state their questions or concerns because they think that this may lengthen the time of the program but this situation should be eliminated because illuminating these questions and concerns is very valuable in active training process. Therefore, a final question-and-answer period was held with the teachers of SPNHS. For this purpose, blank index cards were handed and each participant was requested to write down a question. Then, the questions of teachers were tried to be answered as correct as possible by the presenter with the help of other teachers.

### 3.8.2 Designing a Professional Development Program on Adult Teaching Practices

In this part the process of designing active professional development program on Adult Teaching Practices are reported based on the Silberman's developing active training framework (2006).

#### *3.8.2.1 Defining the needs for active training*

This step was fulfilled through Step 1 and 2 of the study which included classroom observations, application of PALS, and four different group meetings and the findings gathered from this process were reported in the first part of the Result section.

#### *3.8.2.2 Developing the objectives*

After needs assessment process, program objectives were written considering all the aforementioned points that are believed to help teachers reach certain proficiency in terms of using adult teaching practices, and consequently, a total of 26 cognitive and affective objectives were created. They are provided in Appendix K and L, in the complete presentation of lesson plans. In the classroom observations, it was observed

that teachers do not perform any adult teaching practices and in the group meetings they stated that they did not know how to teach adults and they even did not know the characteristics of adult learners. Therefore, these crucial points were carefully considered while writing the objectives of the program.

#### *3.8.2.3 Performing opening exercises*

The first day of the program was mainly on the characteristics of adult learners. As this group of teachers have taught adult learners at least for a year, it would be appropriate to start with their experiences considering the adult learners in their schools. Therefore, as an opening exercises active knowledge sharing was used as it may draw participants immediately into the subject matter in Day 1. They were requested to share the problems that they had encountered or to state the particular characteristics that they had spotted in their students. This activity could also make the teachers determine the characteristics of adult learners regarding their students.

The second day of the program was mainly on the adult teaching practices and activities that can be used with adult learners. As the teachers got already familiar with the adult learners, opening a discussion method was used to make them think more about how they can teach considering the characteristics of this age group of students. Besides, they were also requested to share the techniques or methods that they had used and found suitable for their students. This made the teachers think more about their teaching experiences; therefore it made possible to integrate adult teaching practices into their teaching easier.

#### *3.8.2.4 Arranging lectures with activities*

At the beginning of the presentation of Day 1, initial case problem was used in order to gain the participants interests. A teaching case which includes problems caused by the specific features of adult learners was distributed and teachers were invited to discuss the problems. Then, in order to maximize understanding and retention of the participants, opening summary method was used and the lecture's major points and conclusions were stated to help participants organize their listening. In order not to

put the participants into a mode of passive listeners, some ways to involve participants into lecture were used. In the first day, after the presentation of features of adult learners, teachers were asked to think about these features and to compare them with their students and give specific examples. All of the procedures used in lectures of first day are provided in Appendix K in the complete presentation of the lesson plan of Day 1.

At the beginning of the presentation of Day 2 a short video clip showing how to use adult teaching practices was showed. On the second day, teachers were assigned active listeners mode and they were asked how they could adapt the presented activity to the content of their course. Then, in order to maximize understanding and retention of the participants, opening summary method was used and the lecture's major points and conclusions were stated to help participants organize their listening. In order not to put the participants into a mode of passive listeners, some ways to involve participants into lecture were also used. In the second day, after the presentation of several activities, teachers were asked to think about how they can integrate this activity considering the content of their course. All of the procedures used in lectures of first day are provided in Appendix L in the complete presentation of the lesson plan of Day 2.

#### *3.8.2.5 Concluding an active training program*

A final question-and-answer period was held with the teachers of SPNHS in both days of professional development on adult teaching practices. Blank index cards were handed and each participant was requested to write down a question. Then, the questions of teachers were tired to be answered as correct as possible by the presenter and together with the other teachers.

## 3.9 Data Analysis

This case study had both quantitative and qualitative data collected through 5 different steps. Therefore, there were several data analysis procedures for each step and they are explained in detail below.

*Step 1 and Step 2:* First of all, qualitative data collected through classroom observation were analyzed by using content analysis. The observation forms that were filled by hand throughout the observations were carefully examined and the transcripts were coded by two researchers separately regarding the research questions. Later, emerging codes from two coding processes were determined and crosschecked; the majority of the codes were consistent. The inter-coder reliability, which was calculated by using MAXQDA 18.0.8, was reached with 82.93% agreement on all of the eight codes and according to Neuendorf (2002) .80 or greater would be acceptable in most situations. These categories are methods of teachers used, students' reactions, technology use, adult learning principles usage. For classroom observation a checklist was also used. When the teachers practiced the specified action, a sign was put on that behavior each time and then the frequency of these behaviors was determined. For the pilot study of PALS, the quantitative data collected were analyzed by using IBM SPSS 22.0. Exploratory factor analysis was conducted. In the main study, quantitative data were collected through QEdTech and PALS. The data collected through these instruments were analyzed by using IBM SPSS 22.0 through descriptive analyses.

In the first part of the QEdTech, teachers' demographic information was determined by frequency analysis. The frequency and percentages of teachers' genders, teaching years, education levels, subject fields, teaching years in PNHS, and the number of professional development courses were determined. Second part of QEdTech has different kinds of items about hardware and software and it asks teachers to rate them according to their level of knowledge and usage in their classroom. Descriptive analyses were conducted for this part and means and standard deviations were calculated for each hardware and software.

The last part related to the type of professional development program that the teachers would like to attend. Teachers are asked whether they prefer to learn by themselves, with group work or they prefer someone to teach them. Thus, both descriptive and frequency analysis were conducted for this part and the number of responses was calculated for each three answers; No interest at all, Interested and Very strongly interested. The other instrument, PALS is a 6 point Likert scale with

33 questions. Means and standard deviations for each item were calculated thus descriptive analyses were conducted for analyzing the data collected through PALS.

The other qualitative data sources in the first step were first two group meetings. Later in the Step 2 of the study, two additional group meetings were done in order to determine the features of professional development program. Coding and content analysis of notes of qualitative data was used in this study. Different categories were determined and the notes taken throughout the observations of those meetings were examined based on those categories which are general attitudes of the teachers, general contributions of the teachers, and problems encountered

*Step 5*: Qualitative data were collected through semi-structured interviews in this step. All the recorded interviews were transcribed carefully and categories were determined through content analysis. The transcripts were coded by two researchers separately regarding the research questions. Later, emerging codes from two coding processes were determined and crosschecked; the majority of the codes were consistent. The inter-coder reliability, which was calculated by using MAXQDA 18.0.8, was reached with 82.35% agreement on all of the eight codes and according to Neuendorf (2002) .80 or greater would be acceptable in most situations. In the end, four separate categories for three research questions emerged regarding the codes which are general views on SBPD process, professional development on educational technologies, professional development on adult teaching practices, and points to improve and suggestions. Each of the transcribed data was examined carefully according to these categories and relevant phrases were also determined.

### 3.10 Limitations of the Study

Limitations in case studies include participant restraint, researcher bias, and lack of generalizability of results (Merriam, 2002). Participants may be restrained in their responses because they are concerned about sharing information about themselves and their schools that the researcher ultimately might report in a negative way. In this regard, it is possible that participants in this study may have been reserved in their responses because they did not want critique their performance in SBPD process. To encourage participants to be forthright in their responses to the interview items, I

clearly expressed that their responses would be kept confidential and their identities would not be revealed in the final document.

Qualitative research has greater potential for introducing researcher bias than quantitative research because in qualitative research, the researcher is the primary data collection instrument and, as such, has greater potential for introducing bias during the data collection process (Merriam, 2002). Because the data analysis process in qualitative research is based on researcher interpretation rather than mathematical calculation, there is also potential for research bias to be introduced during the data analysis process (Merriam, 2002). In particular, I recorded the participant interviews to ensure that accurate responses were captured, and I used member checking and peer review to ensure that accurate interpretations of the collected data were reached.

Because data generated during interviews are particular to individual participants, generalizations about those participants cannot be made using this type of data (Merriam, 2002). However, the primary intent of case study research is to describe a particular case rather than to reach general conclusions about larger or similar populations (Merriam, 2002). In this study, the purpose of generating and analyzing data was to determine the perspectives of teachers in the SPNHS who participated in the interviews.

### 3.11 Trustworthiness

Providing reliability and validity in the qualitative study requires different steps to take comparing to quantitative ones and it is a very crucial step to take. Lincoln and Guba (1986), proposed some guidelines for the trustworthiness of a qualitative study and they were utilized for the present study considering its credibility, transferability, dependability, and confirmability. Specifically, in the present study, the supervisor and two other professors in the thesis examining committee scrutinized the research design and provided continuous feedback during the research process regarding the preferences and interpretations. Credibility, dependability, and also confirmability in this study were satisfied by these debriefing sessions which enabled gathering different point of views.

Participant checks were used to provide credibility; each participant was asked to read the interview document after transcription. Spending adequate time in the field and collecting data carefully also were other ways of ensuring credibility in the study. Moreover, peer scrutiny was use for credibility and qualitative data were also coded by a peer of the researcher and emerging codes were evaluated and their consistency was determined. As part of meeting dependability and transferability, research methods, sample, and findings were presented and described. These descriptions can be used another researcher to replicate the current study and evaluate the applicability of the results to other samples and contexts.

# CHAPTER 4

# RESULTS

This section is related to findings of the study. First of all, there is a needs assessment process and it includes results of QEdTech and PALS, classroom observations and group meetings. Secondly, gathered through semi-structured interviews, the views of the teachers of SPNHS for the whole process of SBPD are provided.

## 4.1 Teachers' Needs on Educational Technologies

### 4.1.1 Level of Knowledge and Classroom Use

In this part of the questionnaire, teachers were asked to rate their level of knowledge and classroom use regarding stated 21 hardware and software in 5 different categories. These categories are hardware tools, learning management systems, social media tools, Google applications, and software tools. Teachers' responses regarding these categories are presented below separately.

#### *4.1.1.1 Hardware tools*

In this part, participants were asked to rate their knowledge and classroom use regarding the stated hardware tools which are phone, personal computer, projection machine, smart board, and tablet. Mean scores and standard deviations for both knowledge level and classroom use level are provided in Table 4.1.

Table 4.1

*Participants' Responses on Hardware Tools*

| *Knowledge* | | | *Classroom Use* | |
|---|---|---|---|---|
| *M* | *SD* | Hardware Tools | *M* | *SD* |
| 2.75 | .85 | Phone | 1.14 | .85 |
| 2.67 | .82 | Personal Computer | 1.24 | .97 |
| 2.14 | 1.03 | Projection Machine | 1.00 | 1.01 |
| 1.88 | 1.18 | Smart Board | .97 | 1.38 |
| 1.81 | 1.25 | Tablet | .69 | .85 |

For knowledge level 0 stands for 'none' and 4 stands for 'very good'. When Table 4.1 is examined, it can be seen that phone ($M$ = 2.75, $SD$ = .85) has the highest mean score and tablet ($M$ = 1.81, $SD$ = 1.25) has the lowest mean score. As the other tools also have mean scores near or above 2, it can be stated that teachers of PNHSs have medium level of knowledge considering the hardware tools. When it comes to the classroom use level, the mean scores are a bit lower than the knowledge level and personal computer ($M$ = 1.24, $SD$ = .97) has the highest mean score and tablet ($M$ = .69, $SD$ = .85) has the lowest mean score. In this part 0 stands for 'never' and 4 stands for 'always'. Therefore, it can be seen that participants never or seldom use these tools in their classroom setting.

#### *4.1.1.2 Learning management systems*

In this part, participants were asked to rate their knowledge and classroom use regarding the stated learning management systems which are moodle, edmodo, and kahoot. Mean scores and standard deviations for both knowledge level and classroom use level are provided in Table 4.2.

Table 4.2

*Participants' Responses on Learning Management Systems*

| *Knowledge* | | | *Classroom Use* | |
|---|---|---|---|---|
| *M* | *SD* | Learning Management Systems | *M* | *SD* |
| .08 | .43 | Moodle | .04 | .32 |
| .06 | .33 | Edmodo | .02 | .22 |
| .13 | .57 | Kahoot | .02 | .22 |

Although three of the systems have very low means in knowledge level part, kahoot (*M* = .13, *SD* = .57) has the highest mean score and edmodo (*M* = .06, *SD* = .33) has the lowest mean score. Based on these mean score it can be acknowledged that teachers do not have any information regarding these tools. For classroom use level mean scores are even lower as moodle (*M* = .04, *SD* = .32) has the highest mean score and edmodo (*M* = .02, *SD* = .22) and kahoot (*M* = .02, *SD* = .22) have the same mean scores. It can be claimed that these teachers never use learning management systems in their teaching.

#### *4.1.1.3 Social media tools*

In this part, participants were asked to rate their knowledge and classroom use regarding the stated social media tools which are facebook, twitter, instagram, youtube, blogs, and podcasts. Mean scores and standard deviations for both knowledge level and classroom use level are provided in Table 4.3.

Table 4.3

*Participants' Responses on Social Media Tools*

| *Knowledge* | | | *Classroom Use* | |
|---|---|---|---|---|
| *M* | *SD* | Social Media Tools | *M* | *SD* |
| 2.34 | 1.09 | Facebook | .26 | .76 |
| 2.08 | 1.17 | Twitter | .18 | .64 |
| 2.23 | 1.03 | Instagram | .20 | .69 |
| 2.47 | 1.18 | YouTube | .85 | 1.96 |
| .64 | 1.12 | Blogs | .11 | .50 |
| .33 | .77 | Podcasts | .06 | .37 |

When Table 4.3 is examined, it can be seen for knowledge that while facebook ($M$ = 2.34 , $SD$ = 1.09 ), twitter ($M$ = 2.08 , $SD$ = 1.17 ), instagram ($M$ = 2.23 , $SD$ = 1.03 ), and YouTube ($M$ = 2.47 , $SD$ = 1.18 ) have means scores above 2, blogs ($M$ = .64, $SD$ = 1.12) and podcasts ($M$ = .33 , $SD$ = .77 ) have mean score below 1. This means that while teachers have medium level of knowledge regarding facebook, instagram and YouTube, they have even no knowledge for blogs and podcasts. For classroom use, there is a considerable amount of difference between knowledge level and classroom use level. YouTube ($M$ = .85, $SD$ = 1.96) has the highest means score which is very close to 1 thus it can be claimed that teachers seldom use YouTube. However, the other five social media tools have very low mean scores so these teachers never use these tools in their classroom setting.

#### *4.1.1.4 Google applications*

In this part, participants were asked to rate their knowledge regarding the stated Google applications which are drive, docs, forms, and scholar. Mean scores and standard deviations for both knowledge level and classroom use level are provided in Table 4.4.

Table 4.4

*Participants' Responses on Google Applications*

| *Knowledge* | | | *Classroom Use* | |
|---|---|---|---|---|
| *M* | *SD* | Google Applications | *M* | *SD* |
| .93 | 1.07 | Google drive | .21 | .63 |
| .77 | .96 | Google docs | .15 | .52 |
| .68 | .89 | Google forms | .11 | .47 |
| .60 | .79 | Google scholar | .05 | .29 |

Four of the applications have mean scores below 1 both for knowledge level and classroom use level. In the knowledge level part drive (*M* = .93, *SD* = 1.07) has the highest mean score and scholar (*M* = .60, *SD* = .79) has the lowest mean score. This is also same for classroom use level part as drive (*M* = .21, *SD* = .63) has the highest mean score and scholar (*M* = .05, *SD* = .29) has the lowest mean score. Therefore, it can be asserted that teachers neither have knowledge regarding Google applications, nor they use them in their teaching.

#### *4.1.1.5 Software Tools*

In this part, participants were asked to rate their knowledge regarding the stated software tools which are Microsoft office programs, mobile applications, and computer simulations. Mean scores and standard deviations for both knowledge level and classroom use level are provided in Table 4.5.

Table 4.5

*Participants' Responses on Software Tools*

| *Knowledge* | | | *Classroom Use* | |
|---|---|---|---|---|
| *M* | *SD* | Software Tools | *M* | *SD* |
| 2.57 | .86 | Microsoft Office | 1.51 | 1.12 |
| 1.92 | 1.19 | Mobile Applications | .80 | .98 |
| 1.09 | 1.20 | Computer Simulations | .43 | .82 |

When Table 4.5 is examined, it can be seen that Microsoft office programs (*M* = 2.57, *SD* = .86) has the highest mean score and computer simulations (*M* = 1.09, *SD* = 1.20) has the lowest mean score for knowledge level. This is also same for classroom use level as Microsoft office programs (*M* = 1.51, *SD* = 1.12) has the highest mean score and computer simulations (*M* = .43, *SD* = .82) has the lowest mean score. For knowledge level it can be said that teachers have medium or little knowledge regarding these software tools but they seldom use them in their classrooms.

### 4.1.2 Delivery of the Program

In the last part, participants were asked about their preferences related to the delivery of the program. They had three options in this part; no interest at all, interested, very strongly interested. Having someone to teach has the highest mean score (*M* = 1.51, *SD* = .83), and 127 (%55.9) of the participants chose very strongly interested option. Learning on my own (*M* = .75, *SD* = .83) has lower mean score than having someone to teach, and 112 (%49.3) of the participants chose no interest at all option. Group work has the lowest mean score (*M* = .68, *SD* = .85), and 130 (%57.3) of the participants chose no interest at all option. Table 4.6 provides the mean scores and the Table 4.7 presents the frequencies of the responses.

Table 4.6

*Participants' Responses on Types of the Program*

| Type of the Programs | *M* | *SD* |
|---|---|---|
| Having someone to teach | 1.51 | .83 |
| Learning on my own | .75 | .83 |
| Group work | .68 | .85 |

Table 4.7

*Frequencies of Participants' Responses on Types of the Program*

| Variable | *f* | % |
|---|---|---|
| Having some to teach | | |
| No interest at all | 53 | 23.3 |
| Interested | 47 | 20.7 |
| Very strongly interested | 127 | 55.9 |
| Learning on my own | | |
| No interest at all | 112 | 49.3 |
| Interested | 59 | 26 |
| Very strongly interested | 56 | 24.7 |
| Group Work | | |
| No interest at all | 130 | 57.3 |
| Interested | 40 | 17.6 |
| Very strongly interested | 57 | 25.1 |

## 4.2 Teachers' Needs on Adult Learning Principles

Descriptive analysis of the participants' responses for each factor was done, and means and standard deviations for each item are provided for each factor separately.

### 4.2.1 Personalizing instruction

Personalizing instruction factor has 10 of the items from the scale. This factor includes items that are related to meeting the unique needs of various learners by using different methods, strategies, materials, and allowing the learners to progress at their own pace. Letting students to work on their own pace or using different strategies and methods regarding the students being taught indicate that teachers are trying to personalize the instruction. Item 27 and 30 are negatively worded items in this factor. Table 4.8 presents the mean scores and standard deviation values of 10 items which were related to the personalizing instruction factor.

Table 4.8

*Descriptive Statistics for Personalizing Instruction Factor*

| Items | *M* | *SD* |
|---|---|---|
| 3. I allow older students more time to complete assignments when they need it. | 2.48 | 1.41 |
| 4. I help students diagnose the gaps between their goals and their present level of performance. | 2.63 | 1.40 |
| 9. I determine the educational objectives for each of my students. | 1.76 | 1.65 |
| 15. I use different techniques depending on the students being taught. | 1.75 | 1.78 |
| 18. I let each student work at his/her own rate regardless of the amount of time it takes him/her to learn a new concept. | 2.54 | 1.46 |
| 23. I gear my instructional objectives to match the individual abilities and needs of the students. | 2.70 | 1.28 |
| 25. I allow a student's motives for participating in continuing education to be a major determinant in the planning of learning objectives. | 3.15 | 1.28 |
| **27. I give all my students in my class the same assignment on a given topic.** | **3.41** | **1.19** |
| 30. I encourage competition among my students. | 2.22 | 1.76 |
| **31. I use different materials with different students.** | **1.54** | **1.61** |

Note: The lowest and the highest mean values were given in bold.

In this factor, item 27 which is a negatively worded one has the highest mean score (*M* = 3.41, *SD* = 1.19). Most of the participants accepted that they gave the same assignment to all of their students. Using diverse teaching materials with the different students is one of the ways of personalizing instruction, but item 31 has the lowest mean score (*M* = 1.54, *SD* = 1.61). ın this scale 0 stands for 'never' and 5 stands for 'always'. Therefore, it can be claimed that teachers almost never use diverse teaching materials. Item 25 has the second highest mean score (*M* = 3.15, *SD* = 1.28) and this is favorable for teachers as they often consider students' motivations in the process of education. Item 9 (*M* = 1.76, *SD* = 1.65) and 15 (*M* = 1.75, *SD* = 1.78) almost has the same mean score which is also one of the lowest scores and demonstrates that teachers in PNHSs neither determine specific objectives for different students nor they use different techniques regarding the students being taught.

Item 30 (*M* = 2.22, *SD* = 1.76) is one of the negatively worded items and its mean score asserts that teachers seldom encourage competition among their students. Item 3 (M = 2.48, SD = 1.41), Item 4 (M = 2.63, SD = 1.40), Item 18 (M = 2.54, SD = 1.46), and Item 23 (*M* = 2.70, *SD* = 1.28) have mean scores near 2.50 or slightly over 2.50 thus it can be acknowledged that teachers of PNHSs seldom use ways of personalizing instruction such as using instructional objectives that match with the individual abilities and needs of the students as in Item 23.

### 4.2.2 Learner-centered instruction

Learner-centered instruction has 11 of the items from the scale. This factor includes items that are related to arranging the classroom environment so that the learners can initiate action, help set their own learning objectives, and be in charge of their own learning. In this factor, all of the items are negatively worded. It means that lower mean scores indicate that participants favor learner-centered instruction more. Table 4.9 illustrates the mean scores and standard deviation values of 11 items which were related to the learner-centered instruction factor.

Table 4.9

*Descriptive Statistics for Learner-Centered Instruction Factor*

| Items | *M* | *SD* |
|---|---|---|
| **2. I use disciplinary action when it is needed.** | **1.79** | **1.28** |
| 5. I provide knowledge rather than serve as a resource person. | 3.65 | 1.32 |
| 6. I stick to the instructional objectives that I write at the beginning of a program. | 3.63 | 1.33 |
| 7. I use lecturing as the best method for presenting my subject material to adult students. | 3.41 | 1.41 |
| 11. I get a student to motivate himself/herself by confronting him/her in the presence of classmates during group discussions. | 2.36 | 1.67 |
| 14. I use one basic teaching method because I have found that most adults have a similar style of learning. | 2.77 | 1.58 |
| 16. I use written tests to assess the degree of academic growth rather than to indicate new directions for learning. | 3.51 | 1.23 |
| **20. I maintain a well-disciplined classroom to reduce interference to learning.** | **3.73** | **1.04** |
| 21. I use methods that foster quiet productive desk work. | 3.51 | 1.22 |
| 22. I use tests as my chief method of evaluating students. | 3.52 | 1.23 |
| 28. I use materials that were originally designed for students in elementary and secondary schools. | 3.25 | 1.33 |

Note: The lowest and the highest mean values were given in bold.

When Table 4.9 is examined it can be clearly seen that, except the mean scores of three items (2, 11, and 14), all of the mean scores are over 3. Maintaining a well-disciplined classroom has the highest mean score ($M$ = 3.73, $SD$ = 1.04). Using disciplinary action when it is needed has the lowest mean score ($M$ = 1.79, $SD$ = 1.28). This means that most of the participants favored well-disciplined classroom, but they did not use disciplinary action. Being a resource person (Item 5), sticking to instructional objectives (Item 6), using lectures (Item 7), using writing tests for assessing academic success (Item 16), fostering quiet productive desk work (Item 21), using tests as a chief method of evaluating students (Item 22) are not favorable for making instruction learner-centered, However, as these items have mean score over 3, this means that teachers of PNHSs often or almost always use other

techniques rather than the ones sustain learner-centered instruction. Item 14 (*M* = 2.77, *SD* = 1.58) has one of the lowest mean score but still it demonstrates that teachers often or seldom use one basic teaching method. The other item which has mean score below 3 is Item 11 (*M* = 2.36, *SD* = 1.67) and it can be claimed that teachers do not favor group discussions as a way of motivating students.

### 4.2.3 Relating to experience

Relating to experience has 6 of the items from the scale. This factor includes items that are related to encouraging the learner to relate new material to their previous experiences, and planning lessons to relate to the everyday problems of the learners. Item 10 in this factor is a negatively worded, and it has the lowest mean score (*M* = 1.15, *SD* = 1.48) which means that participants prefer units similar to their students' socio-economic background. Encouraging students to ask questions about the nature of their society has the highest mean score (*M* = 3.51, *SD* = 1.27).

Table 4.10

*Descriptive Statistics for Relating To Experience Factor*

| Items | *M* | *SD* |
|---|---|---|
| **10. I plan units which differ widely as possible from my students' socio-economic backgrounds.** | **1.15** | **1.48** |
| 12. I plan learning episodes to take into account my students' prior experiences. | 2.86 | 1.46 |
| **24. I encourage my students to ask questions about the nature of their society.** | **3.51** | **1.27** |
| 29. I organize adult learning episodes according to the problems that my students encounter in everyday life. | 2.99 | 1.37 |
| 32. I help students relate new learning to their prior experiences. | 3.29 | 1.31 |
| 33. I teach units about problems of everyday living. | 3.26 | 1.40 |

Note: The lowest and the highest mean values were given in bold.

Item 33 (*M* = 3.26, *SD* = 1.40) and Item 32 (*M* = 3.29, *SD* = 1.31) have mean scores over 3 and this means that teachers often consider everyday living problems and prior learning of the students. Similarly, Item 29 (*M* = 2.99, *SD* = 1.37) has a mean

score very close to 3 and it can be concluded that problems that the students encounter in their everyday life are often addressed in the classroom. Moreover, Item 12 (*M* = 2.86, *SD* = 1.46) has a mean score slightly above 3 and prior experiences are often addressed as it is demonstrated in Item 32 as well. Therefore, it can be concluded that teachers of PNHSs often refer to everyday living problems and prior experiences of students.

### 4.2.4 Participation into learning process

Participation into learning process has 6 of the items from the scale. This factor includes items that are related to allowing learner to identify the problems to be solved and materials to be included in order to encourage high levels of learner involvement in decision making. All of the items in this factor are positively worded. Except the item 8 which has also the highest mean score (*M* = 3.05, *SD* = 1.27), all of the items have mean scores below 3. Having individual conferences with students has the lowest mean score (*M* = 1.74, *SD* = 1.77) in this factor.

Table 4.11

*Descriptive Statistics for Participation into Learning Process Factor*

| Items | *M* | *SD* |
|---|---|---|
| 1. I allow students to participate in developing the criteria for evaluating their performance in class | 2.41 | 1.69 |
| **8. I arrange the classroom so that it is easy for students to interact.** | **3.05** | **1.27** |
| 13. I allow students to participate in making decisions about the topics that will be covered in class. | 2.40 | 1.46 |
| **17. I have individual conferences to help students identify their educational needs.** | **1.74** | **1.77** |
| 19. I help my students develop short-range as well as long-range objectives. | 2.56 | 1.48 |
| 26. I have my students identify their own problems that need to be solved. | 2.53 | 1.32 |

Note: The lowest and the highest mean values were given in bold.

Item 1 (*M* = 2.41, *SD* = 1.69) and Item 13 (*M* = 2.40, *SD* = 1.46) have almost the same mean scores and this means that teachers of PNHSs seldom allow their students

to participate in evaluation process and making decisions on the topics that will be covered in class. Item 19 ($M$ = 3.29, $SD$ = 1.31) and Item 26 also have almost the same mean score which is slightly over 2.50 and as they are related to giving responsibility to the students it can be claimed that teachers do not offer prefer giving students responsibility of their own learning.

## 4.3 Teachers' Needs Derived from Classroom Observations

Classroom observations were also done in order to determine the needs of teachers in terms of educational technologies and adult teaching practices. For diverse data four different subject fields were chosen; and two teachers from social sciences and two teachers from science courses were observed. The qualitative data gathered through observation were examined based on four different categories; teaching methods, students' reactions, educational technologies, and adult teaching practices. They are reported below based on these categories and teachers were named as T1, T2, T3, and T4 for not to violate the confidentiality.

### 4.3.1 Teaching Methods

Each of the four teachers used several teaching methods, but generally they all can be called as teacher-centered methods as the teachers were dominant throughout their teaching. T1 used dictation method for the first two hours of the observation. S/he read from the notebook some information and students wrote down each word one by one. In the last hour of observation, T1 used question and answer method and s/he wanted students to make some comments on the example s/he showed. However, s/he directed the students' answers most of the time, and s/he gave the right answer before the students in most of the occasions. T2 used question and answer method in three hours of observation. S/he handed out a worksheet at the beginning of the lesson, and they answered the questions written on that sheet together on the board. This was also same for the T3. Students tried to solve the questions on the board written by the teacher. Both of the teachers provided some room for students to express their own solutions, but they wrote the correct solution on the board in the end even if students could not solve the problem.

Lessons of T4 were a bit different from other lessons. Although T4 used lecture method, s/he made it more interactive by asking short-answer questions to students throughout her presentation. From time to time, s/he made students note down the important things s/he mentioned on their notebooks, and s/he also note them down on the board. In each of the four courses, teacher retained the full control of the classroom and its activities. It can be said that while teachers talked all the time, students listened and they barely made contributions. Instruction occurred with the whole class, for example in the lessons of T2 and T3 students tried to solve the problems together not on their own. Most of the time, teachers did not allow students to express themselves, ask questions or direct their own learning. For example, when one of the students in lesson of T1 said that he did not want to write down those things as he found this very boring, teacher replied that he was a student, he had some obligations, and he had to write.

### 4.3.2 Students' Reactions

Another section in the observation was related to students' reactions especially based on the teaching methods used and the topic of the particular lesson. Generally, students were not active throughout the courses as the teachers preferred teacher-centered methods most of the time. Because of that, students were also not interested in the lesson and they were distracted by many other things. For the first two hours of observation in the lesson of T1, students wrote down the things that their teacher read from her/his notebook, and they seemed really bored. Some of them complained about this situation from time to time, but their teacher wanted them to keep on writing as this was their obligation. In the last hour of observation, when teacher changed her way of teaching, the mood of students changed accordingly. They seemed more interested when teacher wanted them to examine the examples on the board and share their opinions. They seemed entertained while sharing their opinions. However, some of the students stopped sharing their answers after a while as they had made several wrong guesses.

This situation was a little bit different in the lesson of T2. T2 used question and answer method. Students were more interested in the lesson and they tried to participate as much as possible. The teacher solved the questions on the board

together with the whole class and almost every student in the class shared their opinions. T3 also used the same method, but the students' reactions were a little bit different. At the beginning of the course, T3 began to solve the problems in the worksheet s/he handed out. Some of the students tried to solve the problems, but after a while they started to complain about their difficulty. Later, they stopped sharing their answers. When the teacher realized that s/he started to write down more simple questions on the board and students started to participate again.

However, for the general of the three hours of observation of T3, s/he continued her/his lesson with the students who were more eager to solve the problems and share their answers. T4 also used question and answer method in her/his teaching, but students were more willing to contribute to the lesson and answer the questions. The teacher created a warm atmosphere in the classroom that even if a student gave a wrong answer; he or she tried to remember the correct version of it and kept on giving answers. The way the teacher responded the students' wrong answers was very kind and s/he seemed that s/he did not want to make the students feel bad about their answers. S/he also gave additional information after s/he corrected the wrong answer and that made students to listen to the explanation of the teacher. Also, the jokes that the teacher made from time to time entertained students.

### 4.3.3 Educational Technologies

There was a projection machine in the classroom, but not any computer or internet connection. Teachers had to bring their own personal computers and made the necessary connection. The shape of the classroom and the arrangement of the desks were not appropriate for the use of technology because it was really hard for the students to see the board from the back seats. Only T1 used the projection machine in the classroom. She brought her laptop and she projected some examples to the board which s/he saved in her laptop in advance. Actually, this was also the same with writing the example on the board. T1 had some problems with making necessary connections and this cost her/his losing some time. T2, T3, and T4 did not use projection machine or their laptops, they just wrote the examples or the solutions of the problems on the board. Other than the projection machine or laptop teachers did not use any other educational technologies tools.

### 4.3.4 Adult Teaching Practices

The last category in the classroom observation was the adult teaching practices of the teachers used. Teachers did not use any specific practices related to adults, and they were like teaching to young students most of the time. T1 used some rude words to her/his students and s/he directed the students about what to do or what not to do most of the time. Considering the practices in the checklist it can be said that T1 did not use any of them. S/he did not include students in the learning process as s/he just stated what they were going to do in the following hours and by doing this s/he also did not consider their interest as s/he did not ask their opinions. There was not any referring to the previous learning of the students and also s/he did not consider their past experiences. At the beginning of the lesson, s/he just stated that they were going to learn a particular topic about the course, so there were not any clear objectives for the students. Classroom atmosphere was also very tense most of the time, and s/he did not respect to ideas of the students. For example, when one of the students stated that he did not want to write anymore s/he responded to him by saying "shut up".

T2 was a little bit different from the T1 considering the way s/he behaved to the students. S/he was more respectful and kind, but it still seemed like s/he was teaching to younger students. Giving appropriate feedback, respecting students' ideas and creating a comfortable classroom atmosphere could be given as examples of the T2's adult teaching practices. S/he solved the problems together with the whole class and s/he tried include every student in the learning process. However, s/he did not provide clear objectives or any explanations related to future benefits of their learning. For example, in the last hour of observation, at the beginning of the lesson s/he stated that these problems were very similar to the one they confronted in their daily lives. It was a good beginning, but s/he did not make any further explanations, and he did not make the learning relevant to the students' daily lives.

Compared with the other teachers T3 was not different from the T1 as s/he did not use any of the adult teaching practices. Unlike T1, T3 was not rude to her/his students, but s/he also did not show any interest to her/his students. For instance, one of the students became very happy when he solved the physics problem correctly,

and he wanted to share his happiness with his teacher, but the teacher did not give any attention and even s/he did not respond to her/his student.

T4 can be named as the best teacher among four teachers considering the adult teaching practices. First of all, s/he created a warm class atmosphere in which s/he respected her/his students' ideas, and s/he constantly gave feedback without humiliating them when they gave wrong answers. Moreover, s/he considered the interests of the students and tried to make the lesson more entertaining to draw their attention. For instance, s/he gave several examples from popular movies. One of the important practices of the teacher was that s/he tried to trigger students' pervious learning by asking small questions and giving small clues about them. This also made the lesson more interactive.

Considering all the dimensions of the classroom observations (teaching methods, students' reactions, educational technologies that used and adult learning principles that addressed), basic practices are summarized in Table 4.11 below.

Table 4.12

*Summary of the Classroom Observation Results*

| | |
|---|---|
| Teaching Methods | -teacher-centered methods<br>-dictation<br>-question and answer<br>-full control of the classroom<br>-whole classroom instruction |
| Students' Reactions | -not interested<br>-distracted<br>-signs of boredom<br>-some complains<br>-willing to contribute (T4) |
| Educational Technologies | -did not use<br>-not appropriate environment<br>-T1 only used laptop and projection machine |
| Adult Teaching Practices | -not any specific practices<br>-not respectful to students<br>- used some rude words<br>-comfortable classroom atmosphere (T2, T4)<br>-giving feedback (T4)<br>-referring previous learning (T4) |

## 4.4 Teachers' Needs Derived from Group Meetings

In order to determine the needs of teachers in terms of educational technologies and adult teaching practices two group meetings were conducted. Later in the Step 2 of the study, two additional group meetings were done in order to determine the features of professional development program. Different categories were determined and the notes taken throughout the observations of those meetings were examined based on those categories which are general attitudes of the teachers, general contributions of the teachers, and problems encountered. They are reported below based on each meeting.

First meeting was the presentation of SBPD. At the end of the presentation teachers asked their questions and necessary explanations were made. They asked about their responsibilities in the process and they were informed about that.

In the second meeting, teachers were asked their opinions related to possible results of the QEdTech and PALS at the beginning. Later, the prepared documents for the results were distributed and each of the items in these instruments was discussed one by one. Then, agreements and disagreements related to results were determined and they were asked about their opinions related to their exact needs. Before stating their needs about technology and adult teaching practices teachers stated some problems that they constantly encountered in their school. These problems can be listed as follows;

1. Students do not have necessary background knowledge about the courses
2. There is a problem of absenteeism as most of the students have to work
3. It is really hard to educate adult students
4. Adult students consider themselves as the rivals of their teachers because of the similarity in their ages
5. There is lack of technological equipment
6. Teachers start teaching in these schools without any training
7. There are differences among students because of the variety in their ages
8. Teachers of this schools do not have any courses related to adult students in their undergraduate studies
9. Most of the teachers are new in teaching therefore they are not capable enough to handle the problems about adult students
10. Most of the students are older than their teachers

Based on those problems that the teachers mentioned and the results of the QEdTech and PALS, teachers stated that they need to learn the qualities of adult students first because, they need to know more about their students before learning how to treat and teach them. Then, teachers stated that they need to know adult teaching practices especially the activities that they can use in their teaching easily. As they do not have any experience about adult students they stated that they want someone to teach them and show the specific way.

When it comes to educational technologies, teachers talked about the inappropriateness of their classrooms to use technology and their lack of facilities. Therefore, they talked about using technology by integrating students' daily lives. One of the teachers stated that there was a difference between the knowledge level and usage level considering social media based on the QEdTech results. Most of the teachers confirmed that they have general knowledge on how to use social media, but they do not use them in their classroom. Another teacher added that this could be because they do not have any idea about how to integrate it into their teaching. Most of the teachers agreed with these two teachers and they admitted that they did not think about utilizing social media in their teaching before. At the end of the discussion they stated that they want to learn how to use social media in their teaching and similar with the adult teaching practices they stated that they want someone to teach them.

In the third meeting, considering the hardware and the software listed in QEdTech teachers agreed that all of them use the social media tools in their daily lives, but they did not consider using these tools in the classroom for teaching purposes. Moreover, considering the profile of the adult learners in their school, they stated that it would be interesting for them. They wanted someone to teach them about the important points related to using social media tools in their teaching and related activities. They added that as they did not have any previous knowledge regarding this topic it would be better to learn it with the help of an expert. Therefore, third meeting was started with a discussion on their knowledge about the stated social media tools (Facebook, Twitter, Instagram, YouTube, Blogs, and Podcasts). Unlike two of the teachers, 13 of them stated that they had enough information about using Facebook, Twitter, Instagram, and YouTube and also they had their own accounts in these platforms. However, 15 of them stated that they heard Blogs and Podcasts for the first time in this questionnaire and they did not have any information about how to use it. Several teachers volunteered for teaching how to use Facebook, Twitter, Instagram, and YouTube to the other two of the teachers and they could get personal accounts for them. Therefore, they agreed that professional development program should start with brief refreshment on Facebook, Twitter, Instagram, and YouTube and then it continued with full explanations of Blogs and Podcasts. Later, activities

related to integrating these social media tools into teaching could be shared. They stated that they want to see vivid examples to understand their functioning.

In the needs analysis meeting (second meeting) they stated that they wanted to learn the characteristics (physical, psychological, and learning) of adult learners as they wanted to get to know their students, and it was stated that the first topic of the professional development for andragogy should be related to this issue. Therefore, the fourth meeting was started with a discussion on the high school curriculum that they have to follow as teachers in the other regular high schools. They mentioned that they had different students and different class hours (the school starts after 17.00 pm) but they have the same curriculum and it is really intense and it is really hard to complete. They have to cover the curriculum quickly and they mostly have no time for special practices for adult learners. Moreover, it was mentioned that they did not get any training or education related to adult learners before. Therefore, it was stated that the second topic of the professional development for andragogy should be related to activities that they can integrate into this busy curriculum. Later, we talked about the ways of having this training related to adult teaching practices, but they insisted on having someone to teach them as it happened in technology meeting as this topic is also very new to the teachers.

### 4.5 Views of the Teachers on Professional Development Programs

After the implementation process in order to take the teachers' views on the changes and improvements in using educational technologies and adult teaching practices in their teaching, individual interviews were conducted. Detailed information about the conducted interviews is presented in Appendix M. Interviews were conducted with 17 teachers of SPNHS. At the beginning of each interview brief information was given about the process, and then general information about the participants was asked. Their educational background and previous attendance to a program on educational technologies or adult teaching practices were asked. Their background information was provided in the subjects/participants of the study of method section. And, none of the teachers had any experience of having a professional development in educational technologies or adult teaching practices.

In the second part of the interview, opinions of teachers related to SBPD process were asked and in the last part their views on professional development programs on educational technologies and adult teaching practices were requested. Four separate categories for three research questions emerged regarding the codes which are general views on SBPD process, professional development on educational technologies, professional development on adult teaching practices, and points to improve and suggestions. Each of the transcribed data was examined carefully according to these categories and relevant phrases were also determined. Findings are presented based on these categories below. Teachers' subject fields or names are not provided for confidentiality, and they were presented with the initial of teacher as T and a number. To avoid misinterpretation, T1 in the classroom observations is not the same teacher with the T1 in the interviews.

### 4.5.1 General views on SBPD process

Teachers of SPNHS have participated in such a SBPD process for the first time. As they did not have any experience regarding such kind of process, their opinions related to it were asked in the interview. What they think about the process in general, what the positive or negative features of the process are for them, whether they want to join such kind of process or not were asked to the teachers. By and large, teachers' answers were very positive about the process, but they also stated some negative issues that should be fixed for the ones which could be held in the future. T3 stated that s/he wanted to join such kind of activity again, as s/he found it very illuminating and informative and s/he added that;

> It was a great opportunity for us to have the chance of discussing our biggest problems in a more formal situation and try to solve them. We frequently discussed these issues in teachers' room, but this was not more than chatting in a causal way.

Five of the teachers have teaching experiences over 40 years, and it was the first time that they have participated in such an activity. Generally, they talked about how they realized that there were lots of things that they did not know about teaching even after all of those years. T4 summarized those views in these words;

> This is my 45th year in teaching and I have realized that there are still lots of things about teaching that I have to learn. We as teachers are adult learners as well, my 45 years of experience is valuable, but I should be open to new ideas as well. Thus, this was a perfect opportunity.

7 of the teachers stated that they found this process very beneficial for them as they have very different students' profiles. One of the teachers (T10) explained that;

> Our students are working in very difficult jobs and when they come to classroom, they are already exhausted. It is really hard to attract the attention of such kind of students. Therefore, learning different activities and techniques expanded our views on drawing attention of these students.

Another teacher (T11) also talked about the similar issue with T10 and s/he made an emphasis on their learner role as a teacher;

> We talked about that adult learners are self-directed and independent in their learning. I am also an adult learner. After this SBPD process, I thought that improve myself especially in adult teaching practices. I think participating in such kind of an activity created this awareness for almost all of my colleagues.

### 4.5.2 Views on professional development on educational technologies

17 teachers of SPNHS stated their views on the professional development program related to using social media in teaching. All of them remarked that they found this 4-hour program very beneficial and interesting as well. Each of the participants evaluated this program considering their subject fields, and talked about how they can integrate social media in their own courses. T2 stated that;

> I really enjoyed being informed about that side of using social media. I thought that together with my students we can create Instagram or Twitter accounts for our famous poets or authors.

> Then, we can share their works from these accounts and I am sure that this will be very interesting and entertaining for my students.

Although the teachers found using social media topic very interesting, there were also some hesitations regarding using it in their classrooms. T6 was one of those teachers and actually s/he summarized the other teachers' hesitations as well;

> I have never used a social media tool in my daily life. The idea of using it in teaching is very strange for me. I have learned how to use them in the training, they are not so complicated, but I am not sure when I will be ready to integrate them into my lesson.

Regarding teachers' reluctance to use technology in their classrooms one of the teachers (T1) made a referring the profile of the students and stated that;

> Students' do not have the necessary background knowledge and they come here just for having a high school diploma. For instance, if they had goal of being successful in universities exams, social platforms would be very beneficial for me to share questions and make a weekly follow-up. However, I do not think that the current students will be enthusiastic about my posts.

However, there were also some teachers who were really enthusiastic about using social media in their teaching as they found it very beneficial and appealing. T11 was one of them and s/he stated that;

> I am using social media tools actively in my daily life, but I have never thought about using it in my teaching. In the training, I have learned that we can set up an Instagram live broadcast. I excited me a lot and I cannot wait to do this with my students.

### 4.5.3 Views on professional development on adult teaching practices

17 teachers of SPNHS stated their views on the professional development program related to adult teaching practices. All of them remarked that they found this 4-hour

program very beneficial for different reasons. T16 mentioned that learning more about adult learners made her/his feel comfortable when communicating with her/his students because s/he thought that;

> I am younger than almost all of my students and this issue makes me feel very uneasy while talking with my students even for daily purposes. I notice that senior teachers are better than new teachers like me, thus learning how to treat them made me feel relieved.

One of the senior teachers (T13) shared the same views with this young T16 and expressed that;

> We have several young teachers in our school and most of the time they ask us how to treat the students who are older than them when we are together in the teachers' room. I think learning about adult learners will help them a lot.

4 of the teachers indicated that they had not heard the term 'andragogy' before and this is a very unacceptable situation for teachers who are working at PNHS and whose main job is teaching to adult learners. T17 confessed that;

> I am embarrassed to state that but I have heard the term 'andragogy' for the first time. I am a teacher but I am a learner as well and I am going to read more about teaching adult learners, thus this training was a big step for me to improve myself in that field.

T7 provided a very different perspective and talked about how this program created awareness about his/her previous teaching practices. S/he stated that;

> After we talked about adult teaching practices and activities I started to evaluate my teaching and I realized that I have already used some of the techniques but I also realized that how inappropriate was some of my teaching behaviors. I decided to stick on the correct ones, improve them and add new ones as well.

Same as T7 some of the teachers shared their experiences in which they had used some kind of adult teaching practices. In their interviews, they expressed that they were very happy to learn more about them. T12 talked about the importance of using past experiences of adult learners and s/he stated that s/he was glad to learn the role of the background knowledge of the adult learners. S/he shared one of her/her classroom experiences;

> It is very impressive to discuss historical issues with my students, especially the political ones. They have seen 3-4 governments more than me and their comments are valuable for me. However, because of time restrictions we cannot have the chance of doing this kind of discussions. After this training, I will try to spare more time for this kind of activities.

Almost all the senior teachers in SPNHS accepted that they are using lecturing as a basic teaching method, because they think that most adults have a similar style of learning, and it is the best method while presenting subject material to the adult students. However, as the adult teaching practices which were mentioned in the professional development program provided them with a several different teaching methods, they emphasized how surprising it was for them and T8 addressed this issue for his/her colleagues as well;

> I understood that we should use student-centered teaching methods for adult learners. When I started to teach almost 45 years ago, we do not use it in modern Turkish now, but we call the method as 'takrir (lecture)' was the basic method. Things have changed a lot since then, but I continued to use this method as I think this was the best for both my adult students and content of my course. Now, I realized that there are lots of activities that can also be integrated to my lessons. If I have the chance of teaching in upcoming years, I definitely want to use some of them.

### 4.5.4 Points to improve and suggestions

At the end of the interview, teachers were requested to share their suggestions and some points that need to be improved both in professional development programs or general SBPD process for them. Generally, all the teachers stated that regarding the facilities of their school, everything went well both in the programs and the general process. However, they added small suggestions for the future use of such kind of activity. T10 pointed out that;

> Our teaching staff is very diverse regarding the teaching experiences, there are both senior and new teachers. Therefore, while discussing our needs especially related to technology, it was really hard to come to an agreement. Several programs may be developed for different groups of teachers.

There was a common point that almost all the teachers mentioned in the interviews and that was related to practicing the things that they have learned in their classrooms. Although how they can integrate adult teaching practices was discussed in the training, they thought that it would be more beneficial to prepare at least a demo lesson on one of the techniques regarding their content of the course. T14 offered that;

> I think the professional development programs were lack of practicing part. For instance, I should have prepared at least a demo lesson and my colleagues and you should have observed me and stated your comments. This would be more beneficial for me to understand how to integrate social media and adult teaching practices into my teaching.

However, one of the teachers (T5) took this point and move it a little bit forward because s/he thought that teachers of PNHS should be competent enough in applying those adult teaching practices and added that;

> I think teachers of PNHSs should have a certificate of teaching to adult learners because these schools are completely different from

> regular high schools. I mean, this cannot be satisfied with particular professional development programs.

Similar to this point of view, T9 also talked about the different profiles of the adult learners of PNHSs from other adult learners and s/he stated that there should be particular trainings on special characteristics of PNHSs' students, s/he clarified her/his views that;

> I accept that we are dealing with adult learners but they are completely different from the one you described in the trainings. They have adult roles in life such as being a worker or apparent but in an educational setting they are completely young learners, as they do not have the necessary background. Actually, I do not expect them to be self-directed for instance. Therefore, it would be better for us to be prepared for such kind of adult learners.

T15 also talked about the unique characteristics of their learners and added some crucial problems. S/he stated that participating in such kind of professional development programs were obviously beneficial, but they have some problems with their students that they cannot handle. S/he pointed out that;

> We have the students who were somehow excluded from regular educational system mostly because of their severe problems like personal disorders or drug addiction. We are just teachers not psychiatrists. There should be special treatments for students also. While teachers are developing themselves through such kind of professional development programs, there should be some similar activities for students as well.

### 4.6 Summary of the Results

In the results section of the study, findings obtained through different data collection instruments were reported. In the first part, teachers' needs derived from administering of QEdTech were provided. It was found out that teachers working in PNHSs had very little knowledge regarding 21 hardware and software stated in the

questionnaire. Classroom use levels were even lower than the knowledge level. Knowledge level part had slightly higher mean score than usage level part as 9 hardware and software had the mean scores over 2, 4 of them had the mean scores below 2 and the other 8 of them had the mean scores below 1. Mean scores in the usage level part were very low comparing to knowledge level, 12 of the 21 hardware and software had the mean score below .50 and other 9 of them had mean score below 1.52.

The second part of this section was related to findings gathered via administering of PALS. In each factor, for positively worded items teachers did not have mean scores over 4, which means almost always in this scale. The highest mean score belonged to Item 20 ($M$ = 3.73, $SD$ = 1.04) in the learner-centered instruction factor, but as it is a negatively worded item this means that teachers almost always maintain a well-disciplined classroom to reduce interference to learning which is not a favorable for maintaining a learner-centered instruction. In the personalizing instruction factor, teachers had mean scores slightly close to 3, which means often in this scale. Therefore, teachers working in PNHSs often or seldom use practices to personalize instruction such as writing instructional objectives that match with the individual abilities and needs of the students. In the relating to experience factor, referring to prior experiences ($M$ = 3.29, $SD$ = 1.31) and everyday problems of students ($M$ = 3.26, $SD$ = 1.40) had mean scores over 3. Lastly, in the participation in the learning process factor, giving responsibility to students for their own learning ($M$ = 2.40, $SD$ = 1.46) and evaluation ($M$ = 2.41, $SD$ = 1.69) had lower mean scores compare to other items.

In the third part, classroom observation results were presented. For teaching methods, teachers mostly used teacher-centered methods such as dictation and question and answer. They had the full control of the classroom and they preferred whole classroom instruction. In relation with these methods, students were not interested in the lesson and they were even distracted from time to time and showed signs of boredom. Moreover, they had some complains. Only, in T4 classroom students were willing to contribute. None of the teachers used educational technologies and the classroom environments were not appropriate for using educational technologies effectively. T1 only used laptop and projection machine but

it was not a fruitful experience as well. Lastly, considering adult teaching practices, teachers did not use any specific practices. They were even disrespectful to students' ideas and some of them used some rude words. T2 and T4 provided a confortable classroom atmosphere which was favorable in adult education. Moreover, T4 gave feedback and referred to previous learning of the students but these were only small incidents for adult education.

In the following part, teachers needs derived from group meetings were provided. At the end of four meeting teachers of SPNHS concluded that they want to learn how to use social media in their teaching and they stated that they want someone to teach them. For andragogy, they stated that they wanted to learn the characteristics (physical, psychological, and learning) of adult learners as they wanted to get to know their students, and it was stated that the first topic of the professional development for andragogy should be related to this issue. Then, it was stated that the second topic of the professional development for andragogy should be related to activities that they can integrate into their busy curriculum. Later, they discussed the ways of having this training related to adult teaching practices, but they insisted on having someone to teach them as it happened in technology meeting as this topic is also very new to the teachers.

Lastly, views of the teachers working in SPNHS were presented in the results section. By and large, teachers' answers were very positive about the process, but they also stated some negative issues that should be fixed for the ones which could be held in the future. Most of them found this activity as a great opportunity to discuss their biggest problems in a more formal situation. For instance, some of the teachers stated their hesitations about using social media in their teaching, and after this process they admitted that they were going to integrate these new practices into their teaching. This is also same for adult teaching practices. Four of the teachers accepted that they have heard the 'andragogy' term for the first time but after realizing its importance, they have decide to have more information about it and apply these strategies to their practices.

# CHAPTER 5

# DISCUSSION

This chapter includes discussion of the findings of this current study in relation with the relevant literature. Firstly, the needs assessment procedures of the study are discussed and then views of the teachers gathered through interviews are interpreted.

## 5.1 Discussion of the Results

Rebora (2011) stated that there are lots of professional development activities, but most of them did not get expected results or they did not have any positive profit regarding school investment. Desimone (2009) pointed out that if the professional development programs are designed well, they can enhance the achievement of both the teachers and the learners. Therefore, considering the importance of addressing teachers' current needs and problems, SBPD model was chosen for the study to provide collaboration for the teachers. Moreover, needs of teachers in technology adoption and adult teaching practices were prioritized regarding current advances in educational technologies and unique context of PNHSs. As the major aim was to improve the effectiveness of teachers in PNHS, the main purpose of this study was to make the staff in a PNHS develop and implement a SBPD program for their needs and preferences in technology adoption and adult teaching practices.

This research study was designed as a case study including both qualitative and quantitative data collected through principles of adult learning scale (PALS), questionnaire for educational technologies (QEdTech), semi-structured interviews, and observations of group meetings, classroom observations, and field notes. There are two different parts in this discussion section; (1) identifying needs on technology integration and adult learning theory, and (2) views of the teachers on professional development programs. Findings are discussed below based on these steps in which they were gathered and in the light of relevant literature.

### 5.1.1 Needs on technology integration and adult learning theory

In order to determine the needs of PNHS's teachers regarding educational technologies, QEdTech was conducted at first. There are three parts in this questionnaire and in the first part, teachers were asked to rate their level of knowledge regarding stated 21 hardware and software in 5 different categories; hardware tools, learning management systems, social media tools, Google applications, and software tools. In the second part, teachers were asked to rate their level of classroom usage regarding stated 21 hardware and software in these five different categories. Knowledge level part had slightly higher mean score than usage level part as 9 hardware and software had the mean scores over 2, 4 of them had the mean scores below 2 and the other 8 of them had the mean scores below 1. In the knowledge part, 'phone' had the highest mean score ($M$ = 2.75, $SD$ = .85) and Edmodo ($M$ = .06, $SD$ = .33) had the lowest mean score. Mean scores in the usage level part were very low comparing to knowledge level, 12 of the 21 hardware and software had the mean score below .50 and other 9 of them had mean score below 1.52. In the usage part, 'Microsoft office' had the highest mean score ($M$ = 1.51, $SD$ = 1.12) and Edmodo ($M$ = .02, $SD$ = .22) and Kahoot ($M$ = .02, $SD$ = .22) had the lowest mean score, as they had the same mean scores. Therefore, by looking at the mean scores of both knowledge level and the classroom use level it can be claimed that teachers of PNHSs both do not have enough information regarding hardware and software tools stated and they do not use them for educational purposes in their classrooms.

Another outstanding finding in this part was related to differences between knowledge and usage part. For instance, YouTube had one of the highest mean score in knowledge level ($M$ = 2.47, $SD$ = 1.18), but it had mean score below 1 in the usage level ($M$ = .85, $SD$ = 1.96). This situation was the same for all the hardware and software tools in the questionnaire. That means although teachers stated that they know how to use a certain tool, they also accepted that they did not use them in their classrooms. That was also the reason why the teachers of SPNHS preferred a professional development program on social media in teaching, as they noticed that although they knew how to use social media in their daily lives, they had never considered using them in their teaching. Moreover, the results of QEdTech about the

classroom usage of educational technologies were also consistent with the classroom observations results as only one of the four observed teachers used technology.

There are lots of research studies that advocate the underuse of educational technologies despite the advances in technology. For instance, Cuban (2001) argued that computers are sold widely and purchased by the schools, but teachers do not use these tools in the expected level, and Cuban added that although teachers are using computers in their daily lives commonly, they do not successfully integrate them in their daily teaching. From Cuban's perspective, the problem has two important faces; (1) teachers do not have clear understanding of technology integration and (2) schools do not provide necessary assistance for teachers in this case. This is also consistent with the findings of the current study. For instance, in the classroom observations it was noticed that all the classrooms had projection machines but none of the teachers used them in their teaching. Moreover, the results of the QEdTech unfolded that teachers of PNHSs had some sort of knowledge regarding some hardware and software tools but they did not consider using them in their classroom setting for educational purposes.

In another study, Cuban, Kirkpatrick, and Peck (2001) studied the technology use in classroom setting with two high schools located in the heart of technological progress, Northern California's Silicon Valley. They found out that although teachers had wide access to equipment, they did not use them constantly and when they used technology they did not change their occasional teaching methods. They offered two possible reasons for this case; firstly, despite the tremendous changes in educational technologies, traditional high school structure and the lack of time led teachers not to use technology efficiently. Those teachers stated in their interviews that they did not have adequate time to integrate computers into their daily teaching and they added that the technology itself is unreliable and they have fear about those machines that often break down (Cuban, Kirkpatrick, & Peck, 2001). There is an obvious discrepancy of opinions between the teachers who maintain the technology and those who are going to use it (Lam, 2000). During the past decade, schools have invested heavily in acquiring computer-based technologies but educational systems cannot get benefit out of this investment if the actual users, teachers, are not prepared to use them for their teaching practices (Russel, Bebell, O'Dwyer & O'Connor, 2003).

Bitner and Bitner (2002) have developed eight areas that have significant influence on teachers' abilities in technology use. These areas are: (1) fear, anxiety, and concern that teachers have about the possible altering in their teaching practices , (2) professional development for teachers, (3) enhancing teachers' personal productivity skills (4) teaching practices by using technology for the enhancement of students' success, (5) the main aim of the use of technology in the school must be learning, (6) a warm atmosphere should be created, (7) motivation of the teachers should be supported, and (8) ongoing and onsite support must be provided. Actually, when these eight factors are carefully examined it can be clearly seen that all of them are related to professional development of teachers, directly or indirectly.

PALS was another instrument that was used for the analysis of the needs of adult educators. PALS was adopted in Turkish and was used to rate the teachers' andragogical knowledge and their usage of it in their classrooms. Turkish adoption of the scale was done by the researcher, and piloting of the Turkish version was conducted. At the end of the EFA, four factors were determined; personalizing instruction, learner-centered instruction, relating to experience, and participation in the learning process.

In the personalizing instruction factor, item 27 (I give all my students in my class the same assignment on a given topic), which was a negative one, had the highest mean score ($M$ = 3.41, $SD$ = 1.19). Using different materials with different students was one of the ways of personalizing instruction, but item 31 had the lowest mean score ($M$ = 1.54, $SD$ = 1.61). Item 15 (I use different techniques depending on the students being taught) also had the second lowest mean ($M$ = 1.78, $SD$ = 1.75). Based on the mean score obtained in this factor, it can be concluded that teachers of PNHS experience problems in personalizing instruction which is an important dimension in adult learning theory. Instruction is personalized when it focuses specifically on the needs, talents, learning style, interests, and academic background of each learner, and when it challenges each learner to grow and advance (Jenkins & Keefe, 2001). Ismail and Azman (2010) conducted a study with 959 adult learners by using a modified version of Conti's PALS (1998), and instead of asking teachers of adult learners about their practices, they asked adult learners about their preferences related to their teachers. Considering the personalizing instruction factor, the results are very similar

to this current study because students favor teachers who use different teaching techniques depending on the students, letting each student work at his/her own pace to learn a new concept ($M$ = 4.43). However, it should be considered that it is difficult for a program to provide materials which are sufficiently unique to meet individual learner interests and needs. Teachers can learn to rewrite materials from a wide spectrum of written materials selected to appeal to the interests and needs of individual learners, and for doing this they need a professional development (Dowling, 1974).

The learner-centered instruction has 11 negatively worded items; thus lower mean scores indicate that participants favor learner-centered instruction more, but except three of the items (2, 11, and 14); all of the mean scores were over 3. Maintaining a well-disciplined classroom had the highest mean score ($M$ = 3.73, $SD$ = 1.04). Using disciplinary action when it is needed had the lowest mean score ($M$ = 1.79, $SD$ = 1.28). Item 5 (I provide knowledge rather than serve as a resource person) had the second highest means score ($M$ = 3.65, $SD$ = 1.32) and based on these mean score it can be concluded that teachers of PNHSs have the tendency of using teacher-centered method despite the fact that using learner-centered instruction is the core of adult learning theory. Conti (1985), the developer of the PALS, stated that the writings related to adult education by Lindeman, Bergevin, Kidd, Houle, Knowles, and Freire exhibit many commonalities in the basic assumptions of adult teaching-learning. They all argue that the curriculum should be learner-centered, learning episodes should emphasis the learner's experience, adults are self-directed, the learner should participate in needs assessment, goals formations, and outcomes evaluation, adults are problem-centered, and the teacher should serve as a facilitator rather than a source of information providing the facts. Therefore, it can be easily concluded that the instruction of adult learners should be learner-centered. However, this is not applicable to teachers of PNHSs who were participated in the study and the four teachers who were observed in SPNHS. Four of them used teacher-centered methods such as lecturing or dictation, and they provided little room for students' contributions.

Relating to experience has 6 of the items from the scale. This factor includes items that are related to encouraging the learner to relate new material to their previous

experiences and planning lessons to relate to the everyday problems of the learners. Item 10 in this factor was a negatively worded item and it had the lowest mean score ($M$ = 1.15, $SD$ = 1.48) which means that participants preferred units similar to their students' socio-economic background. Encouraging students to ask questions about the nature of their society had the highest mean score ($M$ = 3.51, $SD$ = 1.27). Comparing the other factors, the mean score in this factor were very close to 3 or over 3; this could be mean that teachers had the awareness of the importance of adult learners' past experiences. However, the four teachers observed did not make any referring to their students' past experiences, and teachers of SPNHS stated that they did not consider the importance of past experiences of adult learners both in the group meetings and interviews. Adult learners come into an educational setting with both a greater number of experiences from that of young learners and for adult learners their past and life experiences carry significant meanings to learning (Santos, 2012).

Participation into learning process has 6 of the items from the scale. This factor includes items that are related to allowing learner to identify the problems to be solved and materials to be included, thus encouraging high levels of learner involvement in decision making. All of the items in this factor were positively worded. Except the item 8 which had also the highest mean score ($M$ = 3.05, $SD$ = 1.27), all of the items have mean scores below 3. Having individual conferences with students has the lowest mean score ($M$ = 1.74, $SD$ = 1.77) in this factor. Based on these mean scores in this factor, it can be concluded that teachers were reluctant to include adult learners into learning process. This situation was also observed in classroom observations. However, adult learners are self-directed therefore they would like to take the responsibility of their learning and participate in the decision making process (Merriam, 2001). Moreover, because of some obstacles encountered in learning situations, involving adult learners in the process of educational design can be minimized (Wilson, 2005). Verlander (1986) reported that although instructional practices are somehow designed according to learners' needs, those needs are not determined with the help of learner.

Classroom observations were also done for identifying the needs of adult educators in terms of educational technologies and adult teaching practices. For educational

technologies, only one of the teachers observed used a laptop and a projection machine only for a very short time. Therefore, especially based on the statements of teachers in the meetings as well, teachers of SPNHS did not use educational technologies in their teaching. For adult teaching practices, it can be easily stated that the observed lessons were the examples of how not to teach adult learners. Observed teachers barely used the techniques specified in the checklist and they even violated some of the adult learning principles such as having respect to students' ideas or including them to learning process. Teachers also accepted that they did not have knowledge about both adult learners and adult teaching practices in the group meetings. The results obtained from QEdTech and PALS were consistent with the observation and group meetings results. The mean scores in QEdTech were very low especially in the classroom usage part, and the teachers observed also did not use educational technologies. In the group meetings, teachers stated that they had some sort of knowledge regarding some tools, but they did not consider using them in their teaching. In addition, mean scores in PALS were very low regarding each of the four factors, and this was also observed in the classroom observations.

When the research studies based on adult teaching practices are examined, it can be seen that they are mostly on the (1) teacher orientation to education or (2) teachers' different teaching methods (Beder & Carrea, 1988). For instance, Wang (2002) also used the Principles of Adult Learning Scale (PALS) and surveyed six adult educators, and found out that adult educators served as a knowledge provider rather than a facilitator, they relied more on teacher-centered methods, they were aware of the importance of adult learners' past experiences, and they underestimated the significance of adult learners' ability to participate in the learning. It can be claimed that findings of the Wang's study are very consistent with this current study regarding teachers' adult teaching practices. Wang (2002) also included 115 adult learners in the study and asked them about their preferences, and found out the exact opposite of the teachers' practices as students wanted their teachers to consider their learning needs, and to give a participative role in their learning experience. Perrin (2000) also supported these findings in a study with adult employees who attended the training program of Midwestern University in order to have career profits and reported that those adult learners favored andragogical strategies such as self-directedness, skill enhancement, choice, and a tailor-made education for their needs.

Consisted with the relevant literature and based on the results of QEdTech, PALS, classroom observations and group meetings, professional development programs on educational technologies and adult teaching practices were designed in this study. Geromel (1993) presented students' feedback on adult teaching practices, and stated that students found these types of activities more meaningful and beneficial, and they were more satisfied with their educators, if they used such kind of activities. Therefore, the professional development program on adult teaching practices provided for the teachers of SPNHS will probably have better outcomes on students of this school, if the teachers are willing to use the things they have learned. This is also the same for the professional development program on educational technologies. In 1995 California Model Technology Schools Project in Los Angeles was aimed to make teacher use more instructional technology and at the end of the project, increased use of technology in the classroom, and a willingness of teachers to share their knowledge with their colleagues were reported (Bozeman & Baumbach, 1995). It can be concluded that if teachers have an appropriate training on technology integration, their tendency to use technology in their classrooms may increase.

### 5.1.2 Views of the teachers on professional development programs

After the professional development programs were provided, teachers of SPNHS shared their views both about SBPD process and the programs through interviews. By and large, teachers' answers were very positive about the process, but they also stated some negative issues that should be fixed for the ones which could be held in the future. Most of them found this activity as a great opportunity to discuss their biggest problems in a more formal situation. This is one of the effective features of SBPD because the training is related to everyday teaching practices of teachers, as it is practiced in the school setting (Shohel & Banks, 2012). It is considered that SBPD encourages creating new knowledge and improving teachers' practice, also creating shared professional language that is understandable for all members of teaching community, vision and standards, having sustainable school culture (Mancera & Schmelkes, 2010). For instance, some of the teachers stated their hesitations about using social media in their teaching, and after this process they admitted that they were going to integrate these new practices into their teaching. This is also same for adult teaching practices. Four of the teachers accepted that they have heard the

‘andragogy’ term for the first time but after realizing its importance, they have decide to have more information about it and apply these strategies to their practices. Moreover, almost all the senior teachers in SPNHS accepted that they are using lecture method as a basic teaching method, because they think that most adults have a similar style of learning and it is the best method while presenting subject material to the adult students. However, as the adult teaching practices which were mentioned in the professional development program were against their points of view, so they emphasized how they got shocked and they also claimed that they are going to be more careful about both adult learners’ characteristics and the teaching practices appropriate for them.

Regarding the points about the professional development programs that should be improved there is a common point that almost all the teachers mentioned in the interviews and that is related to practicing the things that they have learned in their classrooms. Although how they can integrate adult teaching practices was discussed in the training, they thought that it would be more beneficial to prepare at least a demo lesson on one of the techniques regarding their content of the course. Teachers who experienced active learning such as observing an expert teacher, being observed by another teacher, developing new curriculum materials, planning new teaching methods, reviewing students works, leading discussions, engaging in written work, and giving reflections report enhancement in their knowledge and skills (Lieberman, 1995).

Moreover, Guskey (1986) defines professional development as a systematic effort to satisfy change in the classroom practices of teachers, change in their beliefs and attitudes, and change in the achievement of students. Therefore, it is quite acceptable that teachers of SPNHS needed a practicing part in order to satisfy the changes in their classroom practices. However, they still got the importance of educational technologies and adult teaching practices for their schools and they asserted that they were going to develop themselves in that direction as having individual efforts was also one of the important parts of professional and personal development.

Another thing that the teachers commonly mentioned in the interviews was the unique profile of the students of PNHSs. One of the teachers stated that their students

have adult roles in life such as being a worker or apparent but in an educational setting they are completely young learners, as they do not have the necessary background. This may take us to the Knowles' revision of his idea of andragogy for adults and pedagogy for children and proposal of a continuum ranging from teacher-directed to student-directed learning. He stated that both approaches are appropriate with children and adults, depending on the situation. For example, if an adult knows very little about some certain topic, he will be more dependent on his teacher; but if a child who is naturally curious, he can be more self-directed (Knowles et al, 2005). Therefore, we can conclude that teachers should be aware of this particular continuum and make adjustment regarding the types of the learners. That is also why Knowles referred to resemblance between constructivism and andragogy in terms of their insistence on learner-centered methods (Knowles, 1990).

### 5.2 Implications for Practice

Findings of this research have implications for the adult educators especially for the ones who are working at PNHSs. Considering these schools, instruction may be improved after the teachers participate in the professional development programs particularly on educational technologies and adult teaching practices. Other adult educators in various educational settings like public education centers may benefit from implementing such kind of programs as well.

The contents of the professional development programs had the potential of influencing the teaching practices of the teachers of SPNHS. However, as they were designed based on the needs analysis process which was conducted through collecting data from as many PNHSs as possible, they can also be implemented in other PNHSs. More specifically, those who would benefit most from the improved instruction in PNHSs will be the students.

The introduction of using adult learning theory addresses the unique learning needs of PNHSs' educators and opens the door for the inclusion of adult learning principles in other educators' professional learning models. SBPD is an appropriate way of realizing of teachers as adult learners; thus while designing professional development programs for teachers, their unique characteristics as adult learners and adult learning

theory principles should be considered. In the literature, it is consistently claimed that how well an educator learns is related to how well that educator's students learn (Guskey, 2002).

Another dimension of this study was technology implementation. Considering the adult learning theory for adult educators' professional learning for technology adoption provides new ways to think about professional learning by building a base around the unique personal context of individuals. Teachers of SPNHS considered their schools' context both with its opportunities and shortcomings for educational technologies, and then they determine their needs and preferences. That is why they stated that they have found professional development programs beneficial in the interviews. Therefore, this model of professional development can be utilized in planning efforts for any type of teachers' professional learning. "Teachers must be the first ones consulted when assessing what is needed to improve the classroom and learning" (Avargil, Herscovitz & Dori, 2012, p. 54). Teachers both want to be asked and to be involved in the process. It is time for the people who are concerned with developing professional development opportunities for teachers to pass the responsibility to the teachers, because for most of the teachers, ownership of their professional development process means being a genuine professional.

For most of the private schools, providing professional development opportunities for their teachers means making difficult budgetary decisions. This current study can be an example for those schools as this type of program could be a method of cutting costs while inviting more teachers to be a part of the professional learning that happens in their schools.

### 5.3 Implications for Further Research

This current research is the first study conducted at PNHSs. Actually, private night high schools issue in Turkey is an important area to consider, as more and more people want to have high school diploma with the increasing demands of business world. Simply, if a middle school graduate worker wants his pension to be higher when he retires, he most probably applies these schools to get a high school diploma. These schools attract many people in this sense and this provides a number of topics

to be investigated such as profiles of these students, the quality of instruction, utilizing adult teaching practices, and etc. Therefore, this study can be regarded as a starting point and more research studies should be conducted in order to investigate and maximize the potential of these schools.

While this study applies to the professional learning needs of the target school, further studies could be conducted in other PNHSs to make a comparison. Moreover, other variables such as the impact of school size, demographics, and other factors on professional development process could also be investigated. Another area that requires further study is the possible connection between professional learning and school climate. This study has proposed the importance of the school environment for professional development but further studies may be needed to demonstrate the connection.

In the interview part most of the teachers of SPNHS pointed out that the practicing part was missing in the professional development programs. This issue should be considered and practicing such as being observed by another teacher or an expert should be included in the professional development part. Moreover, because of the time restrictions, we had to exclude the post-classroom observation part; thus we could only have the teachers' views on SBPD process. Therefore, further studies could be conducted in order to find out the possible effects of implemented professional development programs on teachers through post-classroom observations.

## REFERENCES


Abdulsalam, N., Condrasky, M., Bridges, W., & Havice, P. (2017). The promise of andragogy and experimental learning to improve teaching of nutrition concepts to culinary arts students. *Journal of Food Science Education, 16*(2), 54–61. https://doi.org/10.1111/1541-4329.12107

Al-Juhani, S. (1991). *The effectiveness of computer-assisted instruction in teaching English as a foreign language in Saudi secondary schools.* Unpublished doctoral thesis, University of Denver.

Altun, A., & Gök, B. (2010). Determining in-service training programs' characteristics given to teachers by conjoint analysis. *Procedia-Social and behavioral sciences, 2*(2), 1709 – 1714.

Anderson, H. G., Frazier, L., Anderson, S. L., Stanton, R., Gillette, C., Broedel-Zaugg, K., & Yingling, K. (2017). Comparison of pharmaceutical calculations learning outcomes achieved within a traditional lecture or flipped classroom andragogy. *American Journal of Pharmaceutical Education, 81*(4). https://doi.org/10.5688/ajpe81470

Austin, M. S., & Harkins, D. A. (2008). Assessing change: Can organizational learning "work" for schools? *Learning Organization, 15*(2), 105–125.

Avalos, B. (2011). Teacher professional development in teaching and teacher education over ten years. *Teaching and Teacher Education, 27*(1), 10–20.

Avargil, S., Herscovitz, O., & Dori, Y. J. (2012). Teaching thinking skills in context based learning: Teachers' challenges and assessment knowledge. *Journal of Science Education and Technology, 21(*2), 207-225.

Avidov-Ungar, O. (2015). School-based professional development as a organizational learning mechanism. *IJER,25*(1), 16.

Baek, Y., Jung, J., & Kim, B. (2008). What makes teachers use technology in the classroom? Exploring the factors affecting facilitation of technology with Korean sample. *Computers & Education, 50*(1), 224–234.

Bansavich, J. C. (2005). *Factors influencing pre-service teachers' readiness to integrate technology into their instruction.* Unpublished doctoral thesis, University of San Francisco.

Beavers, A. (2009). Teachers as learners: Implications of adult education for professional development. *Journal of college teaching and learning, 6*(7), 25.

Beder, H., & Carrea, N. (1988). The effects of andragogical teacher training on adult students' attendance and evaluation of their teachers. *Adult Education Quarterly, 38*(2), 75-87.

Behar, L. S., & Ornstein, A. C. (1995). *Contemporary Issues in Curriculum.* Boston: Alan and Bacon.

Ben-Peretz, M. (1990). *The teacher-curriculum encounter: Freeing teachers from the tyranny of texts.* State University of New York Press, Albany.

Bielefeldt, T. (2001). Technology in teacher education: A closer look. *Journal of computing in teacher education, 17*(4), 4–15.

Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational leadership, 57*(8), 28–33.

Bitner, N., & Bitner, J. (2002). Integrating technology into the classroom:Eight keys to success. *Journal of Technology and Teacher Education, 10*(1), 95 - 100.

Black, G. A. (1989). *Effects of using learning contracts on student achievement in a college laboratory fundamentals of mathematics course.* Unpublished doctoral thesis, Texas A & M University.

Blackwood, C. & White, B. (1991). Technology for teaching and learning improvement. In Galbraith (Eds.), *Facilitating adult learning: A transactional process.* Malabar, Fl: Krieger Publishing Co.

Bleicher, R. E. (2013). A collaborative action research approach to professional learning. *Professional Development in Education, 40*(5), 802–821.

Bradford, D. (1999). *A study of factors that influence experienced teachers in grades kindergarten through five to integrate computer technology into the teaching and learning process.* Unpublished doctoral thesis, Oregon State University.

Brand, G. (1997). Training teachers for using technology. *Journal of Staff Development, 19*, 1.

Brinkerhoff, J. (2006). Effects of a long-duration, professional development academy on technology skills, computer self-efficacy, and technology integration beliefs and practices. *Journal of Research on Technology in Education, 39*(1), 22–43. doi:10.1080/15391523.2006.10782471

Brookfield, S. D. (1990). *The Skillful Teacher.* San Francisco: Jossey-Bass.

Bozeman, W. C., & Baumbach, D. J. (1995). *Educational technologies: Best Practices from America's Schools.* Eye on Education, Larchmont, NY.

Boreham, N. (2004) A theory of collective competence: Challenging the neoliberal individualisation of performance at work. *British Journal of Educational Studies, 52*, 5–17.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. Educational Researcher Journal, 33(8), 3–15.

Bowe, R., & Pierson, M. (2008). Professional development in educational technologies: What have we learned so far. In A. Borthwick & M. Pierson (Eds.) *Transformative classroom practice: Professional development strategies in educational technology* (pp. 9–22). Eugene, OR: International Society for Technology in Education

Burbank, M.D. & Kauchak, D. (2003) An alternative model for professional development: Investigations into effective collaboration. *Teaching and Teacher Education, 19*, 499–514.

Bybee, R. W., & Starkweather, K. N. (2006). The twenty-first century workforce: A contemporary challenge for technology education. *Technology and Engineering Teacher, 65*(8), 27.

Catchings, M. H. (2000). *Models of professional development for teachers: factors influencing technology implementation in elementary schools.* Unpublished Doctoral Thesis.

Cifuentes, L., Maxwell, G., & Bulu, S. (2011). Technology integration through professional learning community. *Journal of Educational Computing Research, 44*(1), 59–82.

Clardy, A. (2005). *Andragogy: Adult Learning and Education at Its Best?*. Towson University, Maryland.

Collinson, V. (2010). To learn or not to learn: A potential organizational learning gap among school systems? *Leadership and Policy in Schools, 9*(2), 190–219.

Conti, G. J. (1978) *Principles of adult learning scale: an instrument for measuring teacher behavior related to the collaborative teaching learning mode.* Unpublished doctoral thesis, Northern Illinois University.

Conti, G. J. (1983). Principles of adult learning scale: Follow up and factor analysis. *Proceedings of the 24th Annual Adult Education Research Conference*, 63-68.

Conti, G. J. (1985). The relationship between teaching style and adult student learning. *Adult Education Quarterly, 35*(4), 220-228.

Corey, S. M. (1957). Introduction. In N. B. Henry (Ed.), *In-service education for teachers, supervisors, and administrators: The fifty-sixth yearbook of the National Society for the Study of Education,* 56(Part I). Chicago, IL: University of Chicago Press.

Cranton, P., & King, K. P. (2003). Transformative learning as a professional development goal. *New Directions for Adult & Continuing Education, 98,* 31. https://doi.org/10.1002/ace.97

Cuban, L. (1986). *Teachers and machines: The classroom use of technology since 1920*. Teachers College Press.

Cuban, L. (2001). *Oversold & underused: Computers in the classroom.* Cambridge, MA: Harvard University Press.

Cuban, L., Kirkpatrick, H., & Peck, C. (2001). High access and low use of technologies in high school classrooms: Explaining an apparent paradox. *American Educational Research Journal, 35*(4). 813–834.

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession*. Washington, DC: National Staff Development Council.

Darkenwald, G. & Merriam, S. B. (1982). *Adult education: foundations of practice*. New York: Harper & Row Publishers.

Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational researcher, 38*(3), 181–199.

Diaz, L. B. (1999). Integrating technology. *Learning & Leading with Technology, 27*(3), 10–13.

DiVesta, F.J. (1954). Instructor-centered and student-centered approaches in teaching a human relations course. *Journal of Applied Psychology, 38*(5), 329–335.

Dowling, W. D. (1974). *Project to Train Adult Basic Education Teachers in Personalizing Instruction.* Final Report. Ohio State University.

Ertmer, P. A. (2005). Teacher pedagogical beliefs: The final frontier in our quest for technology integration? Educational technologies *Research and Development, 53*(4), 25–39. doi:10.1007/BF02504683

Evans, L. (2002). What is teacher development?. *Oxford review of education, 28*(1), 123–137.

Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record, 103*(6), 1013–1055.

Field, A. (2009). *Discovering statistics using IBM SPSS statistics.* London: Sage Publications.

Hair, J. F., Black, W. C., Tatham, R. L., & Anderson, R. E. (2010).*Multivariate data analysis.* Upper Saddle River, NJ: Prentice Hall

Fraser, C., Kennedy, A., Reid, L., & Mckinney, S. (2007). Teachers' continuing professional development: contested concepts, understandings and models. *Journal of in-service education, 33*(2), 153–169.

Freire, P. (1970). *Pedagogy of the oppressed.* New York: Continuum.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American educational research journal, 38*(4), 915–945.

Gayton, J. A., & McEwen, B. C. (2010). Instructional technology professional development evaluation: Developing a high quality model. *Delta Pi Epsilon Journal, 52*(2), 77–94.

Geromel, E. D. J. (1994). *An investigation into the perceptions of graduates of an executive MBA program.* Unpublished Doctoral Thesis. Michigan State University.

Göksoy, S. (2014). Teacher's comments on the process and the results of the in-service training studies. *Journal of Human Sciences, 11*(1), 387-402.

Griffin, G. A. (1983). Introduction: the work of staff development, in: G. A. Griffin (Eds.) *Staff Development, Eighty-Second Yearbook of the National Society for the Study of Education.* Illinois: University of Chicago Press.

Guskey, T. R. (1986). Staff development and the process of teacher change. *Educational researcher, 15*(5), 5–12.

Guskey, T. R. (2000). *Evaluating professional development*. Corwin Press.

Guskey, T. R. (2002). Does it make a difference? Evaluating professional development. *Educational leadership, 59*(6), 45.

Guskey, T. R. (2003). What makes professional development effective? *Phi delta kappan*, 84(10), 748–750.

Hadley, H. (1975). *Development of an instrument to determine adult educators' orientation: Andragogical or pedagogical.* Unpublished doctoral thesis, Boston University.

Hardman, F., Hardman, J., Dachi, H., Elliott, L., Ihebuzor, N., Ntekim, M., & Tibuhinda, A. (2015). Implementing school-based teacher development in Tanzania. *Professional development in education, 41*(4), 602–623.

Hayes, D. (2000). Cascade training and teachers' professional development. *ELT journal, 54*(2), 135–145.

Herff Jones, I. (2014). *Technology a widening frontier in professional development: How well prepared are teachers and what more needs to be done to ensure success.* Herff Jones Achievement Series.

Holland, H. (2005). Teaching teachers: Professional development to improve student achievement. *Research Points, 3*(1), 1–4.

Inasaridze, M., Lobzhanidze, S., & Ratiani, M. (2015). Successes and problems of school based teacher professional development program (case study from Georgia).*Andragoški glasnik: Glasilo Hrvatskog andragoškog društva, 19*(34), 65–72.

Ismail, W. C. N., & Azman, N. (2010). Diverse learning styles of non-formal adult learners in community colleges in Malaysia. *Procedia-Social and Behavioral Sciences, 7,* 139– 144.

Jenkins, J. M., & Keefe, J. W. (2001). Strategies for personalizing instruction: A typology for improving teaching and learning. *NASSP Bulletin, 85*(629), 72–82.

Johnson, C. C., Kahle, J. B., & Fargo, J. D. (2007). A study of the effect of sustained, whole school professional development on student achievement in science. *Journal of research in science teaching, 44*(6), 775–786.

Joyce, B., & Calhoun, E. (2010). *Models of professional development: A celebration of educators.* Corwin Press.

Kaiser, H.F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20,* 141–151.

Karagiorgi, Y., Kalogirou, C., Theodosiou, V., Theophanous, M., & Kendeou, P. (2008). Underpinnings of adult learning in formal teacher professional development in Cyprus. *Journal of In-Service Education, 34*(2), 125–146.

Karasolak, K., Tanriseven, I., & Konokman, G. Y. (2012). Öğretmenlerin hizmetiçi eğitim etkinliklerine ilişkin tutumlarinin belirlenmesi. *Kastamonu Eğitim Dergisi, 21*(3), 997–1010.

Kaya, S., & Kartallıoğlu, S. (2010). Okul temelli mesleki gelişim modeline yönelik koordinatör görüşleri. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*.

Kelly, P. & McDiarmid, G.W. (2002) Decentralisation of professional development: Teachers' decisions and dilemmas, *Journal of In-service Education, 28*, 409–425.

Kemper, D. Kam-Por, K., & Ledesma, J. (2001). Conceptions of good teaching and how they influence the way adults and school leavers are taught. *International Journal of Lifelong Education, 20*(5), 393–404.

Kennedy, A. (2005) Models of continuing professional development (CPD): a framework for analysis, *Journal of In-Service Education, 31*(2), 235–250.

Kent, A. M. 2004. Improving teacher quality through professional development. *Education, 124*(3), 427–435.

Klingner, J. K. (2004). The science of professional development. *Journal of Learning Disabilities, 37*(3), 248–255.

Knowles, M. (1970). *The modern practice of adult education: Andragogy versus pedagogy*. New York, NY: Association Press.

Knowles, M. S. (1990). *The Adult Learner: A Neglected Species*. Houston: Gulf Publishing Co.

Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2005). *The adult learner: The definitive classic in adult education and human resource development.* Routledge.

Lam, Y. (2000). Technophilia vs. technophobia: A preliminary look at why second-language teachers do or do not use technology in their classrooms. *Canadian Modern Language Review, 56*(3), 389–420.

Lawson, G. (1997). New paradigms in adult education. *Adult Learning, 8*(3), 10.

Leh, A. (1995). *The reformation in foreign language instruction.* In Proceedings of the 1995 Annual National Convention of the Association for Education Communications and Technology (pp. 333-342).

Lieberman, A. (1995). Practices that support teacher development. *Phi delta kappan, 76*(8), 591.

Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions in Program Evaluation, 30,* 73-84. doi:10.1002/ev.1427

Linn, G. B., Gill, P., Sherman, R., Vaughn, V., & Mixon, J. (2010). Evaluating the long- term impact of professional development. *Professional Development in Education, 36(*4), 679–682.

Little, J. W. (1993). Teachers' professional development in a climate of educational reform. *Educational evaluation and policy analysis, 15*(2), 129–151.

Loucks-Horsley, S., Hewson, P., Love, N., & Stiles, K. (1998). *Designing professional development for teachers of mathematics and science.* Corwin Press: California.

Mahruf C. Shohel, M., & Banks, F. (2012). School-based teachers' professional development through technology-enhanced learning in Bangladesh. *Teacher Development, 16*(1), 25–42.

Mahon, J. P. (2003). Professional development for K-12 reform. *Principal Leadership, 6*, 51–53.

Mancera, C. and Schmelkes, S. (2010). *Specific Policy Recommendations on the Development of a Comprehensive* In-Service Teacher Evaluation Framework, OECD

Maurer, M. M., & Davidson, G. S. (1998). *Leadership in instructional technology.* Merrill.

Meltzer, S. T. (2006). *An analysis of professional development in technology for elementary school teachers.* Unpublished doctoral thesis. Florida Atlantic University.

Merriam, S. B. (2001). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education,* (89), 3.

Merriam, S. B. (2002). Introduction to qualitative research. Qualitative research in practice: *Examples for discussion and analysis*, *1*, 1-17.

Norman, M. (1999). Beyond hardware: Why your schools should invest in professional development - the human side of school technology. *The American School Board Journal.*

Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.

Oxford's Learners Dictionary (6th Ed.). (2000). Oxford University Press.

Özdemir, S. M. (2013). Exploring the Turkish teachers' professional development experiences and their needs for professional development. *Online Submission, 3*(4), 250–264.

Perrin, A. L. (2001). *The fit between adult learner preferences and the theories of Malcolm Knowles.* Unpublished doctoral thesis, University of Kansas.

Pine-Thomas, J. A. (2017). *Educator's technology integration barriers and student technology preparedness as 21st century professionals.* Unpublished doctoral dissertation, Walden University, Minneapolis, MN.

Rhodes, C. & Beneicke, S. (2003) Professional development support for poorly performing teachers: Challenges and opportunities for school managers in addressing teacher learning needs. *Journal of In-service Education, 29,* 123–140.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 1–6.

Prensky, M. (2008). The role of technology in teaching and in the classroom. *Educational Technology.*

Prensky, M. R. (2010). *Teaching digital natives: Partnering for real learning.* Corwin Press.

Ponte, P., Ax, J., Beijaard, D., & Wubbels, T. (2004). Teachers' development of professional knowledge through action research and the facilitation of this by teacher educators. *Teaching and teacher education, 20*(6), 571–588.

Puteh, F., Kaliannan, M., & Alam, N. (2015). *Strategic professional development: does it conform to adult learning perspective?*. The 3rd International Conference on Management, Leadership and Governance. Academic Conferences and Publishing Limited.

Rachal, J. J. R. (1994). Andragogical and pedagogical methods compared: A review of the experimental literature. *Andragogical Methods, 30.* Retrieved from http://eric.ed.gov/?id=ED380566

Rebora, A. (2011). Guidelines on teacher learning revamped. Education week teacher PD sourcebook: *Advancing student learning, 4*(1), 4.

Richardson, D. & Birge, B. (1995). Teaching physiology by combined passive (pedagogical) and active (andragogical) methods. *Advances in Physiology Education, 13*, 1, 66–74.

Richardson, J. S., Ertmer, P. A., Aagard, H., Ottenbreit, A., Yang, D., & Mack, N. C-G. (2007). The digital age literacy professional development initiative: Factors influencing teachers' implementation of skills and strategies. *Teacher Education and Practice, 20*(3), 239–262.

Russell, M., Bebell, D., O'Dwyer, L., & O'Connor, K. (2003). Examining teacher technology use: Implications for pre-service and in-service teacher preparation. *Journal of teacher Education, 54*(4), 297–310.

Santos, R. (2012). *Andragogy content knowledge technology: a training model for teaching adults.* Unpublished Doctoral Thesis, Arizona State University.

Schwandt, D., & Tobin, T. (1999). *Report on Title VII, Subpart 1,* professional development activities.

Serrat, O. (2017). Coaching and mentoring. In *Knowledge Solutions* (pp. 897-902). Springer, Singapore.

Sharifi, M., Soleimani, H., & Jafarigohar, M. (2017). E-portfolio evaluation and vocabulary learning: Moving from pedagogy to andragogy. *British Journal of Educational technologies, 48*(6), 1441–1450. https://doi.org/10.1111/bjet.12479

Silberman, M., & Auerbach, C. (2006). *Active Training: A Handbook of Techniques. Designs, Case Examples, and Tips.* Pfeiffer, San Francisco, CA.

Smith, B. (2001). Bridging the gap between adult education and education psychology: Some important findings. *AHRD Proceedings. 35*(1), 848–855.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics.* Boston: Pearson.

Thiagarajan, S. (2005). *Thiagi's Interactive Lectures: Power Up Your Training with Interactive Games and Exercises.* American Society for Training and Development.

Trotter, Y. D. (2006). Adult learning theories: Impacting professional development programs. *Delta Kappa Gamma Bulletin, 72*(2), 8–13.

Uçar, R., & İpek, C. (2006). The views of primary schools administrators and teachers about in-service training programs in the Turkish educational system. *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi, 3*, 34–53.

Valli, L., & Hawley, W. D. (2002). Designing and implementing school-based professional development. *The keys to effective schools: Educational reform as continuous improvement*, 86–96.

Verlander, E. (1987). *The use of principles of adult education in six university executive programs (Management, Human Resources Development, Andragogy, Training, Career Development).* Unpublished Doctoral Thesis. Columbia University Teachers College.

Voogt, J., Erstad, O., Dede, C., & Mishras, P. (2013). Challenges to learning and schooling in the digital networked world of the 21st century. *Journal of Computer Assisted Learning, 29*, 403–413.

Wang, C. (2002). *Instructional preferences of adult educators and perceptions of their adult students in distance learning settings.* Unpublished doctoral thesis, University of Arkansas.

Wang, F., & Reeves, T. C. (2003). Why do teachers need to use technology in their classrooms? Issues, problems, and solutions. *Computers in the Schools, 20*(4), 49–65.

Weber-Mayrer, M. M. (2016). *Early childhood professional development: An experimental study of adult teaching practices derived from adult learning theory.* Unpublished doctoral thesis, The Ohio State University.

Wenglinsky, H. (1998). *Does it compute? The relationship between educational technologies and student achievement in mathematics.* Princeton, NJ: Educational Testing Service.

Wilson, L. S. (2005). *A test of andragogy in a post-secondary educational setting.* Unpublished doctoral thesis. Louisiana State University

Winn, W. D. (1991). The assumptions of constructivism and instructional design. *Educational technology, 31*(9), 38-40.

Yin, R.K. (2014). *Case Study Research: Design and Methods* (5th Edition). Los Angeles: Sage Publications.

Yolcu, H., & Kartal, S. (2017). Evaluating of in-service training activities for teachers in Turkey: A critical analysis. *Universal Journal of Educational Research, 5*(6), 918– 926.

Yüksel, İ., & Adigüzel, A. (2012). Öğretmenlerin okul temelli mesleki gelişim modeline ilişkin görüşlerinin çeşitli değişkenlere göre değerlendirilmesi. *Mukaddime, 6*(6).

Zepeda, S. J. (2012). *Professional development, what works* (2nd Ed.). Larchmont, NY: Eye on Education.

Zepeda, S. J., Parylo, O., & Bengtson, E. (2014). Analyzing principal professional development practices through the lens of adult learning theory. *Professional Development in Education, 40(*2), 295–315.

# APPENDICES

## APPENDIX A: Permission from Human Subjects Ethics Committee

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
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ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

Sayı: 28620816 / 102

08 ŞUBAT 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Meral AKSU ;

Danışmanlığını yaptığınız doktora öğrencisi Afra Nur AKSOY' un ***"Özel Akşam Liseleri Öğretmenlerinin Teknolojik Becerilerini ve Andragojik Bilgilerini Geliştirmek İçin Okul Temelli Mesleki Gelişim Programı Geliştirme Çalışması"*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2018-EGT-017** protokol numarası ile **08.02.2018 - 30.09.2019** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan V

Prof. Dr. Ayhan SOL
Üye

Prof. Dr. Ayhan Gürbüz DEMİR
Üye

Doç. Dr. Yaşar KONDAKÇI
Üye

Doç. Dr. Zana ÇITAK
Üye

Yrd. Doç. Dr. Pınar KAYGAN
Üye

Yrd. Doç. Dr. Emre SELÇUK
Üye

## APPENDIX B: Questionnaire For Educational Technologies

### Eğitim Teknolojileri İhtiyaç Analizi Formu

Değerli Öğretmenim,

Bu form özel akşam liselerinde çalışan öğretmenlerin eğitim teknolojileri açısından ihtiyaçlarını belirlemek amacıyla hazırlanmıştır.
Lütfen her maddede sizin için geçerli olan seçeneği işaretleyiniz.

| | | | | | | |
|---|---|---|---|---|---|---|
| **1.** | **Cinsiyet:** | ☐ Kadın | ☐ Erkek | | | |
| **2.** | **Öğretmenlik Süresi:** | ☐ 1-5 | ☐ 6-10 | ☐ 11-15 | ☐ 16-20 | ☐ 20+ |
| **3.** | **Eğitim durumunuz:** | ☐ Ön lisans | ☐ Lisans | ☐ Yüksek Lis. | ☐ Doktora | |
| **4.** | **Branşınız, lütfen belirtiniz:** | **……** | | | | |
| **5.** | **Kaç yıldır akşam liselerinde öğretmenlik yapıyorsunuz ?** | ☐ 1-5 | ☐ 6-10 | ☐ 11-15 | ☐ 16-20 | ☐ 20+ |
| **6.** | **Şimdiye kadar teknoloji ile ilgili kaç mesleki gelişim kursuna katıldınız?** | ☐ 0 | ☐ 1-2 | ☐ 3-4 | ☐ 4-5 | ☐ 5+ |

7. **Aşağıda yer alan donanım ve yazılım araçlarını bilginiz ve sınıf içi öğretim amacıyla kullanma düzeyiniz açısından değerlendiriniz.**

a.) Bilgi düzeyiniz için "Yok, Az, Orta, İyi, Çok İyi" seçeneklerinden birini işaretleyiniz.

b.) Sınıf içi kullanma düzeyiniz için "Hiç, Nadiren, Bazen, Sık Sık, Her Zaman" seçeneklerinden birini işaretleyiniz. Belirtilen teknolojiyi günlük yaşamınızda kullanıyor ancak sınıf içerisinde öğretim amacıyla kullanmıyorsanız "Hiç" seçeneğini işaretleyiniz

| **Gruplar** | **Teknoloji** | **Bilgi düzeyi** | | | | | **Sınıf İçi Kullanma düzeyi** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Yok** | **Az** | **Orta** | **İyi** | **Çok İyi** | **Hiç** | **Nadiren** | **Bazen** | **Sık Sık** | **Her zaman** |
| **Donanım Araçları** | Akıllı telefon | | | | | | | | | | |
| | Laptop/PC | | | | | | | | | | |
| | Projeksiyon | | | | | | | | | | |
| | Akıllı Tahta | | | | | | | | | | |
| | Tablet | | | | | | | | | | |
| **Öğretim Yönetim Sistemleri** | MOODLE | | | | | | | | | | |
| | Edmodo | | | | | | | | | | |
| | Kahoot | | | | | | | | | | |
| **Sosyal İletişim Araçları** | Facebook | | | | | | | | | | |
| | Twitter | | | | | | | | | | |
| | Instagram | | | | | | | | | | |
| | YouTube | | | | | | | | | | |
| | Blogs | | | | | | | | | | |
| | Podcasts | | | | | | | | | | |
| **Google Araçları** | Google drive | | | | | | | | | | |
| | Google docs | | | | | | | | | | |
| | Google form | | | | | | | | | | |
| | Google scholar | | | | | | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yazılım Araçları** | Office programları (Word, Excel, Power Point) | | | | | | | | | | |
| | Mobil Uygulamalar | | | | | | | | | | |
| | Bilgisayar Simulasyonları | | | | | | | | | | |

8. **Teknoloji kullanma konusundaki mesleki gelişiminiz için ne tür bir etkinliğe katılmak istersiniz. Seçtiğiniz seçeneğin yanına nasıl bir etkinlik istediğinizi belirtiniz.**

| **Etkinlik türü** | **Hiç istemem** | **İsterim** | **Çok isterim** |
|---|---|---|---|
| Biri bana öğretsin (Örnek: Yüz yüze anlatım/Gösterim/Web konferansı) | | | |
| **Nasıl? Lütfen belirtiniz.** | | | |
| Kendi kendime öğreneyim (Örnek: Online kişisel modüller/ Bilimsel toplantılara katılma) | | | |
| **Nasıl? Lütfen belirtiniz.** | | | |
| Grup çalışması ile öğreneyim (Örnek: Çalıştay -Workshop) | | | |
| **Nasıl? Lütfen belirtiniz.** | | | |
| **Diğer, Lütfen belirtiniz.** | | | |

## APPENDIX C: Principles of Adult Learning Scale (Turkish Version)

### Yetişkin Öğrenme İlkeleri Ölçeği

Değerli Öğretmenim,

Bu ölçek yetişkin öğrencilere ders veren öğretmenlerin yetişkin öğrenme ilkeleri kullanım sıklıklarının belirlenmesi amacıyla hazırlanmıştır. Her bir madde için, lütfen maddede açıklanan eylemi en sık uyguladığınız şekilde yanıtlayın. Seçimleriniz Her Zaman, Neredeyse Her Zaman, Sıklıkla, Nadiren, Neredeyse Hiç ve Hiç'dir. Eğer madde sizin için geçerli değilse Hiç seçeneğini işaretleyiniz.

| Madde | Her Zaman | Neredeyse Her Zaman | Sıklıkla | Nadiren | NeredeyseHiç | Hiç |
|---|---|---|---|---|---|---|
| 1. Öğrencilerin sınıf içi performans değerlendirme ölçütlerinin geliştirilmesine katılmalarına izin veririm. | | | | | | |
| 2. Gerektiğinde disiplin cezasını kullanırım. | | | | | | |
| 3. İhtiyaç duyduklarında yaşça daha büyük öğrencilere ödevlerini tamamlamaları için daha fazla süre tanırım. | | | | | | |
| 4. Öğrencilere amaçları ile bugünkü performans seviyeleri arasındaki farklılıkları teşhis etmelerinde yardımcı olurum. | | | | | | |
| 5. Bir kaynak kişi olarak hizmet vermek yerine bilgi sağlarım. | | | | | | |
| 6. Bir programın başında yazmış olduğum öğretim kazanımlarına bağlı kalırım. | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7. Yetişkinlere konuyu sunarken en iyi yöntem olarak düz anlatım yöntemini kullanırım. | | | | | | |
| 8. Sınıfı öğrencilerin etkileşimini kolaylaştıracak şekilde düzenlerim. | | | | | | |
| 9. Her bir öğrencim için kazanımlar belirlerim. | | | | | | |
| 10. Mümkün olduğunca öğrencilerin sosyo-ekonomik geçmişlerinden farklı üniteler planlarım. | | | | | | |
| 11. Öğrencimi grup tartışmalarında sınıf arkadaşları ile karşı karşıya getirerek kendisini motive etmesini sağlarım. | | | | | | |
| 12. Ünitelerimi, öğrencilerin daha önceki deneyimlerini göz önüne alacak şekilde planlarım. | | | | | | |
| 13. Öğrencilerin sınıfta işlenilecek konularla ilgili kararlar vermelerine izin veririm. | | | | | | |
| 14. Tek bir öğretim yöntemi kullanırım çünkü çoğu yetişkinin benzer öğrenme tarzına sahip olduğunu düşünüyorum. | | | | | | |
| 15. Öğrencilere göre farklı teknikler kullanırım. | | | | | | |
| 16. Yazılı sınavları, öğrencilerin akademik gelişimin derecesini ölçmek için kullanırım. | | | | | | |
| 17. Öğrencilerin eğitim ihtiyaçlarını tespit etmelerine yardım etmek amacıyla bireysel görüşmeler yaparım. | | | | | | |
| 18. Yeni bir kavramı öğrenirken her öğrenciye harcadığı zamanı gözetmeksizin kendi hızında çalışmasına izin veririm. | | | | | | |
| 19. Öğrencilerime kısa süreli ve uzun süreli hedefler geliştirmelerinde yardımcı olurum. | | | | | | |
| 20. Öğrenme sürecinin bölünmesini engellemek amacıyla iyi disiplinli bir sınıf ortamı sağlarım. | | | | | | |
| 21. Sessiz, verimli masa başı çalışmasını teşvik eden yöntemler kullanırım. | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 22. Öğrencileri değerlendirmede başlıca yöntem olarak testleri kullanırım. | | | | | | |
| 23. Öğretim kazanımlarımı öğrencilerin bireysel yetenekleri ve ihtiyaçları ile eşleşecek şekilde düzenlerim. | | | | | | |
| 24. Öğrencilerimi yaşadıkları toplum ile ilgili sorular sorma konusunda teşvik ederim. | | | | | | |
| 25. Öğrenim kazanımlarını planlarken bir öğrencinin yaşam boyu eğitime katılmasını belirleyici faktör olarak düşünürüm. | | | | | | |
| 26. Öğrencilerimin çözülmesi gereken problemlerini kendilerine tespit ettiririm. | | | | | | |
| 27. Sınıftaki tüm öğrencilerime belirli bir konuda aynı ödevi veririm. | | | | | | |
| 28. Özellikle ilk ve orta öğretim okullarındaki öğrenciler için tasarlanmış materyalleri kullanırım. | | | | | | |
| 29. Yetişkinler için öğrenme durumlarını öğrencilerimin günlük yaşamlarında karşılaştıkları sorunlara göre düzenlerim. | | | | | | |
| 30. Öğrencilerim arasında rekabeti teşvik ederim. | | | | | | |
| 31. Farklı öğrenciler için farklı materyaller kullanırım. | | | | | | |
| 32. Öğrencilere yeni öğrendiklerini önceki deneyimleriyle ilişkilendirmelerinde yardımcı olurum. | | | | | | |
| 33. Günlük yaşam sorunları ile ilgili konular öğretirim. | | | | | | |

## APPENDIX D: Observation Form for The Meeting on Needs Analysis

### İhtiyaç Analizi Toplantı Gözlem Formu

| | |
|---|---|
| Gözlemci Adı Soyadı: | Katılan Öğretmen sayısı: |
| Toplantı No: | Okul Müdürü: |
| **Toplantı ile ilgili genel bilgiler** | |
| Toplantı günü: | |
| Toplantı saati: | |
| Toplantı süresi: | |
| Toplantı ortamı: | |
| Toplantı konusu: | |
| **Gözlem Kriterleri / Gözlenecek Konular** | |
| **Toplantı sırasında öğretmenlerin genel tutumları** | |
| **Toplantı sırasında karşılaşılan sorunlar** | |
| **Toplantı sırasında her bir öğretmenin toplantıya olan katkısı** | |
| **Eğitim teknolojileri ile ilgili ihtiyaçlar** | |
| **Yetişkin eğitimi ile ilgili ihtiyaçlar** | |
| **Eğitim teknolojileri ihtiyaç analizi anketinin sonuçlarının tartışılması** | |
| **Yetişkin eğitimi ilkeleri ölçeğinin sonuçlarının tartışılmas** | |
| **Toplantı akışı (baştan sona)** | |
| **NOT:** | |

## APPENDIX E: Observation Form for the Meetings on Professional Development

### İstenen Program ile İlgili Toplantı Gözlem Formu

| | |
|---|---|
| Gözlemci Adı Soyadı: | Katılan Öğretmen sayısı: |
| Toplantı No: | Okul Müdürü: |
| **Toplantı ile ilgili genel bilgiler** | |
| Toplantı günü: | |
| Toplantı saati: | |
| Toplantı süresi: | |
| Toplantı ortamı: | |
| Toplantı konusu: | |
| **Gözlem Kriterleri / Gözlenecek Konular** | |
| **Toplantı sırasında öğretmenlerin genel tutumları** | |
| **Toplantı sırasında karşılaşılan sorunlar** | |
| **Toplantı sırasında her bir öğretmenin toplantıya olan katkısı** | |
| **İstenen program formatı ile ilgili görüşler** | |
| **İstenen program süresi ile ilgili görüşler** | |
| **İstenen programın genel özellikleri üzerine görüşler** | |
| **Toplantı akışı (baştan sona)** | |
| **NOT:** | |

## APPENDIX F: Classroom Observation Form

### Sınıf İçi Gözlem formu

| | |
|---|---|
| Gözlemci Adı Soyadı: | Gözlem No: |
| Dersin adı: | Sınıf Mevcudu: |
| **Öğretmen ile ilgili bilgiler;** | |
| Adı Soyadı: | |
| Mezun olduğu lisans programı: | |
| Mezun olduğu yıl: | |
| Lisans eğitiminde teknoloji veya yetişkin eğitimi ile ilgili bir ders aldı mı? | |
| Mesleğe başladıktan sonra teknoloji veya yetişkin eğitimi ile ilgili bir eğitim aldı mı? | |
| İşlenen konu: | |
| **Gözlem Kriterleri / Gözlenecek Konular** | |
| **Ders sırasında öğretmenin kullandığı öğretim yöntemleri** | |
| **Ders sırasında dersin içeriği ve öğretim yöntemleri ile bağlantılı öğrenci tepkileri *(Örnek: İlgililer mi? Sıkıldılar mı? Katılım gösterdiler mi? Eğlendiler mi? vb.)*** | |
| **Sınıfın eğitim teknolojileri kullanımına uygunluğu** | |
| **Öğretmenin ders sırasında kullandığı eğitim teknolojileri** | |
| **Öğretmenin ders sırasında kullandığı yetişkin öğretim ilkeleri *(Örnek: öğrencilerin önceki deneyimlerine vurgu yapmak, öğrenci merkezli etkinlikler, öğrenci ihtiyaçlarını belirleme)*** | |
| **Eğer varsa kullanılan teknolojiler ile karşılaşılan sorunlar** | |
| **Yetişkin eğitimi açısından karşılaşılan sorunlar** | |
| **Ders akışı (baştan sona)** | |
| **NOT:** | |

## APPENDIX G: Checklist for the Classroom Observation

| | |
|---|---|
| S/he includes students in the learning process | |
| S/he acts like a facilitator | |
| S/he considers students' interests | |
| S/he considers students' past experiences | |
| S/he relates the learning to students' daily lives | |
| S/he checks students' previous learning | |
| S/he provides clear objectives | |
| S/he makes learning relevant | |
| S/he explains future benefits of their learning | |
| S/he creates comfortable atmosphere | |
| S/he respects students' ideas | |
| S/he provides feedback | |

## APPENDIX H: Semi-Structured Interview Schedule

### Öğretmen Görüşme Formu

Merhaba ben Afra Nur Aksoy. Ortadoğu Teknik Üniversitesi Eğitim Bilimleri Bölümü'nde Doktora yapmaktayım. Akşam liselerinde çalışan öğretmenler için teknoloji ve yetişkin eğitimi konularında mesleki gelişim programı geliştirilmesi ve etkilerinin incelenmesi üzerine bir çalışma yapıyorum. Vereceğiniz bilgiler akşam liseleri öğretmenlerinin mesleki gelişimi açısından önemli bir yere sahiptir. Görüşmeye başlamadan önce bir kaç noktaya değinmek istiyorum.

1. Vereceğiniz bilgiler tamamen gizli tutulacaktır ve isminiz hiç bir şekilde kullanılmayacaktır. Tez yazılırken gerektiği durumlarda takma ad kullanılacaktır.
2. Çok fazla zamanınızı almamak ve görüşme esnasında söylediklerinizi yazıya geçirirken yapabileceğim hataları en alt düzeye indirmek amacıyla izin verirseniz görüşmeyi kaydetmek istiyorum.
3. Görüşmeye başlamadan önce sormak istediğiniz herhangi bir soru var mı?
4. Görüşmemiz yaklaşık olarak 30 dakika sürecektir.
5. Hazırsanız görüşmeye başlayabiliriz.

**A. GENEL BİLGİLER**

1. Akademik ve öğretmenlik geçmişinizi kısaca özetler misiniz?
2. Daha önce teknoloji veya yetişkin eğitimi üzerine bir hizmet-içi eğitim kursuna/seminerine katıldınız mı? Evet ise açıklar mısınız?

a) Katıldığınız kursun/seminerin size ne gibi katkısı oldu?
b) Öğrendiklerinizi sınıf içine ne düzeyde aktarabiliyorsunuz? (1'den 10 a kadar bir puan verseniz kaç verirdiniz aktarımınıza? Neden?)
c) Katıldığınız kurs/seminer dolaylı olarak öğrencilerinizin başarısına ne tür bir katkıda bulundu? (1'den 10 a kadar bir puan verseniz kaç verirdiniz? Neden?)

**B. OKUL TEMELLİ MESLEKİ GELİŞİM PROGRAMI GELİŞTİRME SÜRECİNİN DEĞERLENDİRİLMESİ**

1. Okul temelli mesleki gelişim programı geliştirme sürecini genel olarak nasıl değerlendiriyorsunuz? Eksi ve artı yönlerini paylaşabilir misiniz?
2. İleride tekrar bu tarz bir ekinliğe katılmak ister misiniz? Neden?

## C. MESLEKİ GELİŞİM PROGRAMININ DEĞERLENDİRİLMESİ

1. Uygulanan programı genel hatlarıyla değerlendirir misiniz?
2. Uygulanan mesleki gelişim programının eğitim teknolojileri açısından size ne gibi bir katkısı olmuştur?
3. Bu programla öğrendiğiniz sosyal medya araçlarını ve ilgili etkinlikleri derslerinizde kullanmayı düşünür müsünüz? Evet is nasıl? Hayır ise neden?
4. Uygulanan mesleki gelişim programının yetişkin eğitimi ilkeleri açısından size ne gibi bir katkısı olmuştur?
5. Bu programla öğrendiğiniz yetişkin öğretim ilkelerini ve ilgili etkinlikleri derslerinizde kullanmayı düşünür müsünüz? Evet is nasıl? Hayır ise neden?
6. Uygulanan programda size göre geliştirilmesi gereken boyutlar/bölümler/unsurlar nelerdir?
7. Bu programın kalitesini geliştirme adına tavsiyeleriniz nelerdir?
8. Bunların dışında belirtmek istediğiniz noktalar var mı?

Katılımınız için çok teşekkürler…

## APPENDIX I: Lesson Plan for Day 1 of Social Media in Teaching

| Activity | Title | Purpose/Objectives | Procedures | Resources |
|---|---|---|---|---|
| **Introduction** | Introduction of the 2-day PD program on social media in teaching | To familiarize the participants to the instructor and to the program | Handouts of the general program information are distributed and brief explanation is made | Handouts of the general program information |
| **Opening exercises** | Active Knowledge Sharing | To draw participants immediately into the subject matter through making meaningful guesses about the interesting statistics regarding social media tools<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | Following questions about the interesting statistics regarding social media tools are asked<br>-How much of the Facebook users check their account at least 5 times a day?<br>-Which type of people are the most active on social media?<br>-How many | Handouts including these questions as a guide and PowerPoint presentation |

| | | | | |
|---|---|---|---|---|
| | | | videos are viewed on Facebook daily?<br>-How many tweets sent each day?<br>-How many hours of video are uploaded to YouTube every minute? | |
| **Lecture**<br><br>**Lecture** | Introduction of social media tools | To get across general knowledge about social media tools (Facebook, Instagram, Twitter, YouTube, Blogs and Podcasts)<br>**Objectives**<br>-List different social media tools to be used in their courses<br>-Select the most suitable social media tools for the content of their courses<br>-Name the specific features of each social media tool<br>-Identify the technology needed in using social media | - Interesting and funny cartoons about social media addiction was used in order to gain the audience interest through showing the impact of the social media in our lives<br>-Opening summary method: Lecture's major points and conclusions | PowerPoint presentation<br>Handouts of the presentation slides<br>Cartoons about social media addiction<br>Personal laptops and cell phones |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | tools<br>-Identify the stages of using social media tools<br>-Discuss the characteristics of an engaging material<br>-Compare different social media tools<br>-Choose the most appropriate social media tool to create the content of their courses<br>-To select the best social media tool<br>-Help other participants to perform a task<br>-Cooperate with other participants | are stated to help participants organize their listening<br>-PowerPoint presentation on social media tools<br>-After the presentation of each social media tool, teachers are asked the repeat the procedures on their own laptops or cell phones | |
| **Conclusion** | Questions and answers period | To identify the questions and concerns and eliminate them<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Blank index cards are handed<br>Each participant is requested to write down a question.<br>-As many of these questions are answered | Blank index cards |

**APPENDIX J: Lesson Plan for Day 2 of Social Media in Teaching**

| Activity | Title | Purpose | Procedures | Resources |
|---|---|---|---|---|
| **Review** | Reviewing the previous day | To help the participants remember what was taught previous day | Handouts of the general information about social media tools | Handouts of the general information about social media tools |
| **Opening exercises** | Opening a discussion | To help the participants think more about using the social media tools that they learned previous day in their teaching<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Teachers are asked the following questions;<br>-What are the possible ways of integrating a particular social media tool in to your teaching regarding the content you teach? | Handouts including these questions as a guide |
| **Lecture**<br><br>**Lecture** | Introduction of how to use social media in teaching | To get across general knowledge about how to use social media tools in teaching (Facebook, Instagram, | -A short video on an example regarding how to use social media in teaching is showed<br>-Opening summary method: Lecture's major points and | PowerPoint presentation<br>Handouts of the presentation slides<br>Personal laptops and |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | Twitter, YouTube, Blogs and Podcasts)<br>**Objectives**<br>-Identify the specific features of each social media tool<br>-Associate the listed social media tools with their own teaching<br>-Explain the role of social media in teaching<br>-Integrate social media tools in their daily teaching<br>-Encourage their students to use social media tools for their learning<br>-Examine the benefits and drawbacks of using social media in teaching<br>-To plan a lesson to be | conclusions are stated to help participants organize their listening<br>-PowerPoint presentation on how to use social media tools in teaching<br>-Active listeners mode: Participants are asked how they can adapt the presented activity to the content of their course | cell phones |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | implemented through selected social media tool<br>-To prepare the material to be used utilizing the chosen social media tool<br>-To prepare content to be shared prior to classroom meeting through selected social media tool<br>-Help other participants to perform a task<br>-Cooperate with other participants | | |
| **Conclusion** | Questions and answers period | To identify the questions and concerns and eliminate them<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Blank index cards are handed<br>Each participant is requested to write down a question.<br>-As many of these questions are answered as time permits | Blank index cards |

**APPENDIX K: Lesson Plan for Day 1 of Adult Teaching Practices**

| Activity | Title | Purpose | Procedures | Resources |
|---|---|---|---|---|
| **Introduction** | Introduction of the 2-day PD program on adult teaching practices | To familiarize the participants to the program | Handouts of the general program information are distributed and brief explanation is made | Handouts of the general program information |
| **Opening exercises** | Active Knowledge Sharing | To draw participants immediately into the subject matter through sharing their experiences with their own adult learners and thinking about their characteristics<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Teachers are requested to their experiences with the adult learners in their schools<br>-Teachers are asked what kind of specific features they observed in their students. | PowerPoint presentation |
| **Lecture** | Introduction of characteristics of adult learners | To get across general knowledge about characteristics (physical, psychological, | -A teaching case which includes problems caused by the specific features of adult learners is | PowerPoint presentation<br>Handouts of the presentation slides |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | social and learning) of adult learners<br>**Objectives**<br>-List the characteristics (physical, sociological, psychological) of adult learners<br>-List the features of adult learners for educational purposes<br>-Identify the specific features of adult learners<br>-Associate the characteristics of adult learners with their own teaching<br>-Associate the features of adult learners for educational purposes with their own teaching<br>-Discuss the characteristics of an adult learner<br>-Compare | distributed and teachers are invited to discuss the problems.<br>-The lecture's major points and conclusions are stated to help participants organize their listening.<br>-Teachers are asked to think about the features of adult learners and compare them with their students and give specific examples. | |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | different adult learners<br>-Differentiate an adult learner from another type of learners<br>-Help other participants to perform a task<br>-Cooperate with other participants<br>-Motivate others to achieve their goals | | |
| **Conclusion** | Questions and answers period | To identify the questions and concerns and eliminate them<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Blank index cards are handed<br>-Each participant is requested to write down a question.<br>-As many of these questions are answered as time permits | Blank index cards |

**APPENDIX L: Lesson Plan for Day 2 of Adult Teaching Practices**

| Activity | Title | Purpose/Objectives | Procedures | Resources |
|---|---|---|---|---|
| **Review** | Reviewing the previous day | To help the participants remember what was taught previous day | Handouts of the general information about characteristics of adult learners | Handouts of the general information about characteristics of adult learners |
| **Opening exercises** | Opening a discussion | To help the teachers think more about how they can teach considering the characteristics of this age group of students.<br>**Objectives**<br>-Listen to others with respect<br>-Participate in group discussions | -Teachers are asked to think about how they can teach adult learners considering their characteristics<br>-Teachers are asked to think about the techniques or methods that they used and found suitable for adult learners | PowerPoint presentation |
| **Lecture** | Introduction of adult teaching practices | To get across general knowledge about adult teaching practices and related | -A short video on an example regarding how to use adult | PowerPoint presentation<br>Handouts of the |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | activities<br>**Objectives**<br>-Name the differences between pedagogy and andragogy<br>-Define different activities suitable for adult learners<br>-Explain the role of adult teaching practices in teaching adult learners<br>-Identify the consequences of the features of adult learners for educational purposes in their teaching<br>-Integrate adult teaching practices in their daily teaching<br>-Illustrate adult teaching practices that they are using in their teaching<br>-Examine the benefits and drawbacks of using adult teaching practices in their teaching<br>-Plan a lesson to be | teaching practices is showed<br>-Teachers are assigned active listeners mode and they are asked how they can adapt the presented activity to the content of their course -The lecture's major points and conclusions are stated to help participants organize their listening<br>-After the presentation of several activities, teachers are asked to think about how they can integrate this activity considering the content of their course | presentation slides |

| | | | | |
|---|---|---|---|---|
| **Lecture** | | implemented through adult teaching practices<br>-Prepare the material suitable for adult learners<br>-Prepare content suitable for adult learners<br>-Design an activity suitable for adult learners<br>Choose the most appropriate adult teaching practices for particular group of adult learners<br>Rate the activities for the benefit of their students<br>-Help other participants to perform a task<br>-Cooperate with other participants<br>-Motivate others to achieve their goals | | |
| **Conclusion** | Questions and answers period | To identify the questions and concerns<br>**Objectives**<br>-Listen to others with respect | -Each participant is requested to write down a question | Blank index cards |

**,APPENDIX M: Detailed Information about Conducted Interviews**

| **Participants** | **Location** | **Collection method** | **Date** | **Time** |
|---|---|---|---|---|
| Teacher 1 | İstanbul | Recorded | 15.05.18 | 28.04 min. |
| Teacher 2 | İstanbul | Recorded | 15.05.18 | 17.03 min. |
| Teacher 3 | İstanbul | Recorded | 15.05.18 | 27.57 min. |
| Teacher 4 | İstanbul | Recorded | 15.05.18 | 18.50 min. |
| Teacher 5 | İstanbul | Recorded | 15.05.18 | 24.31 min. |
| Teacher 6 | İstanbul | Recorded | 17.05.18 | 24.58 min. |
| Teacher 7 | İstanbul | Recorded | 17.05.18 | 24.42 min. |
| Teacher 8 | İstanbul | Recorded | 17.05.18 | 31.07 min. |
| Teacher 9 | İstanbul | Recorded | 22.05.18 | 35.11 min. |
| Teacher 10 | İstanbul | Recorded | 22.05.18 | 25.02 min. |
| Teacher 11 | İstanbul | Recorded | 22.05.18 | 45.11 min. |
| Teacher 12 | İstanbul | Recorded | 22.05.18 | 28.02 min. |
| Teacher 13 | İstanbul | Recorded | 22.05.18 | 22.04 min. |
| Teacher 14 | İstanbul | Recorded | 25.05.18 | 21.10 min. |
| Teacher 15 | İstanbul | Recorded | 25.05.18 | 29.18 min. |
| Teacher 16 | İstanbul | Recorded | 25.05.18 | 25.48 min. |
| Teacher 17 | İstanbul | Recorded | 25.05.18 | 30.12 min. |

**APPENDIX N: The number of teachers from other PNHSs, İstanbul**

| | | |
|---|---|---|
| 1. Ataşehir | | |
| 2. Ataşehir | X | 9 |
| 3. Ataşehir | X | 12 |
| 4. Ataşehir | X | 11 |
| 5. Ataşehir | | |
| 6. Avcılar | X | 7 |
| 7. Bağcılar | | |
| 8. Bağcılar | X | 13 |
| 9. Bağcılar | | |
| 10. Bağcılar | X | 8 |
| 11. Bahçelievler | | |
| 12. Bahçelievler | X | 10 |
| 13. Bahçelievler | X | 10 |
| 14. Bahçelievler | | |
| 15. Bakırköy | X | 9 |
| 16. Bakırköy | X | 9 |
| 17. Bayrampaşa | X | 7 |
| 18. Beşiktaş | X | 11 |
| 19. Beşiktaş | | |
| 20. Beylikdüzü | X | 14 |
| 21. Beylikdüzü | X | 12 |
| 22. Büyükçekmece | X | 7 |
| 23. Büyükçekmece | | |
| 24. Esenyurt | | |
| 25. Esenyurt | | |
| 26. Güngören | X | 8 |
| 27. Kağıthane | X | 9 |
| 28. Maltepe | X | 6 |
| 29. Maltepe | | |

| | | |
|---|---|---|
| 30. Pendik | X | 7 |
| 31. Pendik | | |
| 32. Pendik | | |
| 33. Şişli | X | 8 |
| 34. Sultanbeyli | | |
| 35. Ümraniye | X | 6 |
| 36. Ümraniye | X | 8 |
| 37. Ümraniye | X | 9 |
| 38. Üsküdar | X | 7 |
| 39. Üsküdar | X | 10 |
| 40. Zeytinburnu | | |

## APPENDIX P:Curriculum Vitae

### PERSONAL INFORMATION

Surname, Name: Aksoy, Afra Nur
Nationality: Turkish (TC)
Date and Place of Birth: 11 April 1988, İstanbul
Marital Status: Married
email: nur2634@gmail.com

### EDUCATION

| Degree | Institution | Year of Graduation |
|---|---|---|
| MS | METU, Curriculum and Instruction (GPA: 4.00 out of 4) | 2015 |
| BA | Boğaziçi University, Foreign Language Education (GPA: 3,41 out of 4) | 2009 |
| High School | Ankara Hasan Ali Yücel Anatolian Teachers Training High School (1st rank) | 2005 |

### WORK EXPERIENCE

| Year | Place | Enrollment |
|---|---|---|
| 2012-Present | Elmadağ Police Vocational Training Center | English Instructor |
| 2009-2012 | Ministry of National Education (İstanbul, Gaziantep, Tunceli) | English Teacher |

## RESEARCH INTERESTS

Curriculum development, teacher training, attitudes of teachers and students, adult education

## CONFERENCE PRESENTATIONS

Evaluation of Human Rights, Democracy and Civics Curriculum through Eisner's Educational Connoisseurship and Criticism Model, 5th International Curriculum and Instruction Congress (October, 2017), Muğla, TURKEY. (Together with Özge Karakuş Özdemirci, Prof. Dr. Ahmet Ok)

Cooperative Learning and Achievement at Faculties of Education: A Systematic Review in Turkish, V. International Eurasian Educational Research Congress (May, 2018), Antalya, TURKEY. (Together with Prof. Dr. Meral Aksu)

## APPENDIX O: Turkish SummaryTürkçe Özet

# GİRİŞ

Öğretmenler, başarılı okulların ana unsurlarından bir tanesidir bu nedenle öğretmenlerin bilgi ve becerilerini geliştirmek için yatırım yapmanın çok önemli olduğu söylenebilir. Eğitim sürecinin en önemli yapı taşlarından biri öğretmenler olduğundan, eğitim sisteminin kalitesini arttırmak için öğretmenlerin kalitesiyle başlanması gerektiği söylenebilir (Altun ve Gök, 2009). Bu nedenle, öğretmenler için mesleki gelişim programları, neredeyse tüm eğitim sistemlerinde sürekli olarak sunulmaktadır. İçerik ve formatlarında büyük farklılıklar göstermelerine rağmen, bu programlar çoğunlukla ortak bir amaç paylaşmaktadırlar; mesleki uygulamalarının ve öğretmenlerin tutumlarının ve bilgilerinin belirli bir hedef doğrultusunda değişmesi (Griffin, 1983). Mesleki gelişim programlarını, öğretmenlerin sınıf içi uygulamalarında öğrenci başarısında değişiklik yapmaya yönelik sistematik çabalar olarak tanımlamak yanlış olmayacaktır (Guskey, 2002).

Teknolojideki yeni ilerlemeler ile öğrencileri gelecekteki işlerine hazırlamak, öğretmenler için bazı zorluklar doğurabilir. Bir yandan öğrencileri için gelişen teknolojiyi kullanmaları diğer yanda diğer öğretim yükümlülüklerini yerine getirirken bu değişimlere açık olmaları için uygun yollar bulmaları gerekir (Pine-Thomas, 2017). Öğretmenlerin, teknolojideki beceri düzeylerinin yeterli olduğundan, yöneticilerin de öğretmenlerinin bu teknolojiyi kullanmak için gerekli bilgiye sahip olduğundan emin olmaları gerekmektedir. Çünkü bugünün öğrencilerine bakıldığında geçmişten çok farklı bir öğrenci profili görülmektedir. Öğretmenler ise bu konuda birçok zorlukla karşı karşıya kalmaktadır ve bunun temel nedeni ise eğitim teknolojilerini derslerinde etkili bir şekilde kullanmalarını sağlayacak mesleki gelişim programlarının eksikliğidir.

Mesleki gelişim programlarının asıl içeriği, belirli eğitim-öğretim ortamlarının bireysel ihtiyaçlarına ve koşullarına göre değişir. Özel akşam liseleri (ÖAL) bu anlamda önemli örneklerden birisidir. ÖAL'ler çeşitli nedenlerle lise eğitimine

devam edemeyen kişilerin lise diplomasını aldıkları kurumlardır. Bu okullarda yaş sınırlaması yoktur. Okullar saat 17.00'de başlar, ancak normal liselerde uygulanan eğitim programları, derse devam, devamsızlık ve disiplin gibi diğer kurallar aynı şekilde ÖAL'lerde de uygulanır. Bu okullarda yaş kısıtlaması olmadığı için hemen hemen tüm öğrenciler yetişkin veya genç yetişkinlerdir. Bu nedenle, bu okulların öğretmenleri, öğrencilerinin birer yetişkin olduğunun ve diğer liselerdeki birçok uygulamayı aynen uygulamak durumda olsalar bile, onlardan çok farklı öğrenci profillerine sahip olduklarının farkında olmalıdırlar. Bu öğretmenler, eğer eğitim-öğretim sürecinde etkili olmak istiyorlarsa, bazı yetişkin öğrenme prensiplerinin olduğunun farkında olmalıdırlar. Etkili yetişkin eğitimi, yetişkin öğrencilerin kendi eğitim ihtiyaçları üzerinde bağımsız kararlar alabildikleri için genç öğrencilerden oldukça farklı olduğu gerçeğine dayanmaktadır (Darkenwald ve Merriam, 1982).

Mesleki gelişim alanındaki uzmanlar, mesleki gelişimin etkili olabilmesi için dahil edilmesi gereken çeşitli faktörlerin tamamı hakkında tam bir mutabakata varmamışlardır. Ancak, öğretmen katılımcılar arasında profesyonel işbirliğinin sağlanması gerektiği konusunda bazı fikir birliktelikleri vardır. Öğretmen, kişisel ve mesleki gelişimini kendi çalışma alanında gerçekleştirirse, hem becerilerinde hem de okulunda çok önemli değişiklikler yapabilir (Lieberman, 1995). Okul temelli mesleki gelişim programı (OTMG), öğretmenlerin birbirlerinden bir şeyler öğrenmek ve birbirlerinin çabalarını desteklemek için birlikte çalışabilecekleri bu profesyonel öğrenme topluluklarının önemli örneklerinden biridir (McFarlen, 2016). OTMG aracılığıyla okuldaki insani ve maddi özelliklerin etkin kullanımını sağlamak için daha fazla şans sağlamak amacıyla, öğretmenlerin mesleki gelişim ihtiyaçları okul bünyesinde ele alınmaktadır (MEB, 2007).

**Araştırmanın amacı:** Bu çalışmada, öğretmenlerin mevcut ihtiyaçlarını, sorunlarını ve etkili mesleki gelişime yönelik yeterliliklerini ele almanın önemi dikkate alınarak, öğretmenler için işbirliğini sağlamak amacıyla OTMG modeli seçilmiştir. Ayrıca, eğitim teknolojilerindeki mevcut ilerlemeler ve ÖAL'nin benzersiz bağlamı da göz önünde bulundurulmuştur. Bu nedenle, eğitim teknolojilerinin etkin kullanma ve yetişkin öğretim uygulamalarındaki öğretmenlerin ihtiyaçları ön plana çıkarılmıştır. ÖAL'deki öğretmenlerin bu alanlardaki etkinliğini artırmak için, bu çalışmanın temel amacı, eğitim teknolojilerini kullanma ve yetişkin öğretim uygulamalarındaki

ihtiyaçları ve tercihleri için bir OTMG programı geliştirmek ve uygulamaktır. Bu çalışmanın yukarıdaki ana amaca dayanan birkaç amacı daha vardır. İlki, eğitim teknolojilerini kullanma ve yetişkin öğretim uygulamaları ile ilgili olarak ÖAL'lerin ihtiyaç ve tercihlerini araştırmaktır. İkinci amaç, bir ÖAL'de öğretmenlerle bir OTMG sürecini takip etmek ve grup toplantıları yapmak şeklindedir. Son olarak ise, belirlenen ihtiyaçlara dayalı bir mesleki gelişim programının geliştirilmesi ve uygulanması amaçlanmıştır.

**Araştırmanın Önemi:** Mesleki gelişim ile ilgili mevcut durum göz önüne alındığında, bu çalışma OTMG modeli aracılığıyla mesleki gelişimin etkili bazı niteliklerini içeren bir profesyonel öğrenme fırsatı sağlamaktadır. OTMG modeli; işbirliği, yeterli zamanlama ve süre sağlama, öğretmenlerin gerçek ihtiyaçlarını ele alma gibi etkili mesleki gelişim için listelenen neredeyse tüm yeterliliklere sahiptir. Bu çalışma, OTMG'nin yapıldığı alan olarak ÖAL'lerden birini içeren bir vaka çalışması olarak tasarlanmışsa da, diğer öğretmenler de eğitim teknolojilerini kullanma ve yetişkin öğretim uygulamaları ile ilgili ihtiyaçları hakkında kendi görüşlerini bildirme şansına sahip olmuştur. Daha sonra, belirlenen okulun öğretmenleri bu ihtiyaçları tartışmış ve nihai bir anlaşmaya varmıştır. Bu süreç boyunca, bu çalışma OTMG programın nasıl uygulandığına ve bir ÖAL'de öğretmenlerin sınıflarına bunu nasıl entegre ettiklerine dair derinlemesine bir anlayış geliştirmek için bir fırsat sağlayacaktır. Öğretmenlerin OTMG ile ilgili görüşlerinin anlaşılması, bu mesleki gelişimin kalitesi hakkında bilgi verecek ve böylece tüm paydaşların gelecekteki mesleki gelişim uygulamaları hakkında bilinçli kararlar almasına yardımcı olacaktır. Ek olarak, bu anlayış, okul yöneticilerinin öğretmenlik pratiğinin iyileştirilmesinde hem anlamlı hem de etkili olan hizmet içi eğitim modellerine (OTMG) yönelmelerine yardımcı olabilir.

Bu vaka çalışması önemlidir, çünkü eğitim teknolojileri konusundaki gelişmelere ilişkin olarak ÖAL öğretmenlerinden bilgi toplayarak literatürdeki bir boşluk giderilmiştir. Ayrıca, daha önce ÖAL ile ilgili başka bir çalışma olmadığı için, bu çalışma alanda bir ilk olma özelliği taşır. Eğitim teknolojilerinde çok sayıda gelişme olduğu için, bu yeni teknolojilerin okula entegrasyonunu sağlamak amacıyla eğitim sisteminin özellikle eğitim programlarında bazı değişiklikler yapması gerektiği açıktır. Bu konuda öğretmenleri bilgilendirmek ilk adımdır. Elimizdeki çalışma

sayesinde, öğretmenler teknolojinin benimsenmesiyle ilgili ihtiyaçlarını belirlemişitr ve daha sonra kendilerini bu alanda geliştirmişlerdir. Bu etkinlik, hem öğretmenler hem de eğitim teknolojleri üzerine mesleki gelişim faaliyetlerini geliştirme prensipleri için fırsatlar sunabilir. Öğretmenler gerekli entegre için becerilerini geliştirebilirler ve sonunda öğrenciler sınıflarında teknolojiyi daha iyi kullanmanın yollarını bulabilirler (Pine-Thomas, 2017).

Çalışmanın bir başka önemli boyutu ise yetişkin öğrenme teorileridir. ÖAL'ler, yetişkin veya genç yetişkin öğrencilere sahiptir ve bu nedenle diğer liselerden farklı bir öğrenci profiline sahiptirler. Bu durum göz önünde bulundurulduğunda, ÖAL'lerdeki eğitim ve öğretimin diğer okullardan farklı olması gerektiği sonucuna varılabilir. Öğretmenler, öğretimde onlara yardımcı olabilecek temel ilkeleri ve yetişkin öğretim uygulamalarını bilmelidirler. Dahası, yetişkin öğretim uygulamalarını sınıflarına dahil ederek ilerlemelerini engelleyen konular hakkında bir fikirleri olmalıdır. Bu çalışmanın sonunda öğretmenler, okulla ilgili ihtiyaçlarını belirleme şansı bulmuşlar ve bu ihtiyaçları OTMG yardımıyla gidermişlerdir. Üstelik OTMG, yetişkinlere yönelik öğrenme ilkelerini göz önünde bulundurarak ve öğretmenlerin öğretimle ilgili ihtiyaçlarını, değerlerini, inançlarını, varsayımlarını ve dünyayı görme biçimlerini içerdiğinden, öğretmenler için anlamlı bir mesleki gelişim sağlamıştır.

**Araştırma Soruları:** Bu çalışmada aşağıdaki sorular araştırılmış ve uygun şekilde yanıtlanmaya çalışılmıştır:

1. Eğitim teknolojileri ve yetişkin öğretim uygulamaları açısından özel akşam liselerindeki öğretmenlerin ihtiyaçları nelerdir?

2. Özel Bahar Akşam Lisesindeki öğretmenlerin eğitim teknolojileri ve yetişkin öğretim uygulamaları ile ilgili bir mesleki gelişim programında içerik ve biçim yöntemleri açısından tercihleri nelerdir?

3. Bir OTMG programını tamamladıktan sonra Özel Bahar Akşam Lisesindeki öğretmenlerin eğitim teknolojilerini ve yetişkin öğretim uygulamalarını kullanmalarındaki değişiklikler ile ilgili görüşleri nelerdir?

## YÖNTEM

Bu araştırma, yetişkin öğrenme ölçeği (PALS), eğitim teknolojileri anketi (QEdTech), yarı yapılandırılmış görüşmeler, grup toplantıları gözlemleri ve sınıf gözlemleri yoluyla toplanan nicel ve nitel verileri içeren bir vaka çalışmasıdır. Bu çalışma İstanbul'da bir ÖAL de gerçekleştirilmiştir. Bu okul, araştırmacı tarafından Özel Bahar Akşam Lisesi (ÖBAL) olarak yeniden adlandırılmıştır. Çok sayıda ÖAL (toplam 40) olduğu için, İstanbul ana il olarak seçilmiştir. Bu çalışmada, ÖBAL, Türkiye'deki diğer ÖAL'lerin önemli özelliklerini anlayabilmek için yardımcı olmuştur.

**Çalışma Grubu:** Bu çalışmada farklı adımlar olduğu için bu çalışmayı hem açıklayıcı hem de tanımlayıcı durum çalışması olarak adlandırabilmek mümkündür. İlk adımda, ÖAL' lerdeki öğretmenlerin ihtiyaçlarını tespit etmek için, İstanbul'da çalışan 227 öğretmene QEdTech ve PALS uygulanmıştır. Bu küme için rasgele örnekleme yöntemi kullanılmıştır. İstanbul'da 40 adet ÖAL bulunduğu için 25'i QEdTech ve PALS daki maddelerin sayısına göre rasgele seçilmiştir. Ana çalışma 17 öğretmen ve 1 müdür ile İstanbul'daki ÖBAL da yapılmıştır. Grup toplantıları 17 öğretmenle gerçekleştirilmiştir. Sınıf gözlemi için 17 öğretmenden 4 öğretmen daha önceden belirlenmiş kriterlere göre seçilmiştir. Farklı verilere sahip olmak ve farklı sınıf uygulamalarını gözlemlemek için farklı branşlardan dört öğretmen gözlenmiştir. Sosyal bilimlerden iki öğretmen ve sayısal bilimlerden iki öğretmen seçilmiştir ve her biri üçer saat gözlemlenmiştir.

**Veri Toplama Araçları:** Bu çalışmada QEdTech, PALS, grup toplantıları için gözlem formları, sınıf gözlemleri için gözlem formları ve öğretmenler için yarı yapılandırılmış görüşme formu veri toplama araçları olarak kullanılmıştır. PALS hariç, tüm veri toplama araçları araştırmacı tarafından oluşturulmuştur.

İlk olarak, eğitim teknolojileri üzerine geliştirilen bir anket olan QEdTech, mümkün olduğunca çok sayıda öğretmenden veri toplayarak eğitim teknolojileri kullanımının güncel durumunu belirlemek amacıyla geliştirilmiştir. Öğretmenlerin kendi sınıflarında bazı eğitim teknolojilerini (hem donanım hem de yazılım) kullanmalarını ve bilgilerini derecelendirmeleri için hazırlanmış sorular içermektedir. Yetişkin öğrenme ilkeleri ölçeği olan, PALS, İngilizceden Türkçeye adapte edilmiştir ve öğretmenlerin yetişkin öğrenme ilkeleri bilgilerini ve sınıflarındaki kullanımlarını değerlendirmek için kullanılmıştır. PALS Conti tarafından 1978'de geliştirilmiştir. Açımlayıcı faktör analizi (EFA), PALS'ın Türkçe versiyonunun faktör yapısını analiz etmek için 193 ÖAL öğretmeninden toplanan verilere dayanılarak yapılmıştır. Bunun sonucunda orijinal ölçekten farklı olarak 33 maddeden oluşan dört faktörlü bir ölçek elde edilmiştir. Bu faktörler; öğretimi bireyselleştirme, öğrenci merkezli öğretim, deneyimleri göz önünde bulundurma ve öğrenme sürecine dahil etme olarak adlandırılmıştır.

Düzenlenen grup toplantıları için hazırlanan gözlem formları her toplantının özelliğine göre düzenlenmiştir. İhtiyaç analizi için yapılan toplantılar için ayrı, istenilen program ile ilgili yapılan toplantılar için ayrı gözlem formları düzenlenmiştir. Sınıf gözlemi için gözlem formu araştırmacı tarafından ders akışındaki önemli olan noktaları kaçırmamak için ayrıntılı olarak hazırlanmıştır. Kullanılan öğretim yöntemleri, öğrencilerin tepkileri, teknoloji kullanımı için sınıfın uygunluğu, kullanılan eğitim teknolojileri, kullanılan yetişkin öğrenme ilkeleri ve karşılaşılan sorunlar gibi çeşitli bölümleri vardır. OTMG program süreci ile ilgili öğretmenlerin görüşlerine ilişkin bireysel görüşmeler için yarı yapılandırılmış bir görüşme formu kullanılmıştır ve bu araç araştırmacı tarafından geliştirilmiştir.

Genel olarak bu çalışmada veri toplama amacıyla kullanılan yedi farklı araç vardır. Araştırmanın her bir araştırma sorusu için farklı veri toplama araçları kullanılmış ve bunlar aşağıda listelenmiştir;

**Araştırma Sorusu 1:** Eğitim teknolojileri ve yetişkin öğretim uygulamaları açısından özel akşam liselerindeki öğretmenlerin ihtiyaçları nelerdir?
**Kullanılan Araçlar:** QEdTech, PALS, toplantı ve sınıf gözlem formları

**Araştırma Sorusu 2:** Özel Bahar Akşam Lisesindeki öğretmenlerin eğitim teknolojileri ve yetişkin öğretim uygulamaları ile ilgili bir mesleki gelişim programında içerik ve biçim yöntemleri açısından tercihleri nelerdir?
**Kullanılan Araçlar:** QEdTech ve toplantı gözlem formu

**Araştırma Sorusu 3:** Bir OTMG programını tamamladıktan sonra Özel Bahar Akşam Lisesindeki öğretmenlerin eğitim teknolojilerini ve yetişkin öğretim uygulamalarını kullanmalarındaki değişiklikler ile ilgili görüşleri nelerdir?
**Kullanılan Araçlar:** öğretmenler için yarı yapılandırılmış görüşme formu

**Veri Analizi:** Bu çalışmada hem nitel hem de nicel veri kullanılmıştır ve her biri farklı teknikler kullanılarak analiz edilmiştir. QEdTech ve PALS kullanılarak toplanan nicel veriler betimleyici analiz kullanılarak analiz edilmiştir. Ortalama değerler ve standart sapma değerleri verilmiştir. Grup toplantıları, sınıf gözlemleri ve görüşmeler ile edilen nitel veriler ise içerik analizi ile incelenmiştir.

## BULGULAR

**Eğitim Teknolojileri Anketi:** Bilgi bölümü düzeyinde öğretmenlerden, belirtilen 21 donanım ve yazılıma ilişkin bilgi düzeylerini 5 farklı kategoride derecelendirmeleri istenmiştir. Bu kategoriler donanım araçları, öğrenme yönetim sistemleri, sosyal medya araçları, Google uygulamaları ve yazılım araçlarıdır. Öğretmenlerin bu kategorilerle ilgili ayrı ayrı yanıtları incelenmiştir.

Donanım araçları kısmında katılımcılardan telefon, kişisel bilgisayar, projeksiyon makinesi, akıllı tahta ve tablet gibi belirtilen donanım araçlarına ilişkin bilgilerini değerlendirmeleri istenmiştir. Bu bölümde, telefonun en yüksek ortalama puana ($M$ = 2.75, $SD$ = .85) ve tabletin en düşük ortalama puana ($M$ = 1.81, $SD$ = 1.25) sahip olduğu görülmektedir. Öğretim yönetim sistemleri bölümünde katılımcılardan moodle, edmodo ve kahoot olarak belirtilen öğretim yönetim sistemlerine ilişkin bilgilerini değerlendirmeleri istenmiştir. Her ne kadar sistemlerin üçünün de ortalama puanları çok düşük olsa da, kahoot ($M$ = .13, $SD$ = .57) en yüksek ortalama puana ve edmodo ($M$ = .06, $SD$ = .33) en düşük ortalama puana sahiptir.

Diğer bir bölümde katılımcılardan, facebook, twitter, instagram, youtube, bloglar, podcast gibi sosyal medya araçlarına ilişkin bilgilerini değerlendirmeleri istenmiştir. Facebook (*M* = 2.34, *SD* = 1.09 ), twitter (*M* = 2.08, *SD* = 1.17 ), instagram (*M* = 2.23, *SD* = 1.03 ), ve youtube (*M* = 2.47, *SD* = 1.18 ) araçlarının 2'nin üzerinde ortalama puana sahip oldukları görülmüştür. Bir diğer bölümde katılımcılardan belirtilen Google uygulamaları ile ilgili bilgilerini derecelendirmeleri istenmiştir. Her ne kadar uygulamaların dördünün 1'in altında ortalama puanları olsa da, Google drive en yüksek ortalama puana (*M* = .60, *SD* = .79) ve Google scholar en düşük ortalama puana (*M* = .93, *SD* = 1.07) sahiptir. Son bölümde katılımcılardan yazılım araçlarıyla ilgili bilgilerini değerlendirmeleri istenmiştir. Microsoft Office programlarının (*M* = 2.57, *SD* = .86) en yüksek ortalama puana ve bilgisayar simülasyonlarının (*M* = 1.09, *SD* = 1.20) en düşük ortalama puana sahip olduğu gözlenmiştir.

Kullanım düzeyi bölümünde ise katılımcılardan yukarıda belirtilen donanım ve yazılımlar için sınıf için kullanım düzeylerini değerlendirmeleri istenmiştir. Donanım araçları bölümünde kişisel bilgisayarın (*M* = 1.24, *SD* = .97) en yüksek ortalama puana ve tabletin (*M* = .69, *SD* = .85) en düşük ortalama puana sahip olduğu gözlenmiştir. Öğretim yönetim sistemleri bölümünde üç aracında ortalama değerleri çok düşük olmasına rağmen, moodle (*M* = .04, *SD* = .32) en yüksek ortalama puana ve edmodo (*M* = .02, *SD* = .22) ve kahoot (M = .02, SD = .22) aynı ortalama puanlara sahiptir. Sosyal medya araçları bölümünde sınıf içi kullanım düzeyi çok düşüktür. Ancak youtube (*M* = .85, *SD* = 1.96) en yüksek ortalama puana sahiptir. Google uygulamaları bölümünde de ortalama puanlar çok düşüktür. Google drive (*M* = .21, SD = .63) bu bölümde en yüksek ortalama puana sahiptir. Yazılım araçları bölümünde Microsoft Office programları (*M* = 1.51, *SD* = 1.12) en yüksek ortalama puana ve bilgisayar simülasyonları ise (*M* = .43, *SD* = .82) en düşük ortalama puana sahip olduğu gözlemlenmiştir.

Son bölümde katılımcılara programın türü ilgili tercihleri sorulmuştur. Bu bölümde üç seçenek vardır. Biri bana öğretsin seçeneği en yüksek puan ortalamasına (*M* = 1.51, *SD* = .83) sahiptir. Kendi başıma öğreneyim seçeneği (*M* = .75, *SD* = .83), biri bana öğretsin seçeneğinden daha düşük ortalama puana sahiptir. Grup çalışmasında öğreneyim seçeneği en düşük ortalama puana (*M* = .68, *SD* = .85) sahiptir.

**Yetişkin Öğrenme İlkeleri Ölçeği**: 4 faktörü bulunan bu ölçek ile edilen veriler her bir faktör için ayrı ayrı incelenmiştir. Öğretimi bireyselleştirme faktöründe 10 madde bulunmaktadır. Olumsuz bir madde olan 27. Madde (Sınıftaki tüm öğrencilerime belirli bir konuda aynı ödevi veririm) en yüksek ortalama puana sahiptir ($M$ = 3.41, $SD$ = 1.19). Farklı öğrencilerle farklı materyalleri kullanmayı öngören 31. Madde öğretimi bireyselleştirmenin bir farklı yoludur fakat bu faktörde en düşük ortalama puana sahiptir ($M$ = 1.54, $SD$ = 1.61).

Öğrenci merkezli öğretim faktörü 11 maddeye sahiptir ve hepsi olumsuz maddelerdir. Bu maddelerden alınan düşük puanlar öğretmenin öğrenci merkezli öğretimi tercih ettiğini göstermektedir. Ancak bu bölümde 8 madde için öğretmenlerin ortalama puanları 3'ün üzerindedir. Gerektiğinde disiplin cezası kullanırım maddesi en düşük ortalama puana sahiptir ($M$ = 1.79, $SD$ = 1.28).

Deneyimleri göz önünde bulundurma faktöründe, 10. Madde olumsuz bir ifadedir ve en düşük ortalama puana ($M$ = 1.15, $SD$ = 1.48) sahiptir, bu da katılımcıların öğrencilerin sosyo-ekonomik geçmişine benzer konuları tercih ettikleri anlamına gelir. Öğrencilerin yaşadıkları toplum ile ilgili soru sormalarını teşvik etmek, en yüksek puan ortalamasına sahiptir ($M$ = 3.51, $SD$ = 1.27).

Öğrenme sürecine dahil etme faktöründeki tüm maddeler olumlu ifadelerdir. En yüksek ortalama puanı olan 8. Madde (Sınıfı öğrencilerin etkileşimini kolaylaştıracak şekilde düzenlerim.) hariç ($M$ = 3.05, $SD$ = 1.27), tüm maddelerin ortalama puanları 3'ün altındadır. Öğrencilerin eğitim ihtiyaçlarını tespit etmelerine yardım etmek amacıyla bireysel görüşmeler yaparım maddesi ise en düşün ortalama puana sahiptir ($M$ = 1.74, $SD$ = 1.77).

**Sınıf Gözlemleri:** Sınıf gözlemleri ile toplanan nitel veri öğretmenlerin kullandıkları yöntemler, öğrenci tepkileri, eğitim teknolojileri ve yetişkin öğretim uygulamaları olmak üzere dört başlık altında incelenmiştir. Dört öğretmenin her biri çeşitli öğretim yöntemleri kullanmıştır, ancak genel olarak öğretmenlerin dersleri boyunca öğretmen merkezli yöntemler kullandıkları söylenebilir. Genellikle, öğretmenler çoğu zaman öğretmen merkezli yöntemleri tercih ettikleri için, öğrenciler ders boyunca aktif değillerdi. Öğrenciler derse ilgi duymuyorlardı ve diğer birçok şey tarafından

dikkatleri dağılıyordu. T1 dışında diğer üç öğretmen derslerinde teknolojiyi kullanarak bir etkinlik yapmadılar. T1 ise kendi bilgisayarını ve sınıfta yer olan projeksiyon makinasını kullanarak tahtaya bir takım örnekler yansıttı. Yetişkin öğretme uygulamaları açısından öğretmenler herhangi bir etkinlik kullanmadılar ve dersleri daha küçük yaştaki öğrencilerle işliyor gibiydiler. Gözlem formunda yer alan yetişkin öğrenme ilklerinden sadece bir kaçını nadiren kullanmışlardır.

**Grup Toplantıları:** İlk grup toplantısı OTMG programı geliştirme sürecinin tanıtımını içermektedir. Bu toplantı öğretmenler kendi sorumlulukları hakkında bir takım sorular sordular ve bu konuda bilgilendirildiler. İkinci toplantı da ise QEdTech ve PALS sonuçları üzerinden öğretmenlerin eğitim teknolojileri ve yetişkin öğretim uygulamaları konusunda ki ihtiyaçları tartışıldı. İhtiyaçlar üzerine konuşmadan önce öğretmenler kendi okullarında karşılaştıkları bir takım sorunlardan bahsettiler. Bu sorunlardan yola çıkarak öğretmenler genel olarak yetişkin öğrencilerin özellikleri hakkında çok fazla bilgi sahibi olmadıklarını ve onlarla ne tarz etkinlikler yapabileceklerini bilmediklerini belirttiler. Eğitim teknolojileri içinse anketteki sosyal medya araçlarının dikkatlerini çektiğinden, sosyal medyayı günlük yaşamlarından kullandıklarından ama sınıf içi etkinliklerde kullanmayı hiç düşünmediklerinden bahsettiler. Bu nedenle üçünü toplantıda da bu konuda uzman birisinin onlara sosyal medyayı sınıf içi etkinlerde nasıl kullanabileceklerini anlatmalarını istediler. Son olarak, dördüncü toplantıda yetişkin öğrencilerin özellikleri ve yetişkin öğretim uygulamaları ile ilgili etkinlikleri bir başkasının onlara öğretmesini istediler.

**Mesleki Gelişim Programları için Öğretmen Görüşleri:** Yarı-yapılandırılmış görüşme formu kullanılarak 17 öğretmen ile yapılan görüşmeler içerik analizi kullanılarak incelenmiştir ve dört ana başlık altında raporlanmıştır. Bu başlıklar OTMG süreci ile ilgili genel görüşler, eğitim teknolojileri üzerine olan mesleki gelişim programı, yetişkin öğretim uygulamaları üzerine olan mesleki gelişim programı ve önerilerdir.

OTMG süreci ile ilgili olarak öğretmenler genelde olumlu görüşler bildirmişlerdir ve birçoğu bu etkinliği bilgilendirici ve faydalı buldukları için ileride tekrar bu tarz bir

etkinliğe katılmak istediklerini belirtmişlerdir. Öğretmenlerden T3 bu görüşleri şu şekilde özetlemiştir;

> Bizim en büyük sorunlarımızı daha resmi bir şekilde tartışabilme olanağı bulmamız ve bunları çözmeye çalışmamız bizim için çok büyük bir fırsat oldu. Bu konuları öğretmenler odasında sıklıkla tartışırdık ama bu tartışmalar günlük konuşmalarımızdan fazlası değildi.

Görüşmeye katılan öğretmenlerden beşi 40 yıldan fazla bir süredir öğretmenlik yapmaktaydılar ve ilk defa böyle bir etkinliğe katılmış olduklarını belirttiler. Genel olarak, bu kadar yıl deneyimden sonra bile öğretim konusunda bilmedikleri birçok şeyin olduğunu nasıl fark ettiklerini anlattılar. T4 bu görüşleri şu sözlerle özetledi;

> Bu, benim öğretmenlikte 45. yılım ve öğrenmem gereken daha ne kadar çok şey olduğunu fark ettim. Öğretmen olarak biz de yetişkin öğrencileriz, 45 yıllık deneyimim değerlidir, ama yeni fikirlere de açık olmalıyım. Benim için bu mükemmel bir fırsattı.

Görüşmeye katılan öğretmenler sosyal medyayı öğretimde kullanma ile ilgili mesleki gelişim programı hakkındaki görüşlerini de belirttiler. Hepsi bu 4 saatlik programı çok faydalı ve ilginç bulduklarını belirtti. Katılımcıların her biri kendi alanlarını dikkate alarak bu programı değerlendirdiler ve sosyal medyayı kendi derslerine nasıl entegre edebileceklerini anlattılar. T2 şunları söyledi;

> Sosyal medyayı kullanmanın bu yönü hakkında bilgi sahibi olmaktan gerçekten keyif aldım. Öğrencilerimle birlikte, ünlü şairlerimiz veya yazarlarımız için Instagram veya Twitter hesaplarını oluşturabileceğimizi düşündüm. Sonra, onların eserlerini bu hesaplardan paylaşabiliriz ve bunun öğrencilerim için çok ilginç ve eğlenceli olacağından eminim.

Öğretmenler sosyal medya konusunu çok ilginç bulmuş olsalar da, sınıflarında kullanmak adına bazı tereddütlerini de dile getirdiler. T6 bu öğretmenlerden biriydi ve diğer öğretmenlerin tereddütlerini de şu şekilde özetledi;

> Günlük hayatımda hiç bir zaman hiçbir sosyal medya aracını kullanmadım. Onu öğretimde kullanma fikri benim için çok garip. Onları eğitimde nasıl kullanacağımı öğrendim, çok karmaşık değiller ama onları dersime entegre etmeye ne zaman hazır olacağımı bilemiyorum.

Yetişkin öğretim uygulamaları ile ilgili mesleki gelişim programı hakkındaki görüşlerini belirten öğretmenler bu 4 saatlik programı farklı nedenlerle çok yararlı bulduklarını belirttiler. T16, yetişkin öğrencilerle ilgili daha fazla şey öğrenmenin, öğrencileriyle iletişim kurarken kendisini rahat hissetmesini sağladığını söyledi ve ekledi;

> Hemen hemen tüm öğrencilerimden daha gencim ve bu konu, öğrencilerimle günlük konular üzerine konuşurken bile beni çok tedirgin ediyor. Deneyimli öğretmenlerin benim gibi yeni öğretmenlerden daha iyi olduğunu düşünüyorum bu nedenle yetişkin öğrencilere nasıl davranmam gerektiğini öğrenmek beni rahatlattı.

Deneyimli öğretmenlerden biri (T13), bu genç T16 ile aynı görüşleri paylaştığını belirtti ve şunları ifade etti;

> Okulumuzda birkaç genç öğretmenimiz var ve çoğu zaman öğretmenler odasında bir araya geldiğimizde bizlere onlardan daha büyük olan öğrencilere nasıl davranacaklarını soruyorlar. Yetişkin öğrenciler üzerine olan bu eğitimin onlara çok yardımcı olacağını düşünüyorum.

Öğretmenlerden 4 tanesi daha önce ‘andragoji’ terimini duymadıklarını ve bu durumun ÖAL de çalışan ve asıl işi yetişkin öğrenciler ile olan öğretmenler için kabul edilemez bir durum olduğunu belirtmiştir. T17 bu durumu şu şekilde ifade etti;

> Bunu belirtmekten utanıyorum, ama ilk kez ‘andragoji’ terimini duydum. Ben bir öğretmenim ama aynı zamanda bir öğrenciyim ve

> yetişkin öğrencilere öğretme hakkında daha fazla bilgi edineceğim, bu yüzden bu eğitim kendimi bu alanda geliştirmem için büyük bir adımdı.

ÖBAL deki deneyimli öğretmenlerin neredeyse tamamı, temel bir öğretim yöntemi olarak sunum yoluyla öğretim metodunu kullandıklarını kabul ettiler, çünkü çoğu yetişkinin benzer bir öğrenme tarzına sahip olduğunu ve yetişkin öğrenciler için söz konusu materyali sunarken en iyi yöntemin bu olduğunu düşünüyorlar. Ancak, mesleki gelişim programında sözü edilen yetişkin öğretim uygulamaları kendi bakış açılarından ne kadar farklı olduğunu gördüklerini ve bu durumun onları nasıl şaşırttığını belirttiler. T8 bu durumu şu şekilde özetledi;

> Yetişkin öğrenciler için öğrenci merkezli öğretim yöntemlerini kullanmamız gerektiğini anladım. Yaklaşık 45 yıl önce ders vermeye başladığımda, şimdi modern Türkçede kullanmıyoruz, ancak bu yöntemi "takrir" olarak adlandırıyorduk. O zamandan beri işler çok değişti, ama bu yöntemi kullanmaya devam ettim, çünkü bu hem yetişkin öğrencilerim hem de dersimin içeriği için en iyisi olduğunu düşünüyordum. Şimdi, derslerime entegre edilebilecek birçok etkinlik olduğunu anladım. Gelecek yıllarda öğretmenlik yapma şansım olursa, kesinlikle bir kısmını kullanmak istiyorum.

Görüşmenin sonunda öğretmenlerin önerilerini ve mesleki gelişim programlarında ya da genel OTMG sürecinde iyileştirilmesi gerektiğini düşündükleri noktaları paylaşmaları istenmiştir. Genel olarak, tüm öğretmenler, okullarının olanakları düşündüklerinde, programlarda ve genel olarak OTMG sürecinde her şeyin iyi gittiğini belirtmişlerdir. Ancak, bu tür bir işlemin gelecekteki kullanımı için küçük öneriler eklediler. T10 şöyle belirtti;

> Öğretim kadromuz, öğretim deneyimleri konusunda çok farklı, hem kıdemli hem de yeni öğretmenler var. Bu nedenle, özellikle teknoloji ile ilgili ihtiyaçlarımızı tartışırken, bir anlaşmaya varmak gerçekten zordu bu nedenle farklı öğretmen grupları için çeşitli programlar geliştirilebilir.

Tüm öğretmenlerin görüşmelerde belirttikleri bir nokta bulunmaktadır. Neredeyse tüm öğretmenler öğrendikleri şeyleri uygulama şansı olmamalarının bu programların eksik yanı olduğunu belirttiler. Yetişkin öğretim uygulamalarını derslerine nasıl entegre edebilecekleri eğitimlerde tartışılmış olsa da, ders içeriğiyle ilgili tekniklerden en az bir dersin hazırlanmasının daha faydalı olacağını düşünmüşlerdir. T14 şunu teklif etti;

> Mesleki gelişim programlarının uygulamaya yönünün eksik olduğunu düşünüyorum. Mesela en azından bir demo dersi hazırlamalıydım ve meslektaşlarımı veya siz beni gözlemlemeli ve yorumlarınızı belirtmeliydiniz. Sosyal medya ve yetişkin öğretim uygulamalarını sınıf içi uygulamalara nasıl dahil edeceğimi anlamak benim için daha faydalı olurdu.

Ancak, öğretmenlerden biri (T5) bu noktayı ele aldı ve biraz daha ileriye taşıdı, çünkü ÖAL öğretmenlerinin yetişkin öğretim uygulamalarını açısından yetkin olmaları gerektiğini vurguladı;

> Bence ÖAL öğretmenleri yetişkin öğrencilere eğitim-öğretim verebilme sertifikası almalıdır çünkü bu okullar normal liselerden tamamen farklıdır. Yani, bu durum küçük çaplı mesleki gelişim programları ile sağlanamaz.

## TARTIŞMA

Rebora (2009) çok sayıda mesleki gelişim faaliyetinin olduğunu, ancak bunların çoğunun beklenen sonuçları alamadığını ya da okul için olumlu faydalar sağlamadığını belirtmiştir. Desimone (2009), mesleki gelişim programlarının iyi tasarlanması durumunda, hem öğretmenlerin hem de öğrencilerin başarılarını arttırdığını belirtmiştir. Bu nedenle, öğretmenlerin mevcut ihtiyaçlarını ve sorunlarını ele almanın önemini dikkate alarak, öğretmenler arasında işbirliğini sağlamak amacıyla bu çalışma için OTMG modeli seçilmiştir. Ayrıca, eğitim teknolojisindeki mevcut ilerlemeler ve ÖAL'lerin benzersiz bağlamı göz önünde bulundurularak

eğitim teknolojilerini kullanma ve yetişkin öğretim uygulamalarını sınıf içi etkinliklere entegre etme açısından öğretmenlerin ihtiyaçları ön plana çıkarılmıştır.

QEdTech kullanılarak elde edilen veriler ÖAL öğretmenlerinin eğitim teknolojileri bilgi düzeyinin ve sınıf içi kullanma düzeylerinin oldukça düşük olduğu görülmüştür. Eğitim teknolojisindeki gelişmelere rağmen, eğitim teknolojisinin çok az kullanıldığının savunan pek çok araştırma çalışması vardır. Örneğin, Cuban (2001), bilgisayarların yaygın olarak satıldığını ve okullar tarafından satın alındığını, ancak öğretmenlerin bu araçları beklenen düzeyde kullanmadığını ve öğretmenlerin günlük yaşamlarında bilgisayarları yaygın olarak kullanmalarına rağmen, bunu başarılı bir şekilde derslerine entegre edemediklerini belirtmiştir. Cuban' a bu sorunun iki önemli boyutu vardır; (1) öğretmenler, teknoloji entegrasyonu hakkında net bir anlayışa sahip değildir ve (2) okullar bu durumda öğretmenler için gerekli yardımı sağlamamaktadır.

Teknolojiyi sağlayanlar ile onu kullanacak olan öğretmenler arasında açık bir fikir ayrılığı vardır (Lam, 2000). Geçtiğimiz on yıl boyunca, okullar bilgisayar temelli teknolojilere büyük yatırımlar yaptılar, ancak gerçek kullanıcılar, öğretmenler, öğretmenlik uygulamaları için bunları kullanmaya hazır olmadıklarında, eğitim sistemleri bu yatırımdan faydalanamazlar (Russel, Bebell, O'Dwyer & O'Connor, 2003).

PALS İngilizceden Türkçe' ye uyarlanmıştır ve öğretmenlerin andragojik bilgilerini ve sınıflarındaki kullanımlarını değerlendirmek için kullanılmıştır. Ölçeğin Türkçe uyarlaması araştırmacı tarafından yapılmış ve Türkçe versiyonunun pilot uygulaması yapılmıştır. EFA'nın sonunda dört faktör belirlenmiştir; öğretimi bireyselleştirme, öğrenci merkezli öğretim, deneyimleri göz önünde bulundurma ve öğrenme sürecine dahil etme olarak adlandırılmıştır.

Öğretimi bireyselleştirme faktöründe elde edilen ortalama puanlara dayanarak, ÖAL öğretmenlerinin, yetişkin öğrenme teorisinde önemli bir boyut olan öğretimin bireyselleştirilmesi konusunda problem yaşadığı sonucuna varılabilir. Öğretim, her öğrencinin ihtiyaçları, yetenekleri, öğrenme stili, ilgi alanları ve akademik geçmişine

odaklandığında ve her öğrencinin büyümesine ve ilerlemesine ortam hazırlandığında bireyselleştirilebilir (Jenkins ve Keefe, 2001).

Öğrenci merkezli öğretim faktöründeki ortalama puanlara dayanarak, öğrenci merkezli eğitimin yetişkin öğrenme teorisinin ana kaynağı olmasına rağmen, ÖAL öğretmenlerinin öğretmen merkezli yöntemler kullanma eğilimine sahip oldukları söylenebilir. PALS'ın geliştiricisi Conti (1985), yetişkin eğitimi alanında çalışan Lindeman, Bergevin, Kidd, Houle, Knowles ve Freire gibi yazarların yetişkin eğitim-öğretiminin temel varsayımlarında birçok ortak yönlerinin olduğunu belirtmektedirler. Hepsi müfredatın öğrenci merkezli olması, öğrencinin deneyimlerini yansıtması, yetişkinlerin kendi kendilerini yönlendirmesini desteklemesi, öğrenciyi ihtiyaç analizine dahil etmesi gerektiğini vurgulamaktadırlar. Ayrıca öğretmende gerçekleri sağlayan bir bilgi insanı yerine bir yol gösterici olarak hizmet etmelidir. Ancak, bu durum bu çalışmaya katılan ÖAL öğretmenleri ve ÖBAL da gözlemlenen dört öğretmen için geçerli değildir. Gözlenen öğretmenler sunum yoluyla öğretme veya dikte etme gibi öğretmen merkezli yöntemleri kullanmış ve öğrencilerin katkılarına yer vermemiştir.

Diğer faktörler ile karşılaştırırsak, deneyimleri göz önünde bulundurma faktöründeki ortalama puanlar 3'e çok yakın veya 3'ün üzerindedir. Bu öğretmenlerin yetişkin öğrencilerin geçmiş deneyimlerinin önemi hakkında farkındalık sahibi oldukları anlamına gelebilir. Ancak, gözlemlenen dört öğretmen, öğrencilerin geçmiş deneyimlerine atıfta bulunmamıştır ve ÖBAL öğretmenleri, hem grup toplantılarında hem de görüşmelerde yetişkin öğrencilerin geçmiş deneyimlerinin önemini dikkate almadıklarını belirtmiştir. Yetişkin öğrenciler genç öğrencilerden daha fazla deneyime sahiptirler ve onlar için deneyimler öğrenimlerini anlamlı hale getirebilmek için çok önemlidir (Santos, 2012).

Öğrenme sürecine dahil etme faktöründeki ortalama puanlara dayanarak, öğretmenlerin yetişkin öğrencileri öğrenme sürecine dahil etme konusunda isteksiz oldukları sonucuna varılabilir. Bu durum sınıf gözlemlerinde de gözlemlenmiştir. Bununla birlikte, yetişkin öğrenciler kendi kendilerini yönlendirirler, bu nedenle onlar kendi öğrenmelerinin sorumluluğunu almak ve karar verme sürecine katılmak isterler (Merriam, 2001). Fakat Verlander (1986), öğretim uygulamalarının bir

şekilde öğrencilerin ihtiyaçlarına göre tasarlanmasına rağmen, bu ihtiyaçların öğrenci yardımı ile belirlenmediğini belirtmiştir.

Eğitim teknolojisi ve yetişkin öğretim uygulamalarına yönelik mesleki gelişim programları bu çalışma ile ilgili literatür ile uygun olarak ve QEdTech, PALS, sınıf gözlemleri ve grup toplantıları sonuçlarına dayanarak tasarlanmıştır. Geromel (1993) çalışmasında öğrencilerin yetişkin öğretim uygulamalarına ilişkin geri bildirimlerini sunmuş ve öğrencilerin bu tür etkinlikleri daha anlamlı ve faydalı bulduklarını ve bu tür etkinlikleri kullanmaları halinde eğitimcilerden daha memnun olduklarını belirtmiştir. Bu nedenle, ÖBAL öğretmenleri için verilen yetişkin öğretim uygulamalarındaki mesleki gelişim programı, öğretmenler öğrendikleri şeyleri kullanırlarsa, muhtemelen bu durum okuldaki öğrenciler için daha iyi öğrenme ile sonuçlanacaktır.

Çalışmanın en sonunda ÖBAL öğretmenleri hem OTMG programı geliştirme süreci ile ilgili görüşlerini paylaşmışlardır. Genel olarak, öğretmenlerin cevapları süreç hakkında olumludur, ancak gelecekte yapılabilecek bu tarz etkinlikler için düzeltilmesi gerektiğini düşündükleri bazı olumsuz noktaları da dile getirmişlerdir. Çoğu bu etkinliği daha önceden sahip oldukları bir takım problemleri daha resmi bir ortamda tartışma fırsatı bulduklarını ve bu durumdan çok menün olduklarını dile getirmişlerdir. Bu, OTMG'nin en etkili özelliklerinden biridir çünkü eğitim, okul ortamında uygulandığı için, öğretmenlerin günlük öğretmenlik uygulamaları ve problemleri ile ilgilidir (Shohel ve Banks, 2012).

Öğretmenlerin mülakatlarda genel olarak bahsettikleri bir diğer konu da ÖAL öğrencilerinin kendilerine özgü profilleri olmuştur. Öğretmenlerden biri, öğrencilerinin hayatında ebeveyn veya işçi olmak gibi yetişkin rollerine sahip olduklarını belirtmiş; ancak eğitim ortamlarında gerekli altyapıya sahip olmadıkları için tamamen genç öğrenciler olduklarını eklemiştir. Bu bizi, Knowles'ın yetişkinler için andragoji ve çocuklar için pedagoji fikrinin gözden geçirmesine götürebilir. Knowles bunun sonuncunda her iki yaklaşımın da duruma bağlı olarak çocuklara ve yetişkinlere uygun olduğunu belirtmiştir. Örneğin, bir yetişkin belirli bir konu hakkında çok az şey biliyorsa, öğretmenine daha fazla bağımlı olacak, ancak doğal olarak meraklı bir çocuk kendi kendini yönetebiliyorsa öğretmeninden bağımsız bir

şekilde öğrenme gerçekleştirebilecektir (Knowles ve ark, 2005). Bu nedenle, öğretmenlerin bu durumdan haberdar olmaları ve öğrenenlerin özellikleri ile ilgili ayarlama yapmaları gerektiği sonucuna varılabilir. İşte bu yüzden Knowles, öğrenen-merkezli yöntemleri savunurken yapılandırmacı ve andragojik eğitimin benzerliğine vurgu yapmıştır (Knowles, 1990).

**Uygulama için Öneriler:** Bu araştırmanın bulguları, yetişkin eğitimciler için özellikle de ÖAL de çalışanlar için önemli anlamlar taşımaktadır. Özellikle eğitim teknolojisi ve yetişkin öğretim uygulamaları konusunda mesleki gelişim programlarına katılan öğretmenler bu okullardaki eğitimin kalitesini arttırabilirler. Halk eğitim merkezleri gibi çeşitli eğitim ortamlarında bulunan diğer yetişkin eğitimciler de bu tür programların uygulanmasından yararlanabilirler.

Mesleki gelişim programlarının içeriği ÖBAL öğretmenlerinin öğretim uygulamalarını göz önünde bulundurularak geliştirilmiştir. Ancak, mümkün olduğunca çok sayıda ÖAL den veri toplayarak yapılan ihtiyaç analizi sürecine dayanarak tasarlandıkları için, diğer ÖAL'lerde de uygulanabilirler. Uygulanan mesleki gelişim programlarının sonucundan en çok yararlananlar ise yine öğrenciler olacaktır.

Bu çalışmada aynı zamanda kendileri de birer yetişkin öğrenci olan öğretmenler için hazırlanan mesleki gelişim programında yetişkin öğrenme teorileri de göz önünde bulundurulmuştur. OTMG, öğretmenleri yetişkin öğrenciler olarak kabul edebilmenin uygun bir yoludur, bu nedenle öğretmenler için mesleki gelişim programları tasarlanırken, yetişkin öğrencilerin özellikleri ve yetişkin öğrenme kuramı prensipleri gibi durumlar dikkate alınmalıdır. Çünkü literatürde bir öğretmenin iyi bir öğrenme gerçekleştirmesi o öğretmenin öğrencilerinin de iyi öğrenmeler gerçekleştirmeleriyle bağlantılı olduğu çokça bahsedilmektedir (Guskey, 2002).

Bu çalışmanın bir başka boyutu da teknoloji uygulamasıdır. ÖBAL öğretmenleri, hem okulun kendi imkânlarını hem de eğitim teknolojisindeki eksiklikleri dikkate aldmışlardır ve sonra kendi ihtiyaçlarını ve tercihlerini belirlemişlerdir. Bu nedenle görüşmelerde profesyonel gelişim programlarını faydalı bulduklarını belirtmişlerdir.

Ayrıca, bu mesleki gelişim modeli, her tür öğretmenin mesleki öğrenimi için planlama çabalarında kullanılabilir. “Öğretmenler, sınıf ve öğrenmeyi geliştirmek için neyin gerekli olduğunu değerlendirirken danışılan ilk kişiler olmalıdır” (Avargil, Herscovitz & Dori, 2012, s. 54).

**İleriki Çalışmalar için Öneriler:** Bu araştırma, ÖAL'lerde yapılan ilk çalışmadır. Aslında, Türkiye'de özel akşam liseleri konusu giderek daha fazla insanın iş dünyasının artan talepleriyle lise diplomasına sahip olmak istediği için dikkate alınması gereken önemli bir alan haline gelmiştir. Eğer bir ortaokul mezunu işçi emekli olurken emekli maaşının daha yüksek olmasını isterse, büyük olasılıkla lise diploması almak için bu okullara başvuracaktır. Bu okullar, bu anlamda pek çok insanı çekmektedir ve bu, öğrencilerin profilleri, öğretim kalitesi, yetişkin öğretim uygulamaları, vb. gibi araştırılacak bir dizi alan ortaya koymaktadır. Bu nedenle, bu çalışma bir başlangıç noktası olarak kabul edilebilir ve bu okulların potansiyelini araştırmak ve maksimize etmek için daha fazla araştırma çalışması yapılmalıdır.

Bu çalışma, hedef okulun mesleki öğrenme ihtiyaçları için geçerli olmakla birlikte, bir karşılaştırma yapmak için diğer ÖAL'lerde de aynı tarz çalışmalar uygulanabilir. Ayrıca okul büyüklüğünün, öğrenci profillerinin ve diğer faktörlerin mesleki gelişim sürecine etkisi gibi diğer değişkenler de araştırılabilir. Daha fazla çalışma gerektiren başka bir alan, profesyonel öğrenme ile okul iklimi arasındaki olası bağlantıdır. Bu çalışma, okul ortamının mesleki gelişim için önemini ortaya koymuştur, ancak bağlantıyı göstermek için daha fazla çalışmaya ihtiyaç duyulabilir.

Görüşme bölümünde ÖBAL öğretmenlerinin çoğu, uygulama bölümünün mesleki gelişim programlarında eksik olduğuna dikkat çekmiştir. Zaman kısıtlamaları nedeniyle mesleki gelişim programı sonrası sınıf gözlemi çalışmadan çıkartılmıştır. Bu nedenle, uygulanan mesleki gelişim programlarının öğretmenler üzerindeki olası etkilerini ortaya çıkarmak için daha ileri çalışmalar yapılabilir.

## APPENDIX R : TEZ İZİN FORMU / THESIS PERMISSION FORM

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**Fen Bilimleri Enstitüsü** / Graduate School of Natural and Applied Sciences ☐

**Sosyal Bilimler Enstitüsü** / Graduate School of Social Sciences ■

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**Deniz Bilimleri Enstitüsü** / Graduate School of Marine Sciences ☐

**YAZARIN** / AUTHOR

**Soyadı** / Surname : AKSOY
**Adı** / Name : AFRA NUR
**Bölümü** / Department : Eğitim Programları ve Öğretim/ Curriculum and Instruction

**TEZİN ADI** / TITLE OF THE THESIS (**İngilizce** / English) : DEVELOPING A SCHOOL BASED PROFESSIONAL DEVELOPMENT PROGRAM FOR IMPROVING TECHNOLOGICAL SKILLS AND ANDRAGOGICAL KNOWLEDGE OF TEACHERS IN PRIVATE NIGHT HIGH SCHOOLS

**TEZİN TÜRÜ** / DEGREE: Yüksek Lisans / Master ☐ Doktora / PhD ■

1. **Tezin tamamı dünya çapında erişime açılacaktır.** / Release the entire work immediately for access worldwide. ☐

2. **Tez iki yıl süreyle erişime kapalı olacaktır.** / Secure the entire work for patent and/or proprietary purposes for a period of two year. * ■

3. **Tez altı ay süreyle erişime kapalı olacaktır.** / Secure the entire work for period of six months. * ☐

* Enstitü Yönetim Kurulu Kararının basılı kopyası tezle birlikte kütüphaneye teslim edilecektir. /A copy of the Decision of the Institute Administrative Committee will be delivered to the library together with the printed thesis.

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