T.C.
Mersin Üniversitesi
Sosyal Bilimler Enstitüsü
Yabancı Diller Eğitimi Anabilim Dalı

THE USE OF ELECTRONIC PORTFOLIO FOR PRE-SERVICE STUDENT-TEACHERS IN LANGUAGE TEACHER EDUCATION

Betül ARAP

YÜKSEK LİSANS TEZİ

Mersin
Haziran, 2008

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Danışman
Yrd. Doç. Dr. Şaziye Yaman

YÜKSEK LİSANS TEZİ

Mersin
Haziran, 2008

Mersin Üniversitesi, Sosyal Bilimler Enstitüsü Müdürlüğüne,

BETÜL ARAP tarafından hazırlanan **The Use of Electronic Portfolio for Pre-Service Student-Teachers In Language Teacher Education** başlıklı bu çalışma, jürimiz tarafından Yabancı Diller Eğitimi A.B.D.-İngiliz Dili Eğitimi Bölümü YÜKSEK LİSANS tezi olarak kabul edilmiştir.

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Prof. Dr. A. Nüket ADIYEKE
Enstitü Müdürü

ACKNOWLEDGEMENTS

I am sincerely indebted foremost to my advisor and mentor Ass. Prof. Dr. Şaziye Yaman for her immense help in organizing and finishing this thesis. She spent enormous time and energy on reading the drafts, editing them, and guiding me with her excellent suggestions and constructive criticism. It has been a pleasure for me to be her advisee.

I own my deepest thanks to Ass. Prof. Dr. Devrim Alıcı for being my co-advisor and giving me encouragement, guidance, and faith in the process of research. Without her academic and emotional support, this thesis would have been impossible.

I warmly thank to my dear teacher, Dönercan Dönük, for her valuable feedback and support. She was always with me when I needed her help. Without her contribution, I could not have gained insights to develop a critical mind over my readings.

My loving thanks are due to my parents for being so supportive to finalize my study. My nieces, Solin and Sonya, my nephew, Kerem Can were my muses at hard times during this work.

I would like to thank to my close friend and colleague, Fidel Çakmak for being there to support me at different stages of my graduate life. Her friendship has been of great value for me.

My warm thanks go to Prof. Dr. Ayhan Sezer, Prof. Dr. Ata Tezbaşaran, Prof. Dr. Adnan Erkuş, Ass. Prof. Dr. Özler Çakır, Ass. Prof. Dr. Dilek Kantar, Vildan Özdemir, Firdevs Ulaş, Filiz Keser, Levent Ergenç, Henrike Platz, Özge Tümen, Helin Mücefher Al, Çakmak, Güllü and Kara Families, Mehmet Baydoğan, Turhan Alıcı and Selvin Güven. I am thankful to my colleagues from the Department of Foreign Language Education and Schools of Foreign Languages for their collaboration during this study. I want to thank to my students, Berkant, Soner, Asuman and Özge for their emotional support.

Finally, I would like to give my greatest appreciation to my brother, İbrahim Arap for taking care of me, sharing my joy, and alleviating my stress with constant phone calls and emails. He is a wonderful brother who has taught me the importance of living a life full of integrity, heartful commitment, and moral responsibility.

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ABSTRACT

The aim of the present study is to examine the attitudes and the achievement scores of English pre-service student-teachers according to their participation in electronic portfolio (e-portfolio) implementation in the Practice Teaching course. The related issues, namely theories of learning and implications for teacher education, reflective thinking, portfolios (types, process, content, and assessment), e-portfolios, pros and cons of e-portfolios, and e-portfolios in teacher education have been covered in this study. This quasi-experimental study consists of two different measurements (pretest and posttest) for forty-four pre-service student-teachers [n= 44] from Mersin University Foreign Language Education Department, who were doing their teacher training at state schools in 2006-2007 spring semester as a Practice Teaching course requirement.

The introduction presents the background information about the purpose of the study, the research questions, the significance, and limitations of the study and operational definitions of the terms.

Chapter I provides a scholarly context for the research with review of literature. Firstly, this chapter begins with theories of learning and their implications for teacher education. The second part includes reflective thinking and its importance in teacher education. The concepts related to portfolios and e-portfolios are introduced respectively in the third part. This chapter ends with the use of e-portfolio in initial teacher education.

Chapter II presents the research design which includes type of research, participants, data collection instrument, equality of the experimental and control groups, and implementation of e-portfolio process in the Practice Teaching course.

Chapter III provides the findings and discussion related to the research questions. In the light of the findings, the results are discussed and the studies in the review of literature are referred to provide a relationship between the findings and the existing studies on the use of e-portfolio in initial teacher education.

The conclusion highlights the importance of the research and contributions to the existing studies. It also provides further implications for a future study. Achievement scores and Attitude Scale Towards The Use of Electronic Portfolio (ASTUEP) are used as data collection instruments. ASTUEP is a Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5) and it is prepared by the researcher to identify the attitudes of the pre-service student-teachers towards the use of e-portfolio. It is used as pretest and posttest.

The result of the study is that if we carry out the e-portfolio implementation in the Practice Teaching course, it will improve the attitudes of the pre-service student-teachers towards the use of e-portfolios and it will increase their achievement scores in the course positively. In terms of the attitudes, it is found that ASTUEP pretest mean scores for the experimental and the control group are similar to each other (ASTUEP mean score of the experimental group is 134.91 and ASTUEP mean score of the control group is 134.64). Yet, after the e-portfolio implementation with the experimental group in the Practice Teaching course, it is found that ASTUEP posttest mean scores of the control group have become even lower (134.36), ASTUEP posttest mean scores of the pre-service student-teachers in the experimental group (177.45) is higher than their pretest mean scores (134.91). The difference is significant ($F_{1\text{-}42}$=105.380, $p<0.01$). Therefore, it can be interpreted that there is a positive improvement in the attitudes of the pre-service student-teachers who have experienced an innovative learning method (e-portfolio) while the

attitudes of the pre-service students who have not taken part in the new method remain similar.

As for the achievement scores of the pre-service student-teachers at the end of the semester, the achievement scores out of the Practice Teaching course have been analyzed through unrelated samplings for t-test for each group. The mean score of the pre-service student-teachers' achievement scores in the experimental group for the Practice Teaching course (94.68) is higher than the mean score of the pre-service student-teachers' achievement scores in the control group (87.50) (t_{42}=3.151, $p<0.05$). Hence, it is concluded that the e-portfolio implementation in the Practice Teaching course has a positive impact on the achievement scores and the attitudes of the pre-service student-teachers towards the use of electronic portfolios.

Key Words: e-portfolios, e-portfolios in ELT, Reflective Teaching, Attitude Scale.

ÖZET

Bu çalışmanın amacı İngilizce öğretmen adaylarının elektronik portfolyo (e-portfolyo) uygulamasına katılmalarına bağlı olarak tutumlarında ve başarı puanlarında farklılık olup olmadığını incelemektir. Bu nedenle öğrenme teorileri, öğretmenlik eğitiminde uygulamalar, yansıtıcı düşünme, portfolyo (çeşitleri, süreç, içerik, değerlendirme), e-portfolyo, e-portfolyonun avantajları ve dezavantajları ve öğretmenlik eğitiminde e-portfolyo konularına değinilmiştir. Yarı-deneysel olan bu çalışma ön test ve son test olmak üzere iki farklı ölçüm içermekte ve Mersin Üniversitesi Yabancı Diller Eğitimi Bölümünde 2006-2007 bahar döneminde okuyan ve belirlenen devlet okullarında Öğretmenlik Uygulaması dersi gereği staj yapan kırkdört [44] İngilizce öğretmeni adayından oluşmaktadır.

Giriş bölümünde çalışmanın amacı, önemi, araştırma soruları, sınırlılıkları ve terimlerin kavram tanımları gibi temel bilgiler verilmiştir.

Birinci bölüm araştırmanın yazın taraması için bilimsel bir bağlam sunmaktadır. Bu bölüm öncelikle öğrenme teorileriyle ve öğretmenlik eğitimindeki çıkarımlarla başlamaktadır. İkinci kısımda yansıtıcı düşünmeye ve bunun öğretmenlik eğitimindeki önemine yer verilmiştir. Üçüncü kısımda ise sırasıyla portfolyo ile ilgili kavramlar ve e-portfolyo tanıtılmıştır. Bölüm öğretmen adaylarının eğitiminde elektronik portfolyonun kullanımıyla bitmektedir.

İkinci bölümde araştırma deseni çerçevesinde araştırmanın çeşidi, veri toplama araçları, deney ve kontrol gruplarının denkliği ve Öğretmenlik Uygulaması dersinde e-portfolyo sürecinin uygulanması yer almaktadır.

Üçüncü bölümde, araştırma sorularıyla ilgili bulgular ve tartışmalar yer almaktadır. Bu bulgular ışığında yorumlar tartışılmış ve öğretmen adaylarının eğitiminde

bulgular ve e-portfolyo kullanımı arasındaki bağlantıyı sağlayabilmek için yazın taramasındaki çalışmalara atıfta bulunulmuştur.

Sonuç bölümü araştırmanın önemini ve var olan çalışmalara katkısını vurgulamaktadır. Bu bölümde gelecekte yapılabilecek çalışmalar için öneriler yer almaktadır. Veri toplama aracı olarak öğretmen adaylarının başarı puanları ve Elektronik Portfolyo Kullanımına Karşı Tutum Ölçeği (EPTKÖ) kullanılmıştır. EPTKÖ "kesinlikle katılmıyorum" (1) dan başlayıp "kesinlikle katılıyorum" (5) la sonlanan Likert-tipi bir ölçektir. EPTKÖ araştırmacı tarafından öğretmen adaylarının e-portfolyoya karşı tutumlarını belirlemek için hazırlanmıştır. Bu tutum ölçeği öntest ve sontestte kullanılmıştır.

Çalışmanın sonucu gösteriyor ki Öğretmenlik Uygulaması dersinde e-portfolyo uygulanırsa, öğretmen adaylarının e-portfolyo kullanımına karşı tutumları ve dersteki başarı puanları olumlu yönde gelişme gösterecektir. Tutumlar açısından, uygulamadan önce, EPKTÖ ön test ortalama puanları deney ve kontrol grupları için benzerdir (deney grubunun EPKTÖ ortalama puanı 134.91 ve kontrol grubunun EPKTÖ ortalama puanı 134.64 tür). Ancak, Öğretmenlik Uygulaması dersinde deney grubu ile e-portfolyo uygulamasından sonra kontrol grubunun EPKTÖ sontest ortalama puanlarının daha da düştüğü (134.36); deney grubundaki öğretmen adaylarının EPKTÖ sontest ortalama puanlarının (177.45) öntest ortalama puanlarından (134.91) daha da yükseldiği tespit edilmiştir.

Farklılık manidardır ($F_{1\text{-}42}$=105.380, $p<0.01$). Bu bulguya göre, e-portfolyo uygulamaları yardımıyla ders alan deney grubundaki öğretmen adaylarının e-portfolyo kullanımına ilişkin tutumlarında olumlu yönde gelişme olduğu, geleneksel yöntemle ders

alan kontrol grubundaki öğretmen adaylarının e-portfolyo kullanımına ilişkin tutumlarının ise aynı düzeyde kaldığı ifade edilebilir.

Deney ve kontrol grubundaki öğretmen adaylarının Öğretmenlik Uygulaması dersine ilişkin başarı notları arasındaki farkın manidarlığı, ilişkisiz örneklemler için t-testi yardımıyla incelenmiştir. Deney grubundaki öğretmen adaylarının Öğretmenlik Uygulaması dersindeki başarı ortalaması (94.68), kontrol grubundaki öğretmen adaylarının başarı ortalamasından (87.50) daha yüksektir (t_{42}=3.151, $p<0.05$). Bu durumda e-portfolyo uygulamasının öğretmen adaylarının e-portfolyo kullanımına ilişkin tutumlarında ve başarı puanlarında olumlu bir etkisi olduğu sonucuna varabiliriz.

Anahtar Kelimeler: e-portfolyo, İngiliz Dili Öğretiminde e-portfolyo, Yansıtıcı Öğretme, Tutum Ölçeği.

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LIST OF ABBREVIATIONS

ASTUEP:	Attitude Scale Towards The Use of Electronic Portfolio Pretest-Posttest Statistics
CBTE:	Competency-Based Teacher Education
EFL:	English as a Foreign Language
GPC:	Google Page Creator
ISTE:	International Society for Technology in Education
KMO:	Kaiser-Meyer-Olkin test
OHP:	An overhead projector
PPCGD:	Pretest-Posttest Control Group Design

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INTRODUCTION

Background of the Study

English language teaching has become prominent all over the world since English is wide spreading as a lingua franca in the exchange of relations for economy, politics, science, tourism, health, culture and education. Therefore, meeting the needs of language learning, raising professional competencies of language teachers and following the innovations in technology for learning and teaching have been fundamental concerns of the language teacher education programs as they are established to provide education and training for qualifications. To train teachers and provide them with the skills to acquire teaching qualifications are the desired outcomes of the educational planning and it can be realized by the curriculum developments, action research, reflective thinking, implementation of technological innovations, and active involvement of making meaning processes.

Karagözoğlu, Arıcı, Bülbül and Çoker (1995) state that teacher education programs should aim to train future teachers by providing implementations of new technological trends, opportunities to participate in educational conferences or in-service training programs and incentives for lifelong learning. Wallace (2000) suggests that in the 21st century, through advance technology, the world has grown into a global village and there is a boom of communication. Therefore, the need for learning to communicate has emerged and it has to be fulfilled. In the field of education, teachers have to have professional skills to cope with the needs of learners. In line with the developments in technology, the reforms in teacher education programs are required. Robert (1998) also puts forward that teacher education has been affected by the interdisciplinary developments in the world. To him, the reforms in teacher education depend on how

teacher educational programs relate learning theories to teacher education and which learning theory they adopt. Formerly, language teaching was under the impact of behaviorist principles where a person was seen as input-output system and his or her behaviors were externally determined. As an implication for teacher education, teachers had to learn necessary behaviors to teach; therefore, teacher education programs afforded student-teachers with at least a training model: either micro-teaching and/or competency-based teacher education (CBTE).

Unlike the principles of behaviorist theory, humanistic principles focusing on the needs, beliefs, and values for the wholeness of the person have gained importance and in teacher education, the reflection of humanistic principles focus on teacher's autonomy to organize his or her teaching. The need for personal development highlights self-actualization and personal constructions of the learning experiences. The construction of knowledge as a mental process is mentioned in the field of cognitive psychology. How the human mind thinks and learns is highlighted. Therefore, the person is seen as an active and autonomous agent in the learning process, making use of various mental strategies to sort out the system of learning.

Following the basics of humanistic theory and the cognitive psychology, the constructivist approach highlights the combination of the existing knowledge with the new coming. The resources of fitting knowledge into another are experiences and active involvement in the activities. The constructivist approach has brought some considerations to teacher education programs. As a principle, student-teachers should understand and make meanings out of the subjects they have been taking so that learning can occur. In other words, through teacher education programs based on the constructivist view, student-teachers construct the field-related knowledge based on the experiences and active

involvement in teaching. With the experiences and active participation, student-teachers analyze what has been learnt and how they can reflect upon their learning by developing a sense of pedagogy for making others learn actively.

Bodner (1986, 1990) also considers the combinations of pre-existing knowledge with the knowledge student-teachers acquire in the educational context and states that learning occurs through planning of combination of knowledge and transfer of it to a new learning situation. He suggests that educational planning should take the combination and transfer of knowledge to other context into consideration and when it is planned and integrated into the curriculum development, students' beliefs, attitudes, personal and professional development are valued.

Like Bodner, Griffith (as cited in Roberts, 1998) also stresses the importance of prior knowledge in being able to learn new concepts and the relationships between the concepts by the conceptual schemata. Griffith accounts for the constructivist model by means of micro-teaching and proposes that each student has a complex conceptual schemata relating to teaching and all student-teachers have individual schemata which shows a high degree of stability, but progressive change through new constructions based on the instructions and experiences. Learning brings in the conceptual development, which determines behavior changes. This can imply that student-teachers have personal differences, and they can learn by developing perceptions and ways of thinking.

According to Bell and Gilbert (1994), in teacher education, the development of perceptions and thoughts can be professional, personal and social. Although these three types of development seem to be different from each other by labeling, they are related to each other. For instance, the personal development of teachers cannot be separated from the social or professional development because it influences the other types of

development and is influenced by them. However, the focus of development may differ for a teacher at different levels. For pre-service student-teachers and novice teachers, development can emphasize making meaning by experiences and involvement in new trends and innovations to keep up with the professional development, which gives priority to personal development. As for the experienced teachers, the focus could be on the adaptation of the new development or implementation in the education systems through in-service training programs. That is, development is mostly regarded as professional. Gök (2003) states that with the teacher education programs for different levels of teachers, teachers are asked to reflect their personal attitudes and beliefs. She suggests that if these reflections are examined and discussed scientifically, the strong and weak points of the teacher education programs will be determined. This study bears importance in that it examines personal attitudes towards an innovative implementation in teacher education program provided by Mersin University, Turkey. It is highly likely that they will be prepared to challenge language teacher qualifications and competences (e.g., to be able to use IT in teaching organizations and discover resources and improve teaching skills continuously). As stated in the studies by Almarza (1996) and Brown and Mc Gannon (1998), it is a necessity to design and implement a teacher education program for student-teachers in their personal and professional development. Young (1998) mentions the importance of attitudes of pre-service student-teachers for two ways:

1. The attitudes of pre-service student teachers might have an impact on the decision making processes for adopting new and different techniques in teaching.
2. As the opinions based on the attitudes and perceptions influence the emotional intelligence, the effect and the utility of the new implementations are relatively profound.

Implementing the innovations in teacher education programs requires a careful and high quality planning because it affects the attitudes of student-teachers and learning outcomes. One of the innovative implementation that entails a careful planning is the use of portfolio in teacher education. Although commonly used in K12 level, the portfolio for teacher education is not a very common implementation at the higher education institution level. Darling (2001) points out those learning processes continue in and after the initial teacher education. Student-teachers learn and reframe their attitudes, beliefs and knowledge. The use of portfolios will be a discovery of their own professional and personal world. With the discovery, they will gain awareness of their own development and create an opportunity to learn by doing. This process will highlight the constructive approach for personal and professional development. Wade and Yarbrough (1996) find out that portfolios do not only help student-teachers to acquire technical skills and involve in the learning process but also they help them to reflect on their practice of teaching or organization of teaching activities.

Some current studies emphasize the use of e-portfolios rather than paper-based ones implying the superiority of e-portfolios over the paper-based portfolios. Kimball (2002) puts forward that e-portfolios help the student-teachers harmonize the artifacts of their learning both for themselves and for their wide range of audiences. Ittelson (as cited in Mason, Pegler & Weller, 2004) considers that e-portfolios are privileged over traditional portfolios in terms of wider range of audience, portability, and adaptability of the items on display. Like Ittelson, Norton-Meier (2003) claims that as students use more visual materials, they become more capable of seeing connections between the concepts and comprehend their progress with the necessity of the program standards.

The present study focuses on the e-portfolio implementation in teacher education and explores the impact of it on pre-service student-teachers' attitudes towards the use of e-portfolios and achievement scores of the course. It highlights the importance of e-portfolios in helping pre-service student-teachers develop a new sense of professional development in terms of the experiences in reflection, technological applications and practice teaching skills.

1.1. Purpose of the study

The aim of this study is to conduct a quasi-experimental research so as to examine the attitudes and achievement scores of English pre-service student-teachers according to their participation in e-portfolio implementation during the Practice Teaching course. In addition, the researcher prepares Attitude Scale Towards The Use of E-portfolio (ASTUEP) to seek response to the first research question. The study also aims to contribute to the existing studies on the use of e-portfolio in initial teacher education.

1.2. Research Questions

The study aims to find answers to the questions below:

(1) Do the attitudes of English pre-service student-teachers differ according to their participation in e-portfolio implementation in the Practice Teaching course?

(2) Do the achievement scores of English pre-service student-teachers differ according to their participation in e-portfolio implementation in the Practice Teaching course?

1.3. Significance of the study

E-portfolio implementation in initial teacher education has been advocated for the reasons that pre-service student-teachers can make meaning in learning through experiences and training while creating their personal e-portfolios. It is agreed that e-portfolios can lead to the technical and professional development of pre-service student-teachers in terms of skills, knowledge and attitudes towards teaching through interactive, audio and visual resources (Duhaney, 2001; Willis & Mehlinger, 1996).

As there are few studies in terms of e-portfolio use in initial teacher education, this study is significant to present the outcomes of e-portfolio use in initial language teacher education in Turkey. It is also believed that the study will highlight the implications of innovative applications in language teacher education.

Additionally, ASTUEP prepared by the researcher adds a different perspective to the research concerning the attitude scale as a data collection instrument for identifying the attitudes of the pre-service student-teachers towards the use of e-portfolio in the Practice Teaching course in ELT. Therefore, the discussion will pioneer further studies in the field of ELT; hence, it presents the attitudes towards the use of e-portfolios in general and the achievement scores of the pre-service student-teachers in the field. Finally, yet importantly, during the integration of technology into content knowledge of practice teaching, pre-service student-teachers will make meaning out of the experiences in creating web sites to publish their teaching preparations and self-reflections.

In a nut shell, this study was the first study done on e-portfolio use by pre-service student-teachers where they uploaded lesson plans, self- evaluation, mentor and peer feedback in their Practice Teaching course in English Language Teacher Education.

Furthermore, it is thought that ASTUEP will contribute to the studies in ELT as it is not come across such a scale in Turkey.

1.4. Assumptions

Pre-service student-teachers participating in the study are assumed to have basic computer literacy (e.g., pre-service student-teachers who are able to use Microsoft Office and the internet for emails or electronic resources).

1.5. Limitations of the study

1. It consists of pre-service student-teachers who are enrolled at Foreign Language Education Department of Mersin University in the spring term, 2007.
2. As there are few national and international studies on the use of e-portfolio specifically for the initial language teacher education, the literature review presents the implementations of e-portfolios mainly in general initial teacher education.
3. E-portfolio implementation is done through Google Page Creator as it is a free and user friendly online tool to create and publish web pages.
4. The interactive feedback is not realized as the Google Page Creator does not allow interactive communication on the website. Therefore, feedbacks given by the researcher are not immediate. They are provided via emails.
5. Most of the artifacts created on the web pages are in English; however, writings of self-reflection are submitted in Turkish.

1.6. Operational definitions

Academic achievement score: Academic achievement score (AAS) is assessed over 100 total points in Mersin University ("*Mersin Üniversitesi 2007-2008 Eğitim-Öğretim Rehberi*," 2007). AAS is calculated by taking into consideration 40% of the midterm and 60% of the final exam in each semester. If a student's score is below 50 in final exam, his/her achievement score is not calculated.

Assessment: the process of documenting, usually in measurable terms, knowledge, skills, attitudes and beliefs.

Attitude scale towards the use of electronic portfolio (ASTUEP): the scale prepared by the researcher aims to identify the attitudes of pre-service student-teachers both in experimental and control groups towards the use of electronic portfolio. ASTUEP is a Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5).

Cooperating teacher: a classroom teacher who takes part in training teacher trainees.

Electronic portfolio: a collection of students' coursework or independent studies brought together on electronic environments.

Mentor: a trusted friend, counselor, or teacher, usually a more experienced person obtaining good examples and advice for students who need help.

Metacognitive dimensions: awareness of cognition or self-representation, and self-regulation.

Multimedia environment: environment that is primarily used to create visual design and other multimedia files for the user interface of one or more application.

Multimedia tools: hardware and software devices that use images, and sounds to facilitate communication.

Portfolio: an organized, goal-driven documentation of professional growth, and achieved competence.

Practice teaching course: the course given at the 8th term of initial teacher education to raise student-teacher confidence in the teaching as profession, to enable student-teachers to gain some practical skills needed in their future role as teacher, and to enable them to take responsibility in the professional context.

Pre-service student-teachers: pre-service student-teachers are the senior students who are studying at the fourth year of teacher education programs and doing practice teaching at the schools as trainee students.

Professional development: skills required for maintaining a career path or basic skills offered through lifelong learning.

School experience II: course aiming to prepare student-teachers for teaching practice by giving them a structured introduction to teaching, helping them acquire teaching competencies and developing teaching skills through observation in school under the supervision of a cooperating teacher.

Student-teacher: a student enrolled in a teacher education program

Supervisor: a person, who supervises, directs or evaluates the work of one or more students.

Teacher education programs: educational programs that account for four sets of curricular emphasis: general education, specialized subject, theoretical studies in the field of education, and both observation of and participation in teaching.

CHAPTER I

I. REVIEW OF RELATED LITERATURE

The purpose of this literature review is to present scholarly context for this research. The review of literature begins with theories of learning and their implications for teacher education. Second, reflective thinking and its importance in teacher education are presented. Third, the concepts related to portfolios and e-portfolios are introduced respectively. The chapter concludes with the use of e-portfolio in initial teacher education.

I.1. Theories of Learning and Language Teacher Education

The profession of teaching has been changing constantly through reforms and implications of learning theories stated by educational scholars, philosophers, and researchers. In the 1950s, behaviorism was a trend and then in mid-1960s, educational research was affected by humanistic psychology. In the 1990s, quite an opposing perspective to behaviorism, constructivism, emerged. In this section, the four models of person based on the theories of learning will be explained and implications for teacher education will be mentioned.

The four models of person related to theories of learning stated in Roth's study (as cited in Roberts, 1998). These are:

1. Person as input-output system: All behaviors are outcomes of the interaction between input sensed and output observed. Human behaviors can be observable and predictable.
2. Person with self-agency: The person is a free agent and he/she takes actions under self-determinism.

3. Person as constructivist: The person has a representation of events. Learning takes place when the representations are constantly being reframed.
4. Person as social being: Learning occurs through social interactions with others. We live in societies in which social rules can shape our behaviors.

These models present how a person is viewed from a certain perspective. The models are reflected to teacher education and teacher as person of certain theories is discussed in the following subsections.

I.1.1. Person as input-output system: Behaviorism

This model is based on behaviorist psychology which views behaviors as observable and predictable. Behaviorism arose from the ideas that sought to explain the term conditioning at the turn of the nineteenth century. The Russian scientist, Pavlov, examined the response of animals and stated that a response is given to one stimulus (e.g., food) which is followed by a second stimulus (e.g., bell). This stimulus-response chain leads to classical conditioning which explains human learning. All human learning occurs when there are external stimuli that reinforce person's behavior. Behaviors become outcomes that are either rewarded or punished. Behaviors, therefore, are seen as formed and maintained according to their outcomes. When a complex behavior is to be learnt, conditioning is provided and the person is brought "closer" to the target behavior (Roberts, 1998, p. 13). Behaviorist model suggests that the desired behavior is to be divided into sub-behaviors. Breaking up a behavior can provide an understanding and observation of behaviors in small and sequential chunks. Through a series of chunks, a behavior becomes a series of stimulus-response chunks and it is explicitly observable.

I.1.1.1. Implications for Teacher Education

In language teacher education, behaviorist principles define observable behaviors for teachers in the form of explicit (visual and written) models. It tries to shape student-teachers to accommodate a model. Two aspects of teacher education are related to behaviorist approach: micro-teaching and competency-based teacher education (CBTE). The micro-teaching stems from school-based practice in the United States in the 1960s. In micro-teaching, the curriculum content of teacher education is seen as a list of behavioral skills that a student-teacher must learn. Therefore, desired and accepted behaviors of the teacher are presented and it is shaped by means of imitation of a model teacher, observation and reinforcement after presentation. Reinforcement helps student-teachers reach the acceptable standards of teaching (Wallace, 1991). The desired behavior is practiced in micro-culture which includes a small number of learners with limited numbers of activities, time span, teaching objectives and a focused skill. Student-teachers are expected to learn skills by practicing teaching behaviors and stimulating how they can teach in small environment of a classroom.

CBTE became a trend when competencies were in issue in micro-teaching in the 1970s. In CBTE, objectives and competencies for teacher behaviors are identified and specified before they are introduced to the student-teachers. The model focuses on individual development as learning is self-paced and evaluation of each of the competencies is specified. Student-teachers demonstrate the attainment of the specified competencies and they are assessed on the basis of actual performance on it. Although there is emphasis on self-paced learning, what matters is the acquisition of the teacher competencies. Teacher educators assist student-teachers for the development of certain competencies and teaching skills.

Although micro-teaching is a practice of behavioral skills and CBTE provides observable and testable standards for teacher training meeting the demands of educational institutions, the model-based teacher education is criticized as there is no best way to teach something. Since teaching is a complex process and context-dependent, imitation of behaviors does not have space for self-reflection or critical thinking. Awareness of what a student-teacher is doing while imitating is ignored. The model-based teacher education is also found "inflexible" (Roberts, 1998, p. 17) for it requires student-teachers to imitate a role model teacher in pre-set micro settings and they may miss out managerial skills of new and immediate demands in the class.

In general, the reflections of behaviorist theory in initial teacher education are criticized as teaching is multidimensional and it is impossible to present a single set of "good teaching". The behaviorist perspective of teacher education underestimates individual differences in student-teachers' beliefs, values and experiences about teaching. It also lacks planning and self-evaluation skills for teaching activities. In the 1950s, these criticisms gave way to humanistic psychology that emerged as a reaction against observation of external conditions for people's behaviors. It stood for a model of person as a self and whole. Scholars favored the idea of orientations to the whole of psychology with an interest in being, becoming, and growing (Roberts, 1998).

I.1.2. Person as self-agency: Humanism

Person as self-agency is supported by humanistic theory, which is mentioned in Bugental (1964), Kelly (1955), Maslow (1968), and Rogers (1961). What they have proposed is a model of person with self-agency rather than a model of person as input-output system. To humanistic theory, a person has feelings, values, beliefs and individual

choices, which can determine the course of personal growth. Each person is regarded as a whole, innately good, and unique. He or she is a self-actualizing person, seeks meaning and values, and knows what he or she needs for self-directed development. Humanistic theory acknowledges personal autonomy and needs survival and growth. However, the needs are hierarchically structured. Human beings need to meet the most basic of physiological needs such as food or sleep before higher needs such as self-esteem and self-actualization can be fulfilled.

I.1.2.1. Implication for Teacher Education

In language teacher education programs, based on humanistic theory, teachers are valued as self-agents. They are essentially good and unique. They have self-agency for their own personal development. They have autonomy to fulfill their personal needs and expectations. The need for personal development highlights a positive relationship between student-teachers and supervisors. Through such interaction, student-teachers have a counseling model of learning. They consult supervisors when they need help for their self-development (Roberts, 1998). Moreover, while teaching, they recognize personal feelings, relationships and the use of language as a whole. Therefore, student-teachers become receptive to the notions of warmth, respect and openness toward students.

Implications of humanistic theory are objected by scholars and social philosophers who think that self-agency might create selfishness. The notion of self-agency might ignore the social perspective of learning, which is regarded as one of the crucial components of learning. In the context of initial teacher education, student-teachers could seek their own standards in teaching with a personal sense of satisfaction and ignore the autonomy of students in the classroom context. Another criticism is done in relation to learning. Inner sources such as beliefs and values and self-directed learning may not be

substantial. Student-teachers may need formal or informal feedback from other people (peers and supervisors) when they learn for their professional development particularly during the period of practice teaching.

Although humanistic theory is criticized for above-mentioned reasons, it pinpoints that people (student-teachers or teachers) need to feel valued and to be understood as a self who has emotions, feelings, and autonomy. Most importantly, it has stimulated a constructive view of teacher education. Student-teachers are regarded to have individual potential and pace to learn. They also have a tendency to derive meaning from what a supervisor plans for their learning. As a result, the supervisor's role in this process is to support self-directed student-teachers through review and feedback. This view of mentor collaborating with his or her student-teachers to assist them in their own way of learning is consistent to humanistic value and related to the constructivist theory which has been regarded as a revolutionary approach towards education since the 1960s.

I.1.3. Person as constructivist: constructivism

In opposition to the behaviorist approach, the cognitive school of psychology has given attention to human thoughts in addition to personal beliefs and values humanistic theory proposes. The ways how people think and learn have been investigated. At one aspect, information processing approach, which attempts to make analogy of the brain as a computer and give explanations to people's taking in information and processing it mentally has appeared. This approach has been found in the studies on the models of memory, reading processes, and intelligent systems. Factors such as attention, perception, and memory have been the focus in presenting how information is processed in the mind of the person while learning takes place. At the other aspect, constructivism has dealt with how people make own meaning of the world. Constructivism has grown out of the writings

of philosophers and psychologists such as Rousseau, Dewey, Piaget, Bruner, Kelly and Vygotsky (Williams & Burden, 1997). The constructivist theory is defined as "a paradigm that views the learner as actively involved in the construction of his and her own representations of knowledge" (Read & Cofolla, 1999, p. 98). Abdal-Haqq (1998) proposes another definition saying, "Constructivism is a learning or meaning-making theory that offers an explanation of the nature of knowledge and human learning. It maintains that individuals create or construct their own understanding and meaning" (p.1). The term constructivism has been used as an umbrella term for two theoretical strands: cognitive constructivism and social constructivism. Cognitive constructivism is based on Piaget's psychological view. He states that people are in a constant evolution and describes learning as a continual process of reconstructing and reframing our knowledge while experiencing. When new information is encountered, and when it is consistent with the pre-existing schemata, it becomes assimilated as meaning is adopted. When it is inconsistent, then it is accommodated. That is, a change in response to the external situations occurs and results in the adoption of a new view. Thus, a person actively constructs meaning by fitting the new information into personal framework.

In constructive learning environment, learners' needs and interests are taken into account. Thus, a learner is regarded as the center of learning organization and his or her cognitive development as the learning outcome. Based on this perspective, the common major principles are listed below (von Glasersfeld, 1990; Feng, 1996; Smerdon, Burkam & Lee, 1999).

1) Knowledge has personal meaning.

2) Meaning is drawn out of experiences, which brings in learning.

3) Students are active learners who are responsible for their own learning and managing it.
4) Learning is the active formation of knowledge structures (schemata) from personal experience and social interaction with the environment.
5) Learning experiences can be transferred to other problem solutions.

These five constructivist principles stem from cognitive psychology during the time when there was a boom of criticism to the behaviorist theory of learning. The pioneers such as Piaget thought that learners are not machine-like persons who take in what is taught explicitly. Instead, they are living organisms with individual cognitive potential that build their own meaning. To help learners construct their own thinking between internal states and external reality, active inclusion of learners into meaning-making processes has been underlined. Active inclusion means that students engage in self-guided, experiential learning; reflect on their individual learning process, and have personal autonomy (Merriam & Caffarella, 1999). Brooks and Brook (1993) state that in constructivist environment, students are autonomous and can generate, demonstrate, and exhibit instead of repeating the knowledge. Vygotsky, the pioneer of social constructivism, added the notion of social interaction to constructivism. According to him, learning occurs in the socio-cultural settings. Some studies also point out that the social environment should be considered in relation with the constructivist learning context (Andrew & Isaacs, 1995; Clements & Battista, 1990).

The constructivist principles in terms of basic themes are also mentioned in Mahony's (2003) study. According to him, there are five basic themes that create the bases for the constructivist approach. These themes are active participation, human mind, self, social relationship and lifelong development. Mahony stated that human experience should

involve active participation. Firstly, conceptualization of the learner as a passive being through the transfer of knowledge by the others is rejected. Secondly, human activity has an aim to process which is referred to meaning-making processes. Learners are individuals with a will and purpose. The mind processes what has been experienced and drawn meaning out of the experiences. Students' prior knowledge and experiences create a new learning context. Thirdly, the activities to be done or have been done are self-regulating. The fourth is that individuals cannot be understood apart from their social environment. Individuals construct knowledge in interaction with the environment (Abdal-Haqq, 1998). Finally, all the organizations including human mind, self-conceptualization, social relationship, active participation create a balance. This balance may continue lifelong meaning that as long as human beings live. These five themes lead to the constructivist view of learning. Constructivism is not only regarded as a theory of learning, yet it is considered to be an approach to teaching. It suggests means to create a constructivist learning environment. These means can be called as strategies such as role-playing, problem-solving, case studies, simulations, concept maps, brainstorming, project making, journal or log writing, dramatization, peer coaching, discussions and so forth (Richard & Rodgers, 1986; Wilson, 1997; Smerdon et al., 1999). For the constructivist learning environment, a higher degree of conceptual understanding is highlighted. It needs to be designed in a way that supports the student's cognitive ability. Seven pedagogical goals are set to create the constructivist learning environment (Honebein, 1996). These are:

1. To provide experience with the knowledge of construction process: Students should be provided with the ownership of their learning. They manage how to learn things and the role of the teacher is to facilitate the processes for learning.

2. To provide experience and appreciation for multiple perspectives: Students should be provided with multidimensional solutions or perspectives to a problem or a case. They should be provided with many options to find appropriate solutions among them.

3. Embed learning in realistic and relevant contexts: The learning environment should provide the authentic and contextualized materials for the learners to interpret the real world problems. The educator must realize the reality outside the class and guide students to manage it.

4. To encourage ownership and voice in the learning process: The learner is the centre of learning organizations and activities. He or she can take a responsibility in his or her learning and have a prominent role in deciding on the goals, tasks, materials, and so forth.

5. Embed learning in social experience: The processes of learning and recognition are enhanced with the social interaction. Communication among peers can increase the quality of understanding. Owning that various source of interaction can bring in deep meaning and interaction is meant to be not only among peers but also between students and teachers.

6. To encourage the use of multiple modes of representation: Learning can be enriched with different modes of presentations such as audio-visual materials, and computer-based multimedia resources. Ainsworth and Van Labeke (2002) think that learning with multiple representations has been referred as “a potentially powerful way of facilitating understanding” (p. 1).

7. To encourage self-awareness of the knowledge construction process: Learners should be aware of the responsibility for their own learning in terms of what is learned and how it is learned. It depends on the student’s ability to give an explanation why they have

drawn meaning out of experiences. They construct their knowledge based on self-realization.

Based on the pedagogical goals, the constructivist approach has brought a new perspective to learning and its assessment. Learning can merely occur with experiences and active participation in the learning process. Outcome of learning is assessed throughout the continuous and interactive process that measures the gains of the learner, and the quality of the learning experience as an output. The assessment does not take place at the end part of the process and is not done by one person (an instructor). Rather, it is a continuous process from the beginning of learning phases and involves a mutual interaction between both the teachers and the learners. The aim of the assessment is to see what changes have occurred in the learner's knowledge or how the learner constructs knowledge rather than how much knowledge can be retrieved. Ignoring the summative tests as decision tools for 'fail or pass' status from a course, learning can be evaluated through self-evaluation, peer evaluation, performance-based evaluation and reflective activities (Anderson & Bachor, 1998). With the help of such evaluation, the characteristics of evaluation can be seen as process-oriented, multidimensional, reflective and negotiated.

I.13.1. Implications for teacher education

In recent years, the constructivist principles have provided a framework for teacher education programs to facilitate student-teachers' thinking and display how they learn what is being taught. The core focus of the constructivist teacher education programs is to help student-teachers to understand and make meanings related to the subjects in the curriculum. That is, through teacher education programs based on constructivism, student-teachers construct the field-related knowledge based on experiences and active

involvement in the teaching. The constructivist teacher education programs also provide the student-teachers with higher-order thinking skills. They help them to analyze what has been learnt and how they can reflect upon their learning. As student-teachers are involved in classroom observation and practice teaching, the experiences they have help them develop a sense of pedagogy for making others learn actively. As they are no longer student-teachers, but prospective teachers, they construct their own understanding of teaching; they become responsible for their own learning as student-teachers.

Roberts (1998) states that the constructivist view in student-teacher learning underpins reshaping and reinforcing the perceptions and beliefs about the teaching environment through assimilation of the input (p. 26). The stage as a field experience aims to help the student-teachers combine theory (e.g., methods) with practice at the same time when they revisit their perceptions, beliefs and their views of themselves as trainees. Bonstetter (1998) mentions that student-teachers have chances to reveal their concepts of teaching during practice teaching. According to Bonstetter, student-teachers experience active participation in teaching, peer partnership and evaluation, visits by other peers or teacher trainers, regular reflective journaling, work in groups and as individuals, which can be seen as practice of the constructivist approach in teacher education.

Kaufman (1996) states that the constructivist teacher education offers student-teachers autonomy for their learning, opportunities for peer collaboration, time for self-observation and evaluation and outlets for reflections. She argues that if a student-teacher has not experienced any practices of the constructivist approach in their teacher education program, it is unrealistic to expect him/her to create the constructivist context at schools. Beside the practice teaching period, she suggests that student-teachers should be included

in the context where interdisciplinary learning, collaborative work, field observations, self-reflection and evaluation exist.

Like other theories of learning, constructivist approach is criticized as it has a wide ranging terms to describe teacher thinking. These are teacher constructs, images, teachers' perspectives, scripts, schema, and subjective theories and so on. These concepts might be difficult to "pin down" how they relate to each other (Roberts, 1998, p. 27). The other criticism is on the incomplete view of person as a meaning constructor. A view of student-teacher as a meaning constructor can isolate him or her from social context and directs the attention to the inner process of making meaning. However, this is not the case as constructivism gives space for social interaction when there is an active involvement in learning.

In conclusion, suggesting a model of person who can make meaning out of experiences and active involvement, the constructivist theory indicates conceptual development of student-teachers from meaningful input, personal experience and change in thinking.

I.1.4. Person as social being: Social constructivism

Social constructivism presents that learning is not a private and personal experience but it involves a social role for each person in the social communities. It views that social roles and norms affect personal development. Human beings are born into a social world and learning occurs as soon as they interact with each other since they make sense of the world through these interactions. Thus, it is seen that social constructivism addresses learning environments where a person makes meaning out of social interactions. The scholars such as Vygotsky and Feuerstein have supported the social constructivist

perspective (Williams and Burden, 1997). They emphasize that learning takes place in social context and social interaction provides mediation for learning process. According to Vygotsky (1962), language is a means of interaction which refers to the role and parts of other people in the learners' lives whose learning experiences are mediated by them. The role of people in interaction is to help the learners to learn through negotiations and social interactions. A child learns from a mediator and the mediator helps the child to cope with the skills and knowledge that is slightly beyond of where the learner is standing. Feuerstein (1990) also considers the role of mediator in learning. What Feuerstein suggests in terms of social constructivism is more practical than Vygotsky's suggestions. He has concerns about classroom teaching and learning through structural cognitive modifiability, which refers to the assumption that people's cognitive structures are modifiable through their lives and the interaction with others. With the modifiability effect, anyone can become a "fully effective learner" (Williams and Burden, 1997, p. 42). Both psychologists emphasize the social context in which learning occurs and state that mediated learning experiences help learners to learn both independently and cooperatively in social environment learning.

I.1.4.1. Implications for teacher education

Social constructivism in teacher education emphasizes the social dimension of teacher development. At the stage of practice teaching, social constructivism recognizes that pre-service student-teachers develop a sense of profession shaped by the interactions (e.g., collaborative dialogues, and talks) in social context. This brings in pre-service student-teachers' awareness that there is an occupational culture at schools and wider context outside it. That is, their awareness of the society is an outcome of the social and

individual experiences when they do their practice teaching as pre-service student-teachers. They work either as trainees or class teachers at schools and they become aware of both classroom culture and large context outside the class. The larger context is created by the community teachers live in and the government's policies. Zeichner (1987) states that in the classroom, teachers learn through interaction with students who contribute to the teacher's construction of the values and beliefs related to teaching. At institutions, social norms and implicit rules of teacher behavior have an impact on teacher's development. Outside the school, social and political conditions affect the way teacher constructs his or her knowledge. The social perspective of teaching also recognizes the structural features of teacher occupation (Lortie, 1975), norms set by school cultures (Richards and Lockhart, 1994) and classroom interactions (Kramsch and Sullivan, 1996), dialogues and mediation of teacher development through collegiality (Roberts, 1998).

Implications of theories of learning in teacher education present a continuum from the behaviorist theory to social constructivism. The role of teachers has been redefined with the principles of these theories. In Freeman (1996), it is mentioned that the shift between theories of learning and its implications for teacher education are outcomes of a need to understand and define teaching, the role of teachers, language as a subject matter, the diverse capacity, and needs of learners and teaching environment and communities. The need goes parallel with professional development of teachers. Among the theories, a challenging framework for professional development in teacher education has been established by the constructivist perspective. The following section will provide reflective thinking in relation to constructivist view for the professional development of teachers and the teacher education programs.

I.2. Reflective Teaching and Teacher Education

The fundamental shift from an input-output model to the constructivist model of language teachers has reframed the role of teachers. Formerly, teachers were taught about how to teach a subject with a teaching model and requested to display the accepted behaviors, skills and competencies in micro-teachings. The student-teachers in teacher education programs were regarded as "empty vessels to be filled with knowledge and theories" of learning and teaching (McManus, 2001, p. 424). With the implications of the constructivist theory, the idea of student-teachers being empty vessels has been replaced by the model of student-teachers who have beliefs, experiences and values which play a crucial role in constructing a concept of being a language teacher. Language teaching is not seen as a practice of specific skills any more. It is regarded as a complex action of thinking and acting together with the practice and theory. This shift in the teachers' roles and the way of language teaching has been marked by the concept of reflective thinking.

Reflective thinking is mainly addressed in the field of teaching and referred to as an act of "reviewing and critically thinking about practice with the purpose of increasing learning opportunities for students and teachers" (Pritchard & McDiarmid, 2005, p. 433). Several studies relate it specifically to the teacher education programs (Griffiths, 2000; Korthagen, 2001; Liston & Zeicher, 1990). Recently, it has been regarded as a necessity for the educational programs to adopt a reflective pedagogy so that student-teachers can have practice of critical understanding and reflective thinking of their practice and conceptions of knowledge taught at schools. Reflection is seen as turning tacit knowledge into explicit and subjective conceptions into objective ones (Korthagen, 2001). The views of Dewey on progressive education and reflective thoughts have influenced the researchers in the field. Dewey (1933) defines reflection as "active, persistent, and careful

consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (p. 9). According to Dewey, reflective thinking has two moves starting from " a state of doubt, hesitation, perplexity, mental difficulty in which thinking originates" and then progresses towards the state of "searching, hunting, inquiring to find materials that will resolve the doubt, settle and dispose the perplexity" (p. 12). In between these two states, Dewey mentions that there are five phases. The first is called suggestions phase, which is thinking of the possibilities to get out of complex situations we are in. Intellectualization is the second phase where the dialogues take place in resolving the problems. This phase also makes use of suggestions to resolve the problem. The third phase is the hypothesis, which guides us to information to test the suggestions. Reasoning comes in the fourth phase. It reviews the implications of suggestions, assuring the best solution to the problem. The final phase is the testing of the hypothesis to confirm or reject them. These five phases are not linear. Each phase confronts with new knowledge that contributes to problem resolution. These phases intermingles experiences, emotions and thinking. They help personal growth since it does not limit a person to one way of defining what the problem is and how it can be resolved. It provides alternative perspectives on problems. The awareness of problem solution can lead to professional development (Roberts, 1998).

Another scholar, Donald Schön also writes on reflection and gives an expansion on the concept of reflection. According to him, teachers develop their sense of teaching through continuous reflections on their practice teaching and their interaction with the class. By questioning, discovering, reflecting, teachers reframe the understanding of theirselves as teachers. A teacher can "surface and criticize the tacit understandings that have grown up around the repetitive experiences of a specialized practice, and can make a

new sense of the situations of uncertainty or uniqueness which may allow himself to experience" (Schön, 1987, p. 61).

Schön (1987) defines reflection as "professional artistry to describe the kinds of competence practitioners display in unique, uncertain and conflicted situations of practice" (p. 22). He states that rather than application of knowledge or theory in a passive process, a person makes use of understanding and actions to develop a sense of situations unexpectedly occurred. He identifies two types of reflection: reflection on action and reflection in action. Reflection on action happens when looking back upon an action some time after or before it has taken place. Teachers use this type of reflection before teaching when they plan their teaching along with the anticipated problems and solutions to them. After teaching, they evaluate on the lesson they have just taught, think over what could have been done better and make implications for future practice. Reflection in action means thinking over an action while handling with it. Simultaneous way of thinking and reflecting is conscious and it brings in on the spot experiment meaning that while there is an action in progress, we tend to explain the new actions, form phenomena, test the understanding, modify it and have affirmation of the actions (Roberts, 1998). Teachers pass through this period when they teach. They think about their practice, monitor the class and students, and adapt the lesson plan according to the situations that occur in the context while teaching. Griffiths (2000) argues that this time-framed reflection is "over-simplified" (p. 545). She argues that reflection needs training and pre-service student-teachers could reflect depending on their training of reflective practice.

Roberts (1998) also has criticism to the time framed reflection Schön (1987) suggests. He emphasizes the limitations of two types of reflection. To him, the terms are narrow as they show one part of the expertise in profession. They are also implicit as there

is no clear way of explaining how reflection can occur. Instead of considering it type by type, reflection should be taken as a wholly essential term which helps teachers to raise awareness of what he or she is doing and understand the complex nature of teaching.

Several studies highlight the necessity of reflection for teachers. Munby and Russell (1990) point out those teachers have a chance to reframe their understanding of teaching through reflective practice. Loughran (1995) mentions that reflective thinking helps student-teachers to revisit their past experiences and reconstrue them by making them explicit. He furthers Griffiths' (2000) point of the training need for reflection. For Loughran, reflection does not occur by only "training the student-teachers" yet rather by "probing, inquiring, and challenging" when they are experiencing how to teach (Loughran, 1996). The model Loughran suggests has three different time layers. Anticipatory reflection occurs when teacher plans the lesson, during the teaching process contemporaneous reflection takes its place and retrospective reflection comes after the lesson has been taught. Through these three layers, teachers are expected to be reflective in their preparation to teach and teaching processes. Zeichner and Liston (1996) state that reflection helps teachers "internalize the disposition and skills to study their teaching and become better at teaching over time, a commitment to take responsibility for their professional development" (p. 6). They differentiate between teachers as reflective practitioners and teachers as technicians. The former means that teaching involves critical examination of experiences, beliefs, values, objective reasoning for teachers and a commitment to take responsibilities for development and better learning situations. The latter means that teachers who do not have any critical thinking simply make decisions based on agreed norms and assumptions without revisiting or reframing the actions.

As shown above, the terms related to reflection are very diverse and there are different perspectives about reflectivity. However, it is generally agreed that awareness of learning to teach and improvement by reframing it have led the attention to how teachers construe a sense of professionalism rather than what an effective teacher act like. Hence, creating ways of reflection can be influential in student-teachers' professional development. Recently, the notion of reflection in teacher education programs has become the centre of attention since reflective practice is suggested in order to reveal student-teachers' capacities for observation, interpretation, as well as decision making strategies and practice of professional learning (Grossman & Williston, 2001; Loughran, 2002; Zeichner & Liston, 1987). Through reflective thinking, teachers involve actively in their own personal and professional growth and they have a conscious understanding of their teaching. A body of research on reflection underlines the transformed role of teachers from being merely a teacher to a researcher and an inquirer for her or his own teaching practice (Freeman, 1998; Zeichner, 1994). Several studies suggest keeping journals (Stemme & Burris, 2005) to record criticism, doubts, frustrations as well as accomplishments and successes in teaching and being involved in action research (Liston & Zeichner, 1990).

Moon (1999) suggests that having a "critical friend" can be regarded as a strategy that facilitates and promotes reflection. He states, "Another person can provide free attention that facilitates reflection; ask challenging questions, notice, and challenge blocks and emotional barriers in reflection" (p. 172). It has been mentioned in King and Kitchener's (1994) study that students are generally involved in quasi-reflective process and their reflection terminates at the lower level. This indicates that without an external support, the reflection remains at lower level and student-teachers may find it difficult to be involved in reflective strategies wholly. It is believed that if the critical friend takes part

in constructivist feedback, both sides will have different perspectives, which can place reflection on the higher level.

As a reflective strategy, keeping portfolios has been recommended as a means of both reflective and constructive teaching practice (Wade & Yarbrough, 1996). Through portfolios student-teachers' meaning making, self-paced growth and reflection in and on action can be fostered. Bartell, Kaye and Morin (1998) believe that idea of reflection, personal and professional growth can be practiced by the use of portfolio. Bartell et al. state that:

> We use portfolios because they give emphasis to student reflection and self-directed growth. We use portfolios because they help students build habits of mind necessary for good teaching. Portfolios encourage collaborative dialogue and enrich discussion of teaching. They allow us to document growth over time and allow students to integrate the diversity of teacher preparation experiences. (p. 130)

In the following section, the concept of portfolio is mentioned in details and the use of portfolio in teacher education will be reviewed in terms of reflectivity.

I.3. Portfolios

Portfolio as a picking-up artifact process is not a new concept. It is a well-known practice in areas such as fine arts, and architecture that has been used for a long time. The portfolio keepers have benefited from portfolios so that they can keep up with the development, processes, investments and performance. The practice of using portfolios has extended to the field of education and portfolios have been accepted as alternative tools for learning and assessing a variety of skills and final achievement (Acosta & Liu, 2006; Ehrmann, 2006; Wade & Yarbrough, 1996). Since the last decade, the use of portfolios in teaching and learning context has gained a momentum; therefore, various definitions have

been made. Paulson, Paulson and Meyer (1991) define portfolio as “a purposeful sum of learner works reflecting their efforts, improvement and success” (p. 60). Another definition is made by Windsor and Ellefson (1995). They refer to portfolio as “a thoughtful, organized and continuous collection of a variety of authentic products that document a professional or student’s progress, goals, efforts, attitudes, pedagogical practices, achievements, talents, interests and development over time” (p. 69). Walther-Thomas and Brownell (2001) refer to portfolio as “the systematic and selective collection of student work that shows mastery or growth over a period of time” (p. 225). As seen from the definitions, in general, we can define portfolio as a process for collecting artifacts on the basis of an educational aim over time.

Besides these diverse definitions, researchers have also mentioned on the functions of the portfolios. Danielson and Abrutyn (1997) add two basic functions to the definitions of the portfolios: Portfolios are expected to reflect the development of cognitive gains and they serve to document student learning. Several functions of the portfolios have been suggested by various studies.

These are:

1. Portfolios show evidence of self-reflection (Paulson et al., 1991).
2. Portfolios display learning and help assessment (student-oriented mode), also they help to demonstrate professional development (profession-oriented mode) (Wolf & Dietz, 1998).
3. Portfolios motivate students by offering platform for combination of theory with practice (Georgi & Crowe, 1998).
4. Portfolios offer a chance to look at development over a period of time (Cohen, 2005).

5. Portfolios present multiple examples of student work for their learning (Cohen, 2005).
6. Portfolios give students the sense of ownership for their own learning (Hewett, 2004).

These functions have led the classification of portfolios and in the following subsection, the basic types are stated.

I.3.1. Types of portfolios

Educational programs using portfolios as performance assessment tools vary in content, aim and the types of the portfolios they require. One of the detailed classifications has been done by Danielson and Abrutyn (1997). According to them, there are nine portfolio types as follows;

1. working portfolios that contain work in progress,
2. display, showcase or best work portfolios which demonstrate the highest level of achievement,
3. assessment portfolios that present student learning on specific curriculum design,
4. community service portfolios that help assess the aims of community service curriculum,
5. interdisciplinary portfolios that show proficiency in various subjects,
6. subject area portfolios that encourage students' learning through social projects,
7. admission portfolios that present students' accomplished works for the admission to the college/university,
8. employment portfolios that include documents convincing the employees about the skills of the author,

9. skill area portfolios that show acquired skills in specific areas.

Wolf and Dietz (1998), Zeichner and Wray (2001) and Hewett (2004) minimize the numbers of these types and classify the portfolios into three general types: process, product, and showcase. Process portfolios refer to the learning process for the mastery of skills and standards. Product portfolios involve a set of different products that students produce, and showcase portfolios display students' best works and reflection of how those best pieces are selected.

In addition to these general types of portfolios, there is one common type of portfolio which is categorized as reflective portfolios and is widely used in pre-service training of student-teachers or practice training of doctors. The purpose of such a type is to monitor owner's development and reflection of how he/she evaluates and analyses himself or herself. Zeichner and Wray (2001) mention this type in relation with the pre-service student-teachers and according to them portfolios fall into three categories: a learning portfolio, a credential portfolio and a professional portfolio. The first helps pre-service student-teachers to question their teaching over time. The second is used to assess pre-service student-teachers' readiness to acquire the qualified teacher status. The third one is mostly organized for employment reasons as it displays a sample of assignments, documents, lesson plans representing pre-service student-teachers' best works. Another classification is suggested by Smith and Tillema (2003). Their description is more detailed in content. They identify four types of portfolios: a dossier portfolio, a training portfolio, a reflective portfolio and a personal development portfolio. A dossier portfolio is a compulsory one which displays works for promotional purposes for the career entry of teachers. A training portfolio is also mandated and displays the student-teachers' work

from a course in the program. A reflective portfolio is a personal completion of best practice for further professional studies. A personal development portfolio is a progressive work showing self-evaluation and professional growth throughout a term process.

The present study is based on the definition of a concept as a mixture of assessment, and reflective portfolios as the aim of the study is to monitor pre-service student-teachers' reflection on their teaching experiences and assess their performance through their e-portfolios. Thereby, we seek to find out if the pre-service student-teachers' attitudes towards e-portfolios have changed by the use of e-portfolios in their Practice Teaching course and if the use of e-portfolios has increased the academic achievement scores of the pre-service student-teachers taking the Practice Teaching course. In compliance with the nature of the present study, it is believed that the mixture of two portfolio types stored in digitized context can also support learning and development of pre-service student-teachers affording them with motivation to develop a professional vision of teaching and reflecting their own voices.

I.3.2. Process of portfolios

Portfolio process is mainly twofold: process or product oriented. Process oriented portfolios display the growth of a learner. They document processes of learning, sharing, creating (from early drafts to the last piece), reflecting on the processes and revising. They also display the students' works from the beginning, in the middle and at the end of a learning period. For example, if we think of a piece of writing, the process oriented portfolio may involve a first draft, a reedited draft reflecting teacher or peer correction or a feedback and a final draft. In such a portfolio process, the comparison of the work is possible and the growth of the student is monitored over the drafts. Product

oriented process, on the other hand, displays one or two best works. The aim of such a portfolio process is to document and reflect on the accomplishment or quality rather than processes which enable the learner to produce the portfolios. This type requires students to collect all the works or artifacts until the end of the portfolio implementation and then to choose the best artifact that represent the learning skills or desired outcomes with the highest quality. Both kinds of portfolio creation can be used according to the aims of the program and the needs of the learners.

The portfolio process has five stages according to Danielson and Abrutyn (1997). They list the processes as collection, selection, reflection, projection (direction) and presentation.

1. Collection: This is the starting step as the several pieces of students' works and desired artifacts are collected. This stage has a pre-stage where teacher plans and organizes the content and criteria of the portfolios. The time span necessary for picking the artifacts is also mentioned. Therefore, the learner starts developing portfolios after the content, criteria and the time span has been settled.
2. Selection: This stage involves reviewing and evaluating the work or artifacts kept and identifying those which display the achievement of goals or desired outcomes. At this stage, learners are autonomous to make their own selection; however, sometimes they can receive comments on it from the teacher, peer or parents. Teachers may specify the criteria for the selection. Selection process also includes instructions and assessment. Pre-defined criteria are taken into consideration for the selection of the best work and the assessment is done according to the quality of the selected works/artifacts.

3. Reflection: This stage helps students construct self-awareness in his/her learning. Students reflect on the importance of the artifacts they have chosen emphasizing the goals of the program. According to Darling (2001) students go through four sub-stages during the reflection process: first response to the portfolio task, structural and stylistic approach to make meaning out of what has been done, making a connection between the themes for discourse and decision on presentation of the portfolio as final self-product. In this stage, teachers' or mentors' activities for cooperative learning context enrich the reflection process as students show improvement through feedback from other peers. It is also crucial for teachers or mentors to create an environment where students voice out as self-agents.
4. Projection (Direction): Students at this stage compare his or her reflection with the aims of the program, his or her performance indicators (e.g., rubric scale) and future learning goals discussing with mentors, teachers or peers on meaning constructions, concepts and practice.
5. Presentation: This is the last stage of the portfolio creation. It includes a presentation to different possible audiences such as class, outside educational communities or organizations or employers. Learners thus share the portfolio they have created with others and receive feedback.

The processes above mentioned are also defined in some studies (Gürol & Demirli, 2007; Kan, 2007). However, Barrett (2000) mentions different types of process development for e-portfolios. She focuses on the multimedia development process identified by Ivers and Barron (1998) and combines them with her own definition. She concludes five stages of e-portfolio development process

Table 1: Electronic Portfolio Development Stages (Barrett, 2000)

Portfolio development	**E-portfolio Development**	**Multimedia development**
Purpose & Audience	Defining the Portfolio Context and Goals	Decide & Assess
Collect, Interject	The Working Portfolio	Design and Plan
Select, Reflect, Direct	The Reflective Portfolio	Develop
Inspect, Perfect, Connect	The Connected Portfolio	Implement, Evaluate
Respect	The Presentation Portfolio	Present and Publish

In the first stage, which is the definition of context and goals, the fundamental tasks are to identify the context stating the standards, desired outcomes of the program and assessment indicators of the learnt skills. The software of the other electronic resources for e-portfolio development is introduced as well. In working portfolio stage, the software is used to create electronic portfolios which fit the vision, aim and style of the e-portfolio users. The applications such as Microsoft Word, Microsoft PowerPoint, Acrobat Reader and open or ventured www domain are the common software packs. Through the use of the selected software, artifacts are stored on a hard disk, a server and a video tape. In this way, word processors, database, PowerPoint, jpeg or video clip are demonstrated. After gathering the multimedia artifacts and transfer the work into the digital format, the learners pass to the reflective portfolio. At the reflective portfolio stage, reflection is done at specific points during the portfolio development and saved for either private or public display. This is called as formative reflection which involves the process from the beginning, and ongoing reflection onto what has been created. The stage four, the connected portfolio, is characterized for its capacity to create a hyperlink between documents such as work samples, rubrics, checklists, projects, and reflections. The hyperlink connects the artifacts and presents a relevancy and consistency of the documents on display. Hartnell-Young and Maureen (1999) state that

> Hypertext allows for deeper understanding and explanation through links that go from summary statements to complete documents, related items, and reflections. In addition to displaying artifacts efficiently, links can allow the connection of materials in a personal archive to become broader and more thoughtful. (p. 23-24)

The last stage is called the presentation portfolio at which the e-portfolio is presented through a medium such as video tape, computer hard disk, and server. The created portfolio is presented to the audiences or virtual viewers. At this stage, the summative evaluation is done and the e-portfolio is evaluated in comparison with the goal of the program, the type of the portfolio and the criteria set for the assessment.

I.3.3 Content of portfolios

The content of the portfolios can vary as it is decided upon the purposes of the portfolio use and the types of the portfolios to be created. If it is used in the field of business, portfolios can include CVs, certificates, projects, tasks undertaken and done, etc. As for the common types used in education, portfolios can include artifacts of students that show progress or achievement. The content of portfolios is mentioned by Paulson et al. (1991) and it is stated that "a portfolio is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas of the curriculum. The collection must include the following: student participation in selecting content, criteria for selection, criteria for judging merits, and evidence of a student's self-reflection" (p. 62). Hamm and Adam (1992) contribute to the content decision of the portfolios by suggesting that portfolios can include any of at least two entities: something difficult, evidence of learning, evidence of reaching a solution and a piece of work of which they are proud of. Linn and Baker (1992) add that portfolios should display students' progress and the accomplishments. Simon and Forgette-Giroux (2000) mention

the content selection along with the holistic approach stating that portfolios present evidences of cognitive, affective and behavioral dimensions of records being developed plus developmental and metacognitive dimensions. Self-reflection is also mentioned in relation with the metacognitive evidence. In their study, portfolios are regarded as assessment tools to check whether the content selection procedures bring out the desired outcomes such as effectiveness of framework and its integration with the curriculum. They put forward that the effective use of portfolio into teaching is related to the flexibility of the dimensions in content. In his analysis of portfolio use in writing abilities, Reckcase (1995) suggests including a collection of reflective essay, a research paper, a descriptive piece, an explanatory, exploratory or persuasive essay, a research paper and an interpretive or evaluative response to a written work, and appendixes with all previous drafts. Hanson and Gilkerson (1999) suggest collecting samples that are representative of skills such as checklists and conceptual maps for teachers who monitor the use of portfolio and cutting, drawing, printing samples, self-portraits, videos, audiotapes, photographs, projects, interviews, and parental input for the students, particularly young ones. Baume and Yorke (2002) state that a portfolio includes evidence of practice; therefore, it contains a reflective commentary or a claim that shows how the participants have combined theory with practice.

I.3.4. Assessment of portfolios

Educational accountability is a necessity for all kinds of implementation so as to assess to what extent the desired knowledge is learnt. Standardized tests are widely regarded as indicators of achievement. Traditionally, the content is taught, activities follow the content and a test to examine to what extent learners have learnt is administered. The

test is scored and handed back to students and the grade is the assessment criteria for students' performance. However, if any performance is involved, the development of alternative assessment tools is needed. This justifies the importance of phases in portfolio processes for assessment. Hanson and Gilkerson (1999) mention the characteristics of portfolio assessment. These are as follows:

1. Assessment must be continuous,
2. Assessment must be performance based and highlight purposeful learning,
3. Assessment must have a connection with instructional objectives,
4. Assessment must include other voices such as students and their families.

In portfolio-implemented teaching context, assessment provides two main authorities for assessment. The first is the student himself or herself. Students can create portfolio-based on the content selection and evaluate themselves after having selected their best samples; they evaluate it with pre-defined criteria and do careful revisiting with the teacher. The assessment authority is the teacher. Teachers can use developed rubric scales to assess the performance of their students. They have a set of criteria and standards in compliance with the aims of the program or the course. Developing rubrics, setting criteria or standards and grading them may require pre-planned guidelines.

> 1. Assign grades only to items in assessment portfolios,
> 2. Evaluate items in an assessment portfolio against clear criteria using, if possible, a scoring guide or rubric which the students themselves have helped to create,
> 3. Establish clear guidelines for evaluating assessment portfolios as a whole for completeness and organization. (Hanson and Gilkerson, 1999, p. 50)

Gillespie, Ford and Gillespie (1996) mention recommendations for portfolio assessment. According to their study, portfolio assessment is "meaningful" and "multi-

dimensional" process of collecting artifacts that display accomplishment as well as gains and progress (p. 487). Gillespie et al. list the benefits of portfolios as follows:

1. Portfolios allow students to reflect on the development/progression of their strength and weaknesses as readers and writers,
2. Portfolios facilitate students' understanding of relations among reading, writing and thinking,
3. Portfolios assist in creating collaborative work through peer collaboration and critiques,
4. Portfolios provide an opportunity for students to assume responsibility for their own learning and become independent,
5. Portfolios contribute to the development of self-esteem, self-awareness and more positive toward reading and writing. (p. 482)

Gillespie et al. (1996) also mention the weakness of the portfolio assessment which is the issue of reliability and validity. To avoid such weakness, there are some suggestions made in regards the evaluation of artifacts by the students:

1. student-selected, teacher-selected and collaboratively selected content,
2. student-generated criteria,
3. collaboratively generated criteria,
4. student's self evaluation,
5. student-generated reactions to teacher/or peers. (p. 487)

Student-selected, teacher-selected or collaboratively selected content evaluation of the artifacts in the portfolios is crucial as such a process needs collaboration between students and the teacher and it must show some evidence of the cognitive, affective, behavioral, metacognitive and developmental dimension of the gain or the competencies (Simon & Forgette-Giroux, 2000). As for the criteria, it is agreed that for portfolio assessment, students are to be informed about how to be evaluated and how to evaluate their own or peer development (Gillespie et al., 1996). This evaluation part reflects learners' voices about their learning in the portfolio processes. Involving the students into the portfolio development and providing them with clear instructions, criteria

and the participation into content can also serve the justification of validity in portfolio assessment.

Van Horn and Brown (1993) also recommend that setting the goals, procedures and the criteria with the students would be used as a strategy for portfolio assessment. For process-focus assessment, the use of rubrics or checklists is mentioned in other studies (Ford, 1993; Stahle & Mitchell, 1993). These studies imply that if carefully designed, rubrics can show evidence for the reflection, development, and overall quality of the works done.

Although there are studies for clarifying and defining the assessment methods, the validity and reliability of portfolios still remain controversial. Farr (1990) highlights that reliability cannot be calculated as artifacts are created under certain conditions at certain dates. Therefore, having a score that is justifiable and accurate based on rubric ratings and providing evidences for representative outputs of acquisition of particular knowledge can be substantial. Brandt (1992) suggests that reliability of portfolio assessment can be achieved only if we are sure that desired outcomes have been attained. As long as we are sure that portfolio is a representative product we have aimed to create, a feeling of confidence occurs in the attained outcomes and reliability of portfolios.

I.4. Electronic portfolios

While the paper-based portfolios were popular in educational use till the mid 1990s, with the rapid inclusion of technology into our lives, electronic portfolio (also called digital portfolio) appeared as an innovative version of keeping the progressive work of learners. The use of portfolio has accelerated in recent years when the World Wide Web (www) has been preferred over the paper-based knowledge sources. Increasingly, nowadays, educators, professionals, students and employers are using electronic means to

create, share or evaluate portfolios. The collection of the works are brought together and displayed on electronic environment (on the web). Barrett (2001, ¶ 10) points out that, “an electronic portfolio uses electronic technologies, allowing the portfolio developer to collect and organize portfolio artifacts in many media types such as audio, video, graphics, and text”. She clarifies the definition saying that an electronic portfolio is not a random accumulation of artifacts yet it is a reflective medium for representing student’s growth. Another definition is done by Lorenzo and Ittelson (2005). They define e-portfolio as “a digitized collection of artifacts including demonstrations, resources, and accomplishment that represent an individual, group, or institutions. This collection can be comprised of text-based, graphic, or multimedia elements archived on a web site or on other electronic media such as a CD-ROM or DVD” (p. 2).

E-portfolios share basic similarities with paper-based ones. One common feature is that both can be used as alternative forms of evaluation (Fogarty, 1998). The other common feature is that they both establish the learner ownership during the learning process. However, this statement is still under debate. For example, Piper (2000) has observed the portfolio processes and concludes that e-portfolios increase ownership of learning. Yet as a controversy study, Woodward (2000) presents a rationale for the sense of ownership by all authors of any types of portfolios. Davies and Willis (2001) state that digital portfolio is a part of tradition of paper-based portfolio and not a distinctive entity itself. Much of the literature they present in their study underlines the benefits of portfolios to develop self-esteem and professional belief whether it is paper-based or electronic. It is agreed that e-portfolio only differs from paper-based, traditional portfolio in terms of the medium used. Technology instead of paper is applied to display the processes, artifacts, and pieces rated as the best. That is, apart from the source by which the portfolio is

presented, the content of the portfolio essentially involves the same information. However, as Barrett (2000) puts forward, electronic portfolio helps to display the artifacts in a wide range of formats (audio, video, graphics, and text). Therefore, it is claimed that digital portfolios include "accessibility, portability, creativity, technology, as well as self-confidence, and community building" (Kilbane & Milman, 2003, p. 8-9). Though both types have provided alternative learning opportunities, in our decade where technology has overtaken the place of paper and pen, e-portfolios can be easier to handle, produce, store, upgrade, and demonstrate more quality in works in terms of audiovisual tools.

An early study by Kimeldorf (1997) supports the superiority of e-portfolios. As to him, compared with paper-based portfolios, e-portfolios equip learners with the sense of achievement thanks to the various multimedia sources attached. This capacity of e-portfolios has provided learners with more options to display graphics, audio and video what they have specified as concrete artifacts in relation with the content. Moreover, they create audiences with their own preferences (e.g., color, lay out, video or audio clips) for presenting the content.

Kimball (2002) suggests that with e-portfolios, authors harmonize the artifacts of their learning both for themselves and for their wide range of audiences. Students can create a voice through their e-portfolios and publish them for the people who could see their works. They have a choice either to welcome the comments and feedbacks or simply to ignore them. Learning and creating a personal space is the responsibility of authors. However, it is open to be evaluated by the people who can access the website. In this respect, it is a preferred educational tool to publish large group of audiences' voice through multimedia tools or online space.

Ittelson (as cited in Mason et al., 2004) has also suggested that e-portfolios are privileged over traditional portfolios in terms of wider range of audience, the portability, and adaptability of the items on display. Like Ittelson, Norton-Meier (2003) claims that as students use visual materials, they become more capable of seeing connections between the concepts and comprehend their progress with the necessity of the program standards. Constantino and De Lorenzo (2002) acknowledge the benefits of e-portfolio stating that

> The e-portfolio, just like the paper-based portfolio, is a carefully selected collection of exemplary documents that highlight a teacher's best work and accomplishment. However, unlike the paper-based portfolio, the e-portfolios are a multimedia approach that allows the teacher to present teaching, learning and reflective artifacts in a variety of formats (audio, video, graphics and text). (p. 48)

In relation to e-portfolio creating process, Mason et al. (2004) mention the advantages of e-portfolios pointing out each process of keeping a portfolio (collection, selection, reflection, projection, presentation). For collection and selection of items, it is relatively easy to organize and rework the content. As an assessment tool, e-portfolio has various options to integrate all the works in chronological order. For reflection, e-portfolios provide audiovisual context to make sense out of experiences. The process of projection is held by the interactive process, as the comments can be made immediate and reactive. E-portfolio creators have the chances to get feedback from various sources. The last process is presentation through e-portfolios. They can offer several of multimedia sources such as audios, graphics, video files, digital artifacts, and so forth. Woodward and Nanlohy (2004a) also state the benefits of e-portfolios over paper-based ones in terms of capacity for storage, use of multimedia assets and flexibility to adapt. They mention that although processes in the paper and e-portfolios are similar, the source for keeping them is different.

Apart from the superiority of e-portfolios over paper-based ones, there is an argument on the nature of e-portfolio. In parallel with the electronic environment for learning, learning through technology or about technology is under debate. Hartnell-Young and Morris (1999) consider that technology should help rather than manage electronic portfolio development. E-portfolio is meant to provide learners with technical know-how and enhance their understanding of technology. However, the main emphasis is to be on learning. Thus, e-portfolio does not have a plus over pen-paper ones if they do not provide students with learning opportunities. To assess if any learning occurs or not, Woodward and Nanlohy (2004a) have carried out a project related with the course called Classroom Computing. They find that digital portfolios were "worthwhile" experiences and learning was "at both a personal and a technological level" (p. 237).

The report by Kelly and Grenfell (2004) proposes an outline for a European Profile for Language Teacher Education, which is an initiation to develop a shared understanding of necessary skills, knowledge, and professional competencies that a teacher must have. In the report, it is stated that trainee teachers "recognize the value of ICT for organizing their own workload and schedules, retrieving and developing resources and archiving documentation" (p. 21). This present study reveals the necessity to use e-portfolios for pre-service student-teacher education as it fits to utilizing technology while being involved in lesson plans, self-reflection and peer review at the stage of practice teaching. It says that as a strategy, student-teachers are taught to use task-based learning approaches by using "online agendas and email, search engines, educational websites, interactive website forums, resources and databases" (p. 22).

In this present study, the use of e-portfolio is chosen to provide pre-service student-teachers with necessary technical know-how for displaying their practice teaching

preparation through online personal pages, to help them accommodate technological applications in their practice teaching planning and enhance their understanding of technology through the creation of personal e-portfolios.

I.4.1. Pros and cons of e-portfolios

E-portfolios provide diverse options and possibilities for displaying performance. They can be created on different electronic learning management platforms. The students can have personalized menus on display as they are accessible from anywhere having internet connection. Some studies underline the personal and professional benefits while facilitating the creation of teaching materials, lesson plans, and organization of the information for the menus (Kilbane and Milman, 2003; Wright, Stallworth & Ray, 2002). Gürol and Demirli (2006) state that e-portfolio can foster strategies of motivation in the course of teaching in terms of attention, trust and self-satisfaction. Sanalan and Altun (2002) find out that by the use of e-portfolios, the interaction between parties in learning context becomes fast and immediate. This interaction can continue through the career path of the students as long as they keep on documenting.

When it comes to disadvantages of e-portfolio, there are some concerns about available access to the Internet, or personal account, errors in opening files on display (Zubizaretta, 2004). McKinney (1998) also notes the challenges of e-portfolio such as lack of time to do experiments in multimedia context, lack of technical support on e-portfolio creation and limited resources (e.g., software or funding). Yet, he states that if the limitations are counted and solutions are found, e-portfolios allow learners to display their growth in non-linear ways.

In order for successful e-portfolio implementation, the limitations and challenges should be taken into account and feasible solutions are to be addressed. In each implementation, there can be barriers encountered; however, what matters is to envisage drawbacks and work on them to find solutions.

I.4.2. E-portfolios in teacher education

The traditional teacher education is based on training mostly with theoretical knowledge and assessing the knowledge through formative and summative testing. It views student-teachers as input-output systems that are to be shaped to teach. However, this can be considered as inadequate to reveal out an accurate extent of teachers' competencies, personal beliefs and values about teaching. Innovative developments highlighting teacher potential, qualifications and skills as well as beliefs and values are necessary for teacher education programs (Cochran-Smith & Fries, 2001). The developments address to constructivist teacher education which aim to make changes in thinking and meaningful constructions of knowledge in relation to other knowledge. For the constructivist teacher education programs, a possible initiative could be integrating technology in teacher education improving student-teachers' productivity (e.g., preparing presentations and lesson plans) for active involvement, assessing information in a self-directed way (e.g., web sites, peer, blogs) for self-discovery of knowledge and producing information or experiences (e.g., web creators) and communication (e.g., emails and chats with peers and teachers) for social interaction and reflection. A study by Willis and Mehlinger (1996) has suggested that student-teachers can have opportunities for learning through technology in their teacher education. This can be done in a constructivist way those student-teachers are required to use technology in their teacher education courses actively, which facilitates learning by doing.

As the technology is advancing rapidly, e-portfolios in teacher education are being implemented for the practice of technology use in teacher education programs. They are justified by some studies (Duhaney, 2001; Willis & Mehlinger, 1996). The studies imply that the use of portfolios in teacher education is a priority in nationwide educational planning, therefore, student-teachers can undergo substantial experiences and training by creating their personal e-portfolios especially during their practice teaching. E-portfolios can be used as a means of performance assessment and as a requirement for meaning-making within multimedia environment. Multimedia environment for e-portfolios can further the technical and professional development of student-teachers in terms of skills, knowledge and attitudes towards teaching through interactive, visual and audio resources. They learn technical skills to manage multimedia environments while learning about the content areas. Besides, their performance in personal and professional development over time is sought and assessed.

Among the studies advocating the use of e-portfolios in teacher education, Woodward and Nanlohy (2004b) underline the use of e-portfolio for innovative learning opportunities by giving choices and varieties in terms of organizing, reporting and presenting of the learnt items. Their extensive study reveals the benefits of e-portfolios and the results of e-portfolio implementation in Pre-Service Teacher Education at University of Western Sydney. They conclude that the use of e-portfolio is proven to be successful in presenting the learners' knowledge by instructing and giving technical understanding. Wetzel and Strudler (2006) also reveal that building an e-portfolio improves technical skills. The study indicates that student-teachers can manage to upload documents, scan, change file formats, deal with cropping the pictures, create templates and modify their own

web pages. Therefore, by creating personal e-portfolios, they could gain and develop (technical) skills which they might need to use as a teacher in their future classrooms.

Hewett (2004) points out the implementation of e-portfolios in learning environments saying "E-portfolios give students ownership and responsibility for their own learning" (p. 27). Gülbahar and Tınmaz (2006) state that when pre-service student-teachers have experiences in a project-based learning environment through the use of e-portfolios, they state that they involve in "enriched learning experience both individually and technologically" (p. 320), and know that they have been given responsibilities of their learning. Based on this finding, it can be agreed that e-portfolio implementation gives student-teachers the ownership and responsibility of their learning processes and performances displayed on the web-based platforms.

E-portfolio implementation in teacher education focus on three points: professional development, reflective expression, and alternative assessment tool for assessing pre-service students' performance in teaching courses (Loughran & Corrigan, 1995; Wray, 2007). A well-known study on professional development carried out by Woodward and Nanlohy (2004b) state that portfolios help pre-service student-teachers express their way of learning better during the development of professional knowledge. Studler and Wetzel (2005) also mention the professional development stating that the use of portfolios brings in responsibility for student-teachers' preparing and selecting artifacts in compliance with the criteria and interpretation of their own learning. Therefore, e-portfolios in teacher education facilitate professional learning about teaching preparation in a way that student-teachers select, share, prepare and reflect on artifacts such as classroom management strategies, unit or lesson plans, and video clips of their practice teaching. Ersoy (2006) finds out the opinion of pre-service student-teachers on portfolios. She points

out that the use of portfolios in teacher education is important for the student-teachers in terms of their personal and professional development. The studies by Crutchfield (2004) and Simpson (2004) also have focused on the importance of portfolio implementation in teacher education in terms of professional development and success. Synder, Lippincott and Bower (1998) examine the use of portfolios as a tool both for monitoring personal and professional growth and for meeting the licensure standards. They find out that this dual function of portfolios support each other rather than jeopardize the processes in portfolio creation.

In relation to using e-portfolios for professional development, Barlett and Sherry (2004) work on the pre-service student-teachers' perceptions about e-portfolios. Their study includes a small number of pre-service student-teachers with limited technology background and they report that the use of e-portfolio has given an opportunity to pre-service student-teachers to learn directly more about teaching as a professional career. They also state that "Pre-service student-teachers perceived that they learned a great deal from creating electronic portfolios and that much of what they learned is directly applicable to their teaching careers" (p. 239). Hauge (2006) indicates that portfolios have accelerated professional learning for pre-service student-teachers; therefore, they are to be regarded as a generative medium for combining theory with practice in teacher education. He states that "Portfolios have been productive in transforming theory into practice, supporting reflection processes about subject matter, content and knowledge application, besides stimulating collaborations and dialogues between partners in the programme" (p. 32).

As for the reflection, a study by Wetzel and Strudler (2006) mentions that e-portfolios support reflective thinking and student learning. These reflections could be listed

under three main categories: 1) personal response 2) reflection on the standards and theory 3) combination of personal response with standards and theory. The students learn through their reflection and use of the e-portfolio as they report on their own performances and the teaching context.

The inclusion of portfolios into teacher education for reflection of student-teachers' attitudes and opinions on their teaching have become a crucial issue. Collins (1991) and Gellman (1993) show how portfolios help both the novice and experienced teachers develop pedagogical skills and analysis of strategies for reflection. The common point in these studies is that portfolio as a means of performance assessment has a positive effect on pre-service student-teachers' practice teaching in terms of self-reflection.

According to Pecheone, Pigg, Chung, and Souviney (2005), the studies related to the impact of portfolios on pre-service student-teacher education focus on reflection. Yet, this reflection could be critical when the context and feedback given are concerned. He suggests that in teacher education programs, the type of context and the amount of feedback given to e-portfolios should be emphasized. Venezky and Öner (as cited in Hewett, 2004) also state that student-teachers given a chance to create e-portfolios become more active learners and more aware of their roles in learning and reflect their own construction of knowledge. This reflective function of e-portfolio use in teacher education fosters active learning and the learner-centered context.

Following important studies such as Whitford, Ruscoe and Fickel (2000) and Campbell, Melenzyer and Nettles (2001) stress the benefits of inclusion of portfolios as performance assessment tools in teacher education. They put forward that e-portfolios provide holistic and authentic assessment to reveal the complexities of teaching that can be viewed by the third parties. Cohen (2005) focus on the pre-service student-teachers'

concerns of performance assessment by the use of e-portfolios in their teacher education programs. According to the study, through formative (e.g., assignment at different intervals for progressive assessment) and summative evaluation (e.g., checklist, charts or rubrics for overall performance assessment), student-teachers believe that they learn to make sense of overall implementation of the program and their accomplishments by using e-portfolios. Lynch and Purnawarman (2004) maintain that e-portfolios are reliable indicators of the competencies in teacher education; therefore, they suggest using both formative and summative rubrics with a guideline to rate each task or artifact while assessing pre-service student-teachers' performances. Korkmaz and Kaptan (2003) mention the necessity of e-portfolios in initial teacher education for the quality of educational outcomes. To them, e-portfolio assessment can be applied to pre-service student-teachers so as to determine the quality of practice and development of teaching and learning process. Gülbahar and Köse (2006) study on how pre-service teachers perceive e-portfolios as an evaluation method and how they see the outcomes. They have found out that e-portfolio as an evaluation tool is "favored" and found "suitable" in project-based teaching context (p. 87). The study assures that pre-service student-teachers benefit from the e-portfolio implementation as the process affords them with time to revisit the artifacts, reflect on them and monitor the process from their points of view. This confirms that e-portfolio assessment aims to reach high level of practice quality in terms of student teachers' revisits of the artifacts, accomplishment based on performance over time and awareness of the evaluation process. The study by Gülbahar and Tinmaz (2006) also affirms that e-portfolio method for the assessment of a project-based course is favored by the student-teachers as they have time to revisit the artifacts before final submission, which provides self-improvement.

In addition to studies on professional development, reflectivity, and alternative assessment tool by using e-portfolios, there are some other studies which put forward the necessity of technical skill integration into teaching as the standards for the teacher profile have kept up with the technological development. Akpınar (2004) mentions that individuals are expected to get training in compliance with the necessity of technology. The same expectation is on the teachers as they are expected not only to teach how to make use of technology but also integrate the use of technology in their teaching preparation and activities. Akpınar mentions the standards for teachers as mentioned in the International Society for Technology in Education (ISTE) Report published in 2001. These are:

1. Teachers should use technological assets for their lifelong learning and professional development,
2. Teachers should evaluate the technological application and bring it to the class atmosphere,
3. To increase the efficiency and quality in education, teachers should use technology,
4. Teachers should use technology to make learning efficient and provide communication between colleagues.

With these international standards, Akpınar states that the efforts in reforming teacher education nationwide create a new context for student-teachers, which urges them to use technology in their teaching. These standards comply with the European Profile for Language Teachers mentioned in section I. 4. In the profile, it is proposed that pre-service student-teachers use technology for personal planning, organization and resource discovery.

To conclude, the use of e-portfolios is a powerful way to help student teachers gain an understanding and articulation of teaching as theory and practice by using technology. It enables student-teachers to construct their meaning for theoretical and practical issues in multimedia environments. Student-teachers are involved in learning by

doing, constructing and interacting with others such as peers, supervisors, instructors by using e-portfolios. Their performances are assessed in terms of progression in thinking and making meaning. From the studies above, it is seen that e-portfolios are mainly used in teacher education programs for promoting professional development, reflection, and authentic alternative assessment. Moreover by implementing e-portfolios in teacher education, a student-teacher is equipped with the technical skills and subject-related knowledge which is a requirement for the teacher profile: a teacher who can use technology for lifelong learning, personal planning of teaching and professional development.

CHAPTER II

II. METHODOLOGY

This chapter includes the type of research, the experimental and control groups, data collection instruments, implementation of e-portfolio in pre-service student-teacher training program and the analysis of the data.

II.1. Type of Research

The present study is a quasi-experimental study which aims to identify the attitudes of pre-service student teachers towards the use of e-portfolio.

In this research, two different measurements (Pretest and Posttest) have been used for participants in both the experimental and control groups. Therefore, it could be stated that the measurements in the experimental group are obtained from related samples. At the same time, measurements in the control group are related with each other. On the other hand, the measurements obtained from Pretest-Posttest Control Group Design (PPCGD) shows that in the case of comparing the measurement related to the individuals in the experimental and control groups, samples are unrelated (Büyüköztürk, 2001). Thus, the research design can be defined as nonequivalent PPCGD (Bulduk, 2003).

II.2. Participants

The research involves forty-four pre-service student-teachers from Foreign Language Education Department, who are doing their compulsory pre-service in the assigned state schools.

In the beginning, there are twenty-three participants (seventeen females and six males) in the experimental group and there are twenty-three participants (twenty females

and three males) in the control group. Both groups are already assigned to observe and teach in the state schools in Mersin at the very beginning of the first semester. After the outlier analysis explained in part II.4., the number of participants in both the experimental and control group has dropped to twenty-second.

Participants are not informed as they belong to either experimental or control group and they are all volunteers. This information could affect the direction of the research.

II.3. Data Collection Instruments

As it is aimed to identify the attitudes of the pre-service student-teachers towards the use of electronic portfolio in the Practice Teaching course, the research data is obtained with Attitude Scale Towards Use of Electronic Portfolio (ASTUEP) prepared by the researcher (see Appendix II). The grades related to the Practice Teaching course obtained from the Student Office are also used as research data. Grades related to the Practice Teaching course are composed of scores which are calculated considering 40% of the midterm and 60% of the final exam and scores changing between 0-100.

ASTUEP is a Likert-type scale ranging from “strongly disagree” (1) to “strongly agree” (5) and it is aimed to identify the attitudes of pre-service student-teachers towards the use of e-portfolio in the Practice Teaching course. The scale has 41 items and these items take place under eight dimensions. Cronbach alpha for the whole scale is found to be 0.954. Factor analysis findings prove that the construct validity of the scale has been established. The participants in both the experimental and control groups are requested to respond to each item considering the degree of appropriateness according to their existing knowledge or experiences. ASTUEP is implemented as both pretest and posttest. Therefore, the research data is obtained with ASTUEP.

The process for preparation of ASTUEP is defined as follows:

A literature survey has been done to constitute expressions for ASTUEP which can reveal the cognitive, affective and psychomotor aspects of the attitudes towards the use of e-portfolio (Bartlett and Sherry, 2004; Orland-Barak, 2005; Ersoy, 2006; Mondock, 1997). Additionally, in order to write the attitude expressions related to the use of e-portfolio open-ended questions are applied to junior students (see Appendix III). Through the responses given to the questions and the information obtained from the literature survey, attitude expression construction has been done.

Nearly 120 attitude expressions are constructed by the help of an expert on measurement and evaluation which are considered to measure the cognitive, affective and psychomotor aspects of the attitudes towards the use of e-portfolio. Some expressions have been omitted for they are thought not to be suitable in terms of attitude expression construction principles or measurement of the related attitude. After this examination, the constitution of the trial form of the scale with 70 attitude expressions is found convenient.

As the research is limited to Faculty of Education at Mersin University, 201 pre-service student-teachers who were at the departments of Psychological Counseling and Guidance, Science Teaching, Elementary School Teaching, Maths Teaching, Turkish Teaching and Preschool Teaching were informed about e-portfolio processes and applications in education and the trial form of the scale was applied to them. Like the pre-service student-teachers at Foreign Language Education Department, these pre-service student-teachers were doing their compulsory pre-service in the assigned state schools.

Through the data obtained from the application of the trial form of the scale (ASTUEP-TF) to 201 pre-service student-teachers, item analysis, reliability and validity studies have been done.

In the first step, responses given to the attitude expressions of the ASTUEP-TF have been scored. As the rating scale ranges from “strongly disagree (5)” to “strongly agree (1)”, each response given to an item has been provided with a score. For all the negative items, scoring has been done from “strongly disagree (1)” to “strongly agree (5)”.

In the next step, the outlier analysis has been done and the distribution of normality has been checked. Four participants’ scores have the same outliers and this causes deviation (in the distribution) of normality. The data belonging to these participants are taken out and the Kolmogorov Smirnov normality test has been applied. As a result of the analysis, score distribution obtained from 197 students’ responses has been found normal (z_{197}=0.059, p>0.05). The distribution of scores is given in Table 2.

Table 2: Distribution of the Scores

Mean	245.38
Median	250.00
Mode	245.00
Variance	1315.91
Std. Deviation	36.27
Minimum	152.00
Maximum	334.00
Range	182.00
Skewness	-0.268
Kurtosis	-0.048

According to Table 2, the scale score of 197 participants responding to the scale varies between 152.00 and 334.00 scores. The mean score of the participants obtained from the scale is 245.38, the mode is 245.00 and the median is 250.00 and these have close values. Having high values, each three statistics may be interpreted as the attitudes of the pre-service student-teachers towards the use of electronic portfolio to be generally in a positive direction.

After the distribution of the score is determined as normal, the item and test statistics of the scale are examined. In the research, independent samples of the t-test procedure are used for the item analysis of the trial form of the scale (Tezbasaran, 1997). Therefore, the scores obtained from ASTUEP-TF are ranked from the highest to the lowest. 27% of respondents in this distribution at the highest level is defined as the highest group, and 27% of them at the lowest level is defined as the lowest group. As for the next step, it is examined whether each item responded by the lowest and the highest respondents can be discriminated in terms of their attitude towards the use of e-portfolio. Therefore, t-test is administered for each item responded by the lowest and highest respondents to indicate the significance of the difference in item score mean for unrelated samplings. The following formula has been used (Tezbaşaran, 1997):

$$t = \left(\overline{X}_{ü} - \overline{X}_{a}\right) \Big/ \sqrt{\left(\frac{S_{ü}^2}{n_{ü}}\right) + \left(\frac{S_{a}^2}{n_{a}}\right)} \qquad (1)$$

$\overline{X}_{ü}$: Item Mean Score for the highest group
$\overline{X}_{a}$: Item Mean Score for the lowest group
$S_{ü}^2$: Variation of item scores for the highest group
S_{a}^2 : Variation of item scores for the lowest group
$n_{ü}$: Number of respondents at the highest group
n_{a}: Number of respondents at the lowest group

The t-test results are given in Table 3. According to Table 3, t-test results related to three items (13, 54, and 61) are not significant. Related items are extracted from the scale and the item-total correlations of the remaining 67 items are calculated. One item (56th item) having a negative correlation is observed in the item-total correlation analysis and it is extracted from the scale and factor analysis is done for the remaining 66 items.

Table 3: t-test Results of ASTUEP-TF Items for Unrelated Samples

Item number	Group	$\overline{X}$	SD	t	p	Item number	Group	$\overline{X}$	SD	t	p
1	High	4.40	0.57	8.002	0.000	**17**	High	4.38	0.53	8.716	0.000
	Low	3.02	1.12				Low	3.06	0.97		
2	High	4.09	0.84	8.454	0.000	**18**	High	4.00	0.83	5.869	0.000
	Low	3.40	1.20				Low	3.00	0.92		
3	High	4.62	0.60	6.750	0.000	**19**	High	4.30	0.57	9.082	0.000
	Low	3.43	1.14				Low	2.72	1.13		
4	High	4.02	0.77	6.226	0.000	**20**	High	4.42	0.53	9.512	0.000
	Low	2.83	1.16				Low	2.91	1.02		
5	High	4.30	0.61	5.910	0.000	**21**	High	3.87	0.81	11.107	0.000
	Low	3.34	1.02				Low	2.08	0.85		
6	High	4.08	0.73	11.085	0.000	**22**	High	4.23	0.70	8.070	0.000
	Low	2.34	0.88				Low	2.91	0.97		
7	High	4.11	0.61	8.803	0.000	**23**	High	4.34	0.55	7.844	0.000
	Low	2.79	0.91				Low	3.08	1.03		
8	High	4.21	0.66	7.082	0.000	**24**	High	3.89	0.95	8.996	0.000
	Low	3.08	0.96				Low	2.21	0.97		
9	High	4.34	0.71	9.730	0.000	**25**	High	4.13	0.92	6.990	0.000
	Low	2.85	0.86				Low	2.87	0.94		
10	High	4.19	0.68	7.944	0.000	**26**	High	4.23	0.61	12.891	0.000
	Low	2.87	1.00				Low	2.25	0.94		
11	High	4.30	0.57	10.649	0.000	**27**	High	4.36	0.48	9.546	0.000
	Low	2.83	0.83				Low	2.89	1.01		
12	High	4.17	0.73	11.506	0.000	**28**	High	4.26	0.56	7.737	0.000
	Low	2.30	0.93				Low	3.06	0.99		
13	High	2.66	1.11	0.252	0.801	**29**	High	4.36	0.56	10.312	0.000
	Low	2.60	1.20				Low	2.98	0.80		
14	High	4.13	0.62	7.171	0.000	**30**	High	4.19	0.71	9.566	0.000
	Low	2.91	1.08				Low	2.75	0.83		
15	High	4.28	0.77	7.924	0.000	**31**	High	4.40	0.77	7.627	0.000
	Low	2.74	1.20				Low	3.11	0.95		
16	High	4.30	0.61	9.591	0.000	**32**	High	4.01	0.54	10.314	0.000
	Low	2.74	1.02				Low	2.55	0.89		

$^{*}p<0.01$. $^{**}p<0.05$; n= 54 for all the comparisons and standard deviation (sd)=106

Table 3: (continues):t-test Results of ASTUEP-TF Items for Unrelated Samples

Item Number	Group	$\overline{X}$	SD	t	p	Item Number	Group	$\overline{X}$	SD	t	p
33	High	4.19	0.62	10.232	0.000	**49**	High	4.28	0.60	9.669	0.000
	Low	2.62	0.92				Low	2.83	0.91		
34	High	4.26	0.71	6.014	0.000	**50**	High	4.11	0.61	9.812	0.000
	Low	3.36	0.83				Low	2.68	0.87		
35	High	4.45	0.54	8.026	0.000	**51**	High	3.96	0.65	6.590	0.000
	Low	3.34	0.85				Low	2.87	1.02		
36	High	4.01	0.75	8.231	0.000	**52**	High	4.25	0.65	8.066	0.000
	Low	2.64	0.96				Low	2.96	0.96		
37	High	3.15	1.08	4.520	0.000	**53**	High	3.68	0.94	5.787	0.000
	Low	2.19	1.11				Low	2.66	0.88		
38	High	3.75	1.07	6.574	0.000	**54**	High	2.71	1.12	-1.448	0.151
	Low	2.34	1.14				Low	3.02	1.03		
39	High	4.60	0.57	8.110	0.000	**55**	High	4.28	0.53	9.324	0.000
	Low	2.94	1.38				Low	2.98	0.87		
40	High	4.36	0.56	11.022	0.000	**56**	High	2.74	0.98	-4.121	0.000
	Low	2.81	0.86				Low	3.45	0.80		
41	High	4.49	0.72	4.854	0.000	**57**	High	4.36	0.56	6.820	0.000
	Low	3.72	0.91				Low	3.40	0.86		
42	High	4.32	0.58	9.366	0.000	**58**	High	4.25	0.59	10.576	0.000
	Low	2.92	0.92				Low	2.70	0.89		
43	High	4.25	0.76	7.262	0.000	**59**	High	4.09	0.66	9.302	0.000
	Low	3.08	0.90				Low	2.62	0.95		
44	High	3.96	0.73	7.541	0.000	**60**	High	4.30	0.67	10.160	0.000
	Low	2.55	1.15				Low	2.74	0.90		
45	High	4.23	0.47	9.941	0.000	**61**	High	2.28	1.03	-2.365	0.020
	Low	2.62	1.08				Low	2.74	0.94		
46	High	3.75	1.02	7.414	0.000	**62**	High	4.00	0.62	9.688	0.000
	Low	2.23	1.10				Low	2.64	0.81		
47	High	3.85	0.89	6.411	0.000	**63**	High	4.26	0.52	10.742	0.000
	Low	2.74	0.90				Low	2.81	0.83		
48	High	4.08	0.78	6.849	0.000	**64**	High	4.41	0.50	10.065	0.000
	Low	2.89	0.99				Low	2.83	1.03		

$^{*}p<0.01$. $^{**}p<0.05$; n= 54 for all the comparisons and standard deviation (sd)=106

Table 3: (*continues):* t-test Results of ASTUEP-TF Items for Unrelated Samples

Item number	Group	$\overline{X}$	SD	t	p	Item Number	Group	$\overline{X}$	SD	t	p
65	High	4.60	0.49	6.679	0.000	**68**	High	4.02	0.66	8.143	0.000
	Low	3.81	0.71				Low	2.87	0.78		
66	High	4.36	0.65	6.654	0.000	**69**	High	4.19	0.68	6.181	0.000
	Low	3.43	0.77				Low	3.11	1.07		
67	High	4.09	0.71	8.157	0.000	**70**	High	4.11	0.75	9.123	0.000
	Low	2.75	0.96				Low	2.38	1.16		

*p<0.01. **p<0.05; n= 54 for all the comparisons and standard deviation (sd)=106

After factor analysis has been done for 66 items, 25 items (item number 4, 5, 7, 10, 22, 23, 25, 29, 30, 31, 33, 34, 35, 36, 39, 42, 43, 47, 48, 52, 53, 58, 60, 62, 66) have been excluded from the analysis due to the fact that they have low communalities and they give relatively close high value for more than one factor. After that, using varimax rotation technique for 41 items, explatory factor analysis has been done.

The Bartlett Test of Sphericity and the KMO test are also performed to check whether the correlation matrix can be presumed to be the identity. The KMO and the Bartlett test result is given in Table 4 to indicate the appropriateness of data to the factor analysis. As seen in Table 4, the structure of the data is appropriate for doing factor analysis.

Table 4: ASTUEP KMO and Bartlett Test Result (41 items)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.923
Sphericity Test by Bartlett	Approximate chi-square	4723.598
	Standard deviation	820
	P	0.000

According to the results of varimax rotation applied to ASTUEP-TF, the items whose factor load higher than 0.30 have been selected. It is observed that items come together under 8 factors. Those items, factor names, reliability of each factor, standard

deviation, item total correlation, common variance, original factor loadings before rotation, and post rotation factor loadings are given in Table 5. When Table 5 is examined, all items are found to have communalities higher than 0.48. Furthermore, first factor values of all items in scale are more than 0.392 and variances of the first factors before rotation are more than 36.74% which show that the scale has a general factor. This finding is supported by the scree plot of eigenvalues (Figure 1). In the scree plot, it appears as if one dominant factor is present.

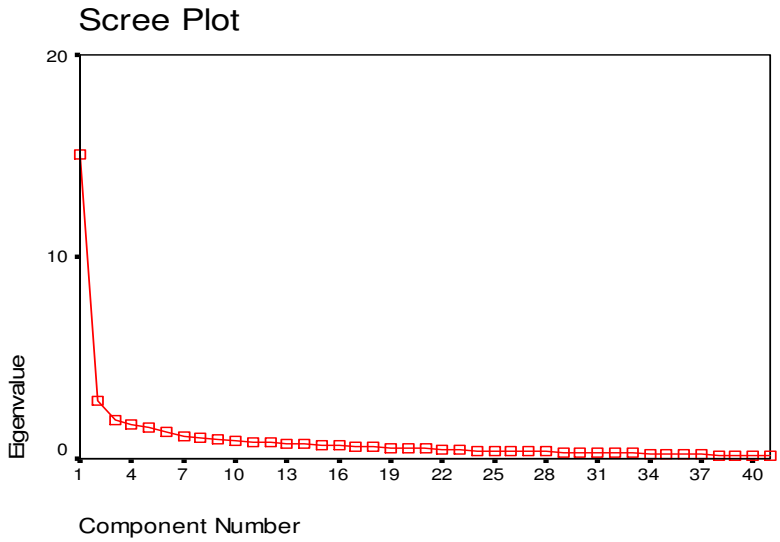

Figure 1. Scree Plot of Eigenvalues for ASTUEP-TF

The total variance explained by the first factor is 11.52% and all factors explain 64.66% of the total variance. It is found that the first factor has 9 items, the second has 8 items, the third has 6 items, the fourth has 5 items, the fifth has 4 items; the sixth, seventh and the eighth have 3 items. Item-total correlations change between 0.415 and 0.737 and these values indicate that correlations are sufficiently high. Reliability analyses have been carried out through Cronbach alpha. Cronbach alpha for the whole scale is found to be

7540.954. Cronbach alpha values for the subscales are 0.903, 0.873, 0.856, 0.803, 0.751, 0. 754 and 0.690 respectively. These findings indicated that the reliability of the scale is high.

Considering the results of the t-test, correlation, and factor analyses, it has been found appropriate to constitute ASTUEP with 41 items.

Table 5: ASTUEP Factor Analysis Results (41 Items)

Factors and Items	$\bar{x}$	Std. dev.	Item total correlation	Common variance	Factor 1-load value	Post rotation factor load
1. factor: (Cronbach α=0.903)						
Item 28: I believe that electronic portfolio study improves the feeling of curiosity of the students.	3.69	0.89	0.628	0.729	0.647	0.729
Item 63: Electronic portfolio study increases the motivation of the students towards courses.	3.62	0.86	0.728	0.686	0.745	0.641
Item 27: I think electronic portfolio study will make the courses more lively.	3.69	0.92	0.691	0.648	0.705	0.630
Item 64: I think electronic portfolio study will be entertaining.	3.72	0.93	0.712	0.733	0.724	0.628
Item 51: Electronic portfolio study improves the critical thinking abilities of the students.	3.43	0.90	0.523	0.545	0.527	0.594
Item 68: Electronic portfolio study improves the problem solving skills of an individual.	3.48	0.84	0.611	0.647	0.628	0.570
Item 59: Electronic portfolio study is a permanent method in acquiring the related target behaviors.	3.47	0.92	0.670	0.593	0.687	0.493
Item 40: Electronic portfolio study keeps the interest towards the course continuous.	3.61	0.92	0.737	0.686	0.750	0.487
Item 11: Electronic portfolio study increases my interest towards the course.	3.62	0.87	0.707	0.649	0.714	0.458
2. factor: (Cronbach α=0.873)						
Item 15: Electronic portfolio study is an opportunity for the teacher to identify the students in many aspects.	3.72	1.12	0.605	0.713	0.601	0.783
Item 2: I believe that electronic portfolio study will make the teacher-student communication more effective.	3.39	1.19	0.586	0.683	0.580	0.663
Item 14: I think electronic portfolio study is important for the teacher to observe and evaluate the improvements of the students objectively.	3.71	0.94	0.498	0.547	0.499	0.660
Item12: Electronic portfolio study improves the students' skill of expressing their feelings and thoughts.	3.41	1.12	0.692	0.687	0.699	0.628
Item 17: Electronic portfolio study improves the feeling of responsibility of an individual.	3.84	0.89	0.615	0.620	0.625	0.603
Item 16: Electronic portfolio study improves the creative thinking abilities.	3.68	1.00	0.641	0.602	0.652	0.557
Item 1: Electronic portfolio study maintains the permanence of the learning.	3.77	0.97	0.583	0.479	0.589	0.508
Item 6: Electronic portfolio study is an indispensable period in the education of pre-service teachers.	3.12	1.01	0.642	0.536	0.642	0.450
3. factor: (Cronbach α=0.856)						
Item 70: I'd like to prepare electronic portfolio in practical teaching course.	3.25	1.19	0.566	0.663	0.548	0.740
Item 38: I'd like to prepare electronic portfolio in school experience course.	3.12	1.21	0.418	0.625	0.392	0.739
Item 44: I wouldn't like to prepare electronic portfolio if I am not bound to do.	3.24	1.08	0.585	0.675	0.572	0.645
Item 26: In my opinion professional development of the pre-service teachers should be monitored through electronic portfolios in all education faculties.	3.14	1.16	0.643	0.661	0.632	0.634
Item 21: I'd like to prepare electronic portfolio in all courses.	2.91	1.09	0.651	0.650	0.633	0.625
Item 45: Preparing electronic portfolio in all courses bothers me.	3.41	1.00	0.677	0.678	0.665	0.619

Table 5 (continues): ASTUEP Factor Analysis Results (41 Items)

Factors and Items	$\bar{x}$	Std. dev.	Item total correlation	Common variance	Factor 1-load value	Post rotation factor load
4. factor: (Cronbach α=0.803)						
Item 8: I think electronic portfolio study will slow down the pace of the courses.	3.67	0.93	0.527	0.621	0.519	0.732
Item 20: I think preparing electronic portfolio is not a practical method in monitoring the learning of the students.	3.67	0.96	0.624	0.705	0.625	0.666
Item 18: I think electronic portfolio study will prevent the courses from completing on time.	3.42	0.91	0.415	0.554	0.403	0.646
Item 19: The idea of preparing electronic portfolio does not appeal to me.	3.54	0.98	0.668	0.641	0.665	0.633
Item 9: I don't believe electronic portfolio study will increase the success in courses.	3.68	1.09	0.599	0.517	0.600	0.520
5. factor: (Cronbach α=0.803)						
Item 50: I don't think that I will evaluate the learning of my students through electronic portfolios in my teaching career.	3.37	0.92	0.650	0.724	0.646	0.616
Item 49: I don't believe that using electronic portfolios in the education of pre-service students is not important in their professional improvement.	3.69	0.92	0.660	0.644	0.664	0.608
Item 67: I don't think it is necessary for my students to prepare electronic portfolios in their teaching profession.	3.48	0.93	0.557	0.546	0.552	0.544
Item 32: I encourage my friends in preparing electronic portfolios.	3.38	0.90	0.636	0.619	0.633	0.507
6. factor: (Cronbach α=0.751)						
Item 65: Electronic portfolio study improves the interaction of the individual with the technology.	4.36	0.67	0.483	0.711	0.497	0.677
Item 55: Electronic portfolio study creates an opportunity for teachers and students to study systematically.	3.70	0.80	0.702	0.738	0.715	0.620
Item 57: Electronic portfolio study improves the research ability of an individual.	3.88	0.79	0.515	0.615	0.538	0.587
7. factor: (Cronbach α=0.754)						
Item 46: I think electronic portfolio study will minimize the social relationship among students.	2.90	1.19	0.572	0.742	0.549	0.734
Item 37: Electronic portfolio study pushes the students towards individualism.	2.54	1.09	0.416	0.736	0.392	0.717
Item 24: I believe electronic portfolio study will minimize the interaction among students.	3.03	1.20	0.588	0.707	0.573	0.692
8. factor: (Cronbach α=0.690)						
Item 69: I'd like to share my electronic portfolio with my friends.	3.80	0.91	0.539	0.688	0.547	0.643
Item 41: I find electronic portfolio study important in terms of storing the studies.	4.19	0.77	0.451	0.584	0.463	0.617
Item 3: I think electronic portfolio study will be effective in terms of student's monitoring and evaluating his/her self development in period.	4.15	0.89	0.534	0.684	0.535	0.603

Another study for the construct validity of ASTUEP-TF aims to examine the internal consistency by taking participants who are at the extreme in terms of instrument scores and test total score measures into the comparison group. This examination is done in order to see if the scores obtained from ASTUEP-TF can discriminate participants with high level attitude towards using e-portfolios from participants with low level attitudes. 27% of the group (53 pre-service student-teachers) whose participants have got the highest score from ASTUEP-TF with 70-items and 27% of the group (53 pre-service student-teachers) whose participants have got the lowest score are identified and t-test for unrelated samples is used to examine if there is any significant difference in these two groups' mean scores.

According to the test result, a significant difference has been observed in the mean score of the respondents in the high level ($\bar{x}$=171.45) and mean score of the respondents in the low level ($\bar{x}$=24.943) [t_{104}=; $p<0.05$). This finding shows that ASTUEP-TF can be accepted as a valid instrument to measure the participants' attitudes towards the use of e-portfolio.

II.4. Equality of the Experimental and Control Groups

Before the formation of the groups, a meeting with the supervisors at the Foreign Language Education Department of Mersin University was held. In the meeting, information about the participants, the schools the participants were going to teach at, the curriculum and the assessment technique for the Practice Teaching course was given. The researcher took advantage of this information while preparing the weekly tasks.

The pre-service student-teachers in the experimental group were expected to implement the tasks of the Practice Teaching course by using e-portfolio while the pre-service student-teachers in the control group were expected to implement the tasks of the

Practice Teaching course in weekly paper-based portfolio without using e-portfolio. As the subject of the research is about e-portfolio, participants in the experimental group were expected to have basic computer literacy such as using Microsoft Office tools and internet application. Therefore, the Basic Computer Literacy Questionnaire (see Appendix I) including six questions about their existing literacy was applied to all pre-service student-teachers who registered university in 2006-2007 education term. After the questionnaire was applied, the answers were examined in the light of it and the groups were formed as experimental and control. This formation based on the extent of pre-service student-teachers' literacy skills. That is, pre-service student-teachers who like using computers and who know how to use it (e.g., sending mails, searching through the net and doing assignment on the computer) were placed in the experimental group, pre-service student-teachers who do not know how to use it and do not like using it were placed in the control group. In this way, twenty-three pre-service student-teachers were placed in the experimental and control group respectively.

In order to specify whether the experimental or control groups are alike, three different studies were done. The first of them was examining if there is any significant difference in the mean score for attitude obtained from Attitude Scale Towards Use of Electronic Portfolio (ASTUEP) given to groups as pretest.

Therefore, primarily outlier analysis related to the scale scores of the pre-service student-teachers in the experimental and control groups was done. When the potential outliner was identified, that value was excluded from the group, and outliner test was given again. This procedure was repeated until no additional outliners were detected. In relation with the outlier analysis results, it was decided to exclude one pre-service student-teacher both from the experimental and from the control groups. The distribution

of the scale scores related to twenty-two pre-service student-teachers in the experimental and control groups were analyzed through Shapiro Wilks normality test. At the end of the analysis, Shapiro Wilks test result of the participants in the experimental group was found to be 0.990; while Shapiro Wilks test result of the participants in the control group was found to be 0.962. The distribution of the scores for both groups was determined as normal (α=0.05).

The mean score obtained from ASTUEP scores of the twenty-two participants in each group is 134.91 for the experimental group and 134.64 for the control group. The difference in mean scores was examined by using t-test for unrelated samples and no significant difference in attitude mean score of both groups was observed (t_{42}=-0.117; p>0.05). This finding indicates that at the beginning of the research both groups are equal in terms of their attitude towards the use of e-portfolios.

The second study to check the equality of the experimental and control group aims to establish whether there is a significant difference between pre-service student-teachers' academic achievement score averages until the spring semester 2007, or not. Mean obtained from the academic mean score of the pre-service student-teachers is 3.20 in the experimental group and 3.33 in the control group. There is no significant difference between groups' academic achievement score averages (t_{40}=1.653; p> 0.05). The finding indicates that participants of both groups are equal in terms of their academic achievement score averages at the beginning of the research.

The last and the third method ensuring the group equality was done by examining if there is any significant difference between the achievement scores of the participants in the School Experience II course which all of them took in the previous semester as a requisite for the Practice Teaching. As it is mentioned before, the Practice

Teaching is the stage where the teacher candidates have the chance to raise student-teacher confidence in the teaching as profession, enable them to gain some practical skills needed in their future role as a teacher, and enable them to take responsibility in the professional context. The mean score of the pre-service student-teachers' achievement score (grade) is 92.82 for the experimental group and 91.50 for the control group. The difference between these mean scores was analyzed by t-test for unrelated samples and no significant difference was found (t_{42}=0.695; p>0.05). This finding can suggest that both groups are alike in terms of achievement score (grade) in the School Experience II course.

II.5. Implementation

After grouping as experimental and control, the attitude scale was applied and it was used as a pretest. After the pretest was carried out, both groups were called to the meeting and the researcher explained what she expected from them in the second semester of the school year as pre-service student-teachers who were going to practice teaching in state schools in Mersin. The content of the Practice Teaching course was explained, also the requirement of the Practice Teaching course and essential criteria for assessment were mentioned. A list of activities which the participants were expected to carry out for each week at those schools was given to all of them and each activity (task) was explained in detail. The participants were also told that they were going to submit the activities they were going to do in the format of "task". The task consists of a lesson plan with attached teaching materials and self-evaluation.

After the explanation to the participants, the experimental group participants were called to another meeting and they were told that they were going to use e-portfolios so as to exhibit their reports online. The participants told that they were supposed to develop their own e-portfolios using Google Page Creator (GPC) in the first place. The

basic information was given to the pre-service student-teachers and it was also said that there was going to be a workshop where an educational technology expert from Mersin University was going to do hands-on presentation about how to use GPC to make a personal e-portfolio and to facilitate them to create their own page for online task display through e-portfolio. The implementation studies in the workshop are explained below together with some photos.

GPC is used as a database for creating e-portfolios. It is a free online tool used for creating and publishing web pages. This database was introduced to the participants in the experimental group during the workshop. At the beginning, participants were required to take a gmail account in order to have access into GPC.

Firstly, GPC is visited online; the sign of "I'm ready to create my page" appears. While creating the pages, many choices are given to choose. There are many choices in different looks. Any form may be elected through "choose look." Secondly, the layout is elected. Everything can be written in these layouts. GPC presents several buttons like in Microsoft Word such as font, size etc. In addition to this, there are key buttons like preview, publish, link and back to site manager. Back to site manager provides the user with the chance to go back to previous process.

While the page is created, GPC user has a chance either to preview or publish what he/she has done. If needed, the items can be uploaded. Following the steps, the researcher created her own e-portfolio (see Appendix IV). Meanwhile, the participants in the experimental group created their e-portfolios (see Appendix V). They wrote a short introduction of themselves, added their CVs, links, favorite quotations, pictures and photos.

During the workshop, all participants of the experimental group were placed in the computer lab of Mersin University. The expert instructed them about what to do first by explaining and then showing it with the aid of an OHP.

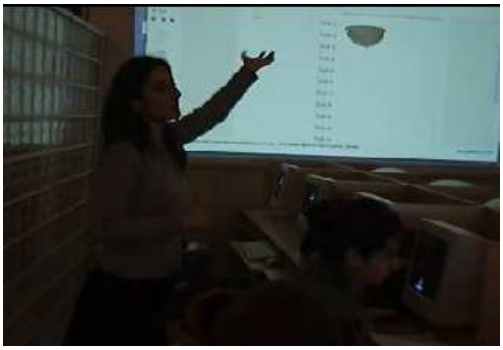


Figure 2. GPC Workshop with the experimental group

The participants all created e-portfolios under anonymous nicknames to be confidential. The nicknames and the real names of the participants were listed so that the nicknames would be known by the researcher and they would be kept as confidential in case this could create a problem for the cooperation between the faculty and the state schools.

Figure 3. GPC Workshop with the experimental group

At the end of the workshop, the participants were asked to publish their reports online for the following week task submission. After the first week, the meeting was arranged again with the experimental group of participants and they were asked if they had had any problems to prepare their tasks and publish them online. Each of the e-portfolio was checked if it was seen online and if the documents could be opened up. These kind of technical checkups were done regularly after the deadline of the each task submission via emailing. The researcher checked if there was any technical problem that the participants were having and confirmed them via emails or if any complicated problem arose, the researcher and pre-service student-teachers got together in the office hours of to work on the technical problem.

The following week after the workshop, the weekly tasks were sent to the experimental group through email and they were given to the control group as handouts (see Appendix VI). At the beginning of the research, the weekly tasks were composed of eight weeks. However, at the end of the research, the pre-service student-teachers voluntarily wanted to add an additional task. Thus, the weekly tasks consisted of nine weeks. In the first two weeks, participants were required to observe the classroom teacher and fill in the classroom teacher observation checklist and write about his/her preparation before the class, his/her performance during the class and his/her action after the class (see Appendix VII). In the third, fourth, fifth and the sixth weeks participants were required to fulfill skill based mini-lessons. In the seventh week, they taught grammar-focus mini lessons. In the eighth week, participants made arts & crafts activities with the students in the classroom and in the ninth week, pre-service student-teachers chose what to teach.

At the end of each weekly task, participants were expected to write about their preparation before the class, their performance during the class (the strengths and

weaknesses) and their action after the class. The participants had to follow classroom teacher's topics; therefore, each task was done not in the assigned order by the researcher. The researcher, classroom teacher and pre-service student-teacher decided which task should be done each week. As the semester is composed of 13 weeks, the participants of both experimental and control groups were observed in the assigned state schools because of the official reasons for the rest of the weeks.

The researcher prepared a rating scale called Supervisor Observation Points (see Appendix VIII) to score each task. Every task was scored by the researcher using the rating scale. Nevertheless, classroom teacher observation checklist was not included while calculating the academic achievement score. Because it was composed of criteria to assess pre-service student-teachers'classroom teachers. Through this checklist, pre-service student-teachers could learn which criteria were significant in being a classroom teacher and therefore they were informed that they could take into consideration the criteria in the checklist while teaching. The mean score of three tasks was accepted as midterm and the mean score of four tasks was accepted as final exam. Academic achievement score (AAS) is obtained by taking into consideration 40% of the midterm and 60% of the final exam. (Scoring had been done according to Mersin University official scoring system. Academic achievement score is assessed over 100 total points in Mersin University.)

While e-portfolio study was going on with the experimental group, the control group was called to the office hour meetings at the same frequency with the experimental group (after the deadline of each task) as to check if they submitted their tasks or not and if there was any problem about teaching, preparing written tasks, etc. The participants in the experimental group wrote a short introduction of themselves, added their CVs, links, favorite quotations, pictures and photos. They submitted their tasks online and the control

group submitted their tasks to the researcher in their office hours vis-à-vis (see Appendix IX). Apart from the medium of the task submission, the practice teaching was carried out at the same level in terms of requirements, implementation and assessment criteria. In the experimental group, feedback was given to the participants online and they displayed it with the related tasks done. In addition to the researcher's feedback, pre-service student-teachers in the experimental group could have the chance to observe their peers through e-portfolios and give feedback or opinion about the following task. Thus, they uploaded their peer feedback. On the other hand, in the control group, the feedback was given by the researcher both orally in the office hours meeting or written on their tasks submitted. After all tasks were submitted, all participants were called again and asked to take the posttest.

E-portfolios can make it easier for the experimental group participants to share, update or store their teaching materials. It may be said that preparing e-portfolios could improve professional development in terms of facilitating technological competence and improving attitudes positively toward the use of e-portfolio.

II.6. Data Analysis

ASTUEP was applied to both experimental and control groups at the beginning of the research as pretest. Then participants who were in the experimental group were given the Practice Teaching course through the use of e-portfolio by the researcher. At the end of the semester when all participants fulfilled the requirement of the Practice Teaching course, both groups were again given ASTUEP as posttest. As the measures of both groups were repeated, two-way ANOVA with repeated measures was used to examine whether there was any difference between the attitudes of the experimental and control groups towards the use of e-portfolio in pre and post tests. (Büyüköztürk, 2002; Kalaycı, 2005).

Necessary assumptions were tested if they were sufficient to carry two-way ANOVA as an initial step of data analysis. The first of the assumptions is that "dependent variable has at least a characteristic of interval scale" (Büyüköztürk, 2002). The dependent variable of this study is the attitudes of the pre-service student-teachers towards the use of e-portfolios. Therefore, this assumption had been verified since the attitude scores obtained from the data collection instrument (ASTUEP) indicated the characteristic of interval scale.

The second assumption of the analysis is that "the scores belonging to the dependent variable presents normal distribution in each group" (Büyüköztürk, 2002). In the research, the normality of the distribution of the scores for each group was examined by Shapiro-Wilk test and the result is given in Table 6. When Table 6 is examined, the attitude score distribution for both groups is seen to be normal.

Table 6. Shapiro-Wilk Normality Test Result

Group	Test	W	sd	p
Experimental Group	Pre-test	0.990	22	0.997
	Post-test	0.961	22	0.518
Control Group	Pre-test	0.962	22	0.530
	Post-test	0.986	22	0.984

The third assumption of two-way ANOVA with repeated measures is that "the variance of the concurrent test scores of the groups is equal" (Büyüköztürk, 2002). To check this assumption, Levene test was used to control the variance homogeneity of groups to be compared. When pretest ($F_{1,42}$=0.273, p=0.604) and posttest scores ($F_{1,42}$=1.923, p=0.6173) were taken into account, the variance was accepted as equal and the third assumption, thereby, proved to be true.

The fourth and the last assumption is that "groups' covariances are equal to measures for dual group" (Büyüköztürk, 2002). Box's M statistics was used to check the

coefficient of covariance equation and M statistics was found to be 3.527 and probability value for this statistics is p=0.341. The value proves that covariance homogeneity is validated. The significance of the difference related to the achievement scores of the pre-service student-teachers in the experimental and control groups related to the Practice Teaching course have been analyzed through unrelated samplings for t-test.

After the four assumptions were met, two-way ANOVA with repeated measures were used to show the relationship between dependent and independent variables.

CHAPTER III

III. FINDINGS AND DISCUSSIONS

This section presents the findings and interpretations related to the research questions. The main purpose of this study was to identify the attitudes of the pre-service student-teachers in the experimental group towards the use of e-portfolio; hence, ASTUEP was applied to all the participants both in the experimental and control group as pretest and posttest. Another main purpose was to see whether e-portfolio implementation increases the achievement scores of the pre-service student-teachers. Therefore, two groups were formed as experimental and control. The pre-service student-teachers in the experimental group created their own e-portfolios while the pre-service student-teachers in the control group prepared paper-based portfolios. Statistical analyses were done to find an answer to two research questions throughout the study. The findings show us that although participants in the control group participated actively, constructed knowledge, and made reflections about their teaching like the participants in the experimental group, the participants in the experimental group had the chance of teaching and learning through technology which enhance their professional development, getting feedback, updating and uploading the documents to their e-portfolios, modifying their e-portfolios like adding CVs, photos and pictures, being more self-confident as they could increase their technological competence and enjoying the process while dealing with an innovative method for their future career.

III.1. Findings and Discussion Related to the First Research Question

"Do the attitudes of English pre-service student-teachers differ according to their participation in e-portfolio implementation in the Practice Teaching course?"

In order to analyze the differences between the attitudes of English pre-service student-teachers in each group towards the use of e-portfolio, two-way analysis of variance was done. The statistics received from ASTUEP, applied to the pre-service student-teachers as pretest and posttest, are given in Table 7.

Table 7: Attitude Scale Towards The Use of Electronic Portfolio Pretest-Posttest Statistics

Group	Test	Mean	Std. Deviation	N
Experimental	pretest	134.91	7.98	22
	posttest	177.45	12.58	22
	total	156.18	23.90	44
Control	pretest	134.64	7.42	22
	posttest	134.36	18.38	22
	total	134.50	13.86	44
Total	pretest	134.77	7.61	44
	posttest	155.91	26.78	44
	total	145.34	22.27	88

According to Table 7, ASTUEP posttest mean score of the pre-service student-teachers in the experimental group (177.45) seems greater than pretest mean score (134.91); ASTUEP posttest mean score of the pre-service student-teachers in control group (134.36) seems lower than pretest mean score (134.64). Without making distinction as pretest and posttest; it is observed that ASTUEP mean score of the pre-service student-teachers in the experimental group (156.18) is quite greater than mean score of the pre-service student-teachers in the control group. (134.50).

To determine whether these observed distinctions are significant statistically, two-way analysis of variance is done and analysis results are given in Table 8.

Table 8: Two Way Analysis of Variance For Repeated Measurements

Source of Variability	KT	Sd	KO	F	p
Between groups	19244.772	43			
Group (E/C)	10342.227	1	10342.227	48.847	0.000*
Error	8892.545	42	211.727		
Within groups	23931.000	44			
Test (P/P)	9828.409	1	9828.409	102.713	0.000*
Group*Test	10083.682	1	10083.682	105.380	0.000*
Error	4018.909	42	95.688		
Total	43175.772	87			

*p<0.01

According to Table 8, there is a significant difference between the attitude mean scores of the experimental group (156.18) and the control group (134.50). The attitudes of the pre-service student-teachers towards the use of e-portfolios both in the experimental and control groups indicate a significant difference without making before or after course distinction (F_{1-42}=48.847, p<0.01). It can be said that the attitudes of the pre-service student-teachers in the experimental group towards the use of e-portfolios are higher than the attitudes of the pre-service student teachers in the control group.

Table 8 indicates that there is a significant difference between the mean scores of the attitude scale (pretest) (134.77) of the pre-service student-teachers which is applied before the Practice Teaching course and mean scores of the attitude scale (posttest) (155.91) which is applied after the Practice Teaching course (F_{1-42}=102.713, p<0.01). Regardless of the type of the group, we can say that the attitudes of pre-service student-teachers towards the use of e-portfolio changed in relation to the experimental process.

The factors which show the measurement in different groups (experimental/control) and at different times (pretest/posttest) indicate that the interaction related to the attitudes of the pre-service student-teachers towards the use of electronic portfolios is significant (F_{1-42}=105.380, p<0.01). According to this finding, the observed change in the attitudes of the pre-service student-teachers who took the course by the help

of e-portfolio applications towards the use of e-portfolios prior to the experimental process is different from the observed change in the attitudes of the pre-service student-teachers who took the course in accordance with the traditional methods. In other words, the attitudes of the pre-service student-teachers in the experimental and control groups show difference according to the experimental process; that is, whether the course is performed by the application of a new teaching method or not.

Tukey test has been done to determine which dual group differences cause the interaction. At the end of the test it has been found out that the observed difference between the pretest and the posttest mean score of the experimental group and the posttest mean score of the experimental group and the pretest and posttest mean score of the control group is significant.

According to the findings, it can be said that there is a positive improvement in the attitudes of the pre-service student-teachers who took the course with the new method while the attitudes of the pre-service student-teachers who took the course with the traditional method stayed at the same level.

The research design providing an opportunity of comparing the experimental and control groups through the pretest may give us a chance to say that the observed difference in the measurements of the posttest of both groups stems from the experimental process if the groups were alike in the beginning of the research. In this research, it has been determined that the attitude scores of both the experimental and control groups towards the use of e-portfolios were the same at the beginning in other words these findings point out that the pre-service student-teachers in the experimental and control groups may be accepted as equal at the beginning. Based on these findings, the observed difference between the final test measurements of both groups stems from the use of e-

portfolio in the experimental group; in other words, it can be considered that to continue the Practice Teaching course by the help of e-portfolio has a positive effect on the attitudes and academic successes of the pre-service student-teachers.

To take a course supported by e-portfolios makes a difference in the attitudes of the pre-service student-teachers towards the use of e-portfolios. In this situation, it can be stated that to continue the course with the new method is an important factor in improving the attitudes of the pre-service student-teachers towards the use of e-portfolios. This interpretation of the finding is similar to the study by Nahony (2004). As he finds out, the use of e-portfolio creates innovative learning opportunities, which leads to a positive attitude not only to learning in general but to also learning the subject matter in an innovative way.

The findings from the first research question also go parallel with the study by Barlett and Sherry (2004). They have found out that the use of e-portfolio with pre-service student-teachers has brought in a positive attitude towards using e-portfolios, for the pre-service student-teachers learn directly about their teaching career and in this research it has been highlighted that pre-service student-teachers have learnt about the Practice Teaching course (content-knowledge) plus technical skills. Additionally, as Fraizer and Paulson (1992) point out, the sense of confidence might also have an influence on their affective domain and they might like the idea of e-portfolio use in their course as they feel safe and confident in using it.

III.2. Findings and Discussion Related to the Second Research Question

"Do the achievement scores of English pre-service student-teachers differ according to their participation in e-portfolio implementation in the Practice Teaching course?"

The significance of the difference related to the achievement scores of the pre-service student-teachers in the experimental and control groups related to the Practice Teaching course have been analyzed through unrelated samplings for t-test. The results of the t-test are given in Table 9.

Table 9: Descriptive Statistics Related to the Success Scores of the Practice Teaching Course

Group	N	Mean	Standard Deviation	t	Sd	p
Experimental	22	94.68	3.18	3.151	42	0.003*
Control	22	87.50	10.21			

*p<0.05

According to Table 9, the mean score of the pre-service student-teachers' success in the experimental group for the Practice Teaching course (94.68) is greater than the mean score of the pre-service student-teachers' success in the control group (87.50) (t_{42}=3.151, p<0.05).

The mean score in Table 9 indicates that pre-service student-teachers in the experimental group are more successful than the pre-service student-teachers in the control group. This result implies that achievement score of the pre-service student-teachers at the end of the process is higher because through e-portfolio implementation, they reflect on teaching, become more conscious of the theories and the assumptions and they develop a sense of self-assessment (Zeichner & Wray, 2001). The result confirms that when e-portfolios are used to motivate pre-service student-teachers to learn and involve them in

the processes of learning, satisfaction of the performance, skills and competencies as outcomes is higher. The success based on e-portfolio assessment could be an indicator of the practice quality as mentioned by Gülbahar and Köse (2006), which serves to decision-making processes for the certification competencies (Wilkerson and Lang, 2003).

The first research question aimed to identify the attitudes of the pre-service student-teachers towards the use of e-portfolio; therefore, ASTUEP was used as a data collection instrument in order to seek a response. The second research question aimed to find whether e-portfolio implementation in the Practice Teaching course makes any difference in the academic achievement scores of the pre-service student-teachers. While creating e-portfolios, the pre-service student-teachers in the experimental group improved their technological skills like learning how to convert a Word document into Adobe Reader (Pdf) format, uploading a document, making hyperlinks and so forth. Apart from uploading lesson plans, self-evaluation, mentor and peer feedback, the pre-service student-teachers in the experimental group designed their own e-portfolio in accordance with their preferences. When the participants in the experimental group got feedback from the researcher, they had the chance to update and upload the material again. They could show their e-portfolios to their classroom teachers, parents and friends. These experiences can motivate the pre-service student-teachers in the experimental group which result in positive attitudes towards the use of e-portfolio and higher academic achievement scores.

CONCLUSION

The e-portfolio implementation has become popular in teacher education programs in recent years (Barrett, 2003; Montgomery, 2003). Various researchers have found that e-portfolios allow pre-service student-teachers to promote and document reflective practice and to integrate knowledge, skills, and dispositions related to educational and information technology (Adcock, 2003; Bartlett, 2002; Britten et al., 2003; Ring & Foti, 2003). The studies in the literature have highlighted the benefits of the e-portfolio implementation in teacher education. It is intended to observe the implications of the e-portfolio studies from the eyes of the pre-service student-teachers, reviewing their attitudes about it. Therefore, the main concern of the present study is to examine the attitudes of pre-service student-teachers of English Language Education towards e-portfolio implementation in the Practice Teaching course through ASTUEP prepared by the researcher and the achievement score of the students at the end of the e-portfolio implementation. It has been proposed that if pre-service student-teachers are involved in e-portfolio implementation and if they create their own e-portfolios and follow the course through their e-portfolios, they will develop positive attitudes towards the use of e-portfolio and they will be successful in the overall evaluation of the performance in the course.

The findings related to the first question show the attitudes that pre-service student-teachers have before and after the e-portfolio implementation. Before the implementation, it has been found that ASTUEP pretest mean score for the experimental (134.91) and the control group (134.64) is similar to each other. However, after the implementation the mean score for the experimental group rose up (177.45) whereas the pretest mean score for the control group remained similar to the pretest mean score, and the figure was even lower

(134. 36). The two-way analysis of variance was done to observe if the distinctions were statistically significant and the analysis showed that the attitudes of the pre-service student-teachers towards the use of e-portfolios in both experimental and control groups indicate a significant difference. That is to say, with the use of e-portfolio in the Practice Teaching course, the pre-service student-teachers in the experimental group have developed positive attitudes towards the e-portfolio implementation. The positive attitude could attribute to the experiences pre-service student-teachers had had while creating and publishing their e-portfolios. They designed their own e-portfolios as they preferred and they enhanced their professional development through technology. For instance, they converted Word files into Adobe Reader (Pdf) format, uploaded lesson plans, made hyperlinks, published mentor and peer feedback which may point that they could develop their technical skills while enjoying creating e-portfolios.

The investigation about the second question has proved that after the implementation, the achievement scores of the experimental group (the mean score is 94.68) has been greater than that of the control group (the mean score is 87.50) ($t42=3.151$, $p<0.05$). This finding indicates that pre-service student-teachers in the experimental group are more successful than the pre-service student-teachers in the control group in the overall assessment of the performance in the course. That the pre-service student-teachers have higher academic achievement scores could mean they were motivated as they have tried out a new method. Both affective factor (likeliness) and cognitive factor (new method of learning) could affect their academic achievement score.

On the whole, the present study suggested that the use of e-portfolios as an innovative implementation gives pre-service student-teachers the opportunity to develop their technological skills and combine it with their teaching experiences in the professional

development path. The data of the present study also support that creating e-portfolio improves the attitudes of the pre-service student teachers positively towards the use of e-portfolio which lead to higher academic achievement scores. Since it has been dealt with the attitudes towards the e-portfolio implementation and the achievement score at the end of the implementation, it is proven that the use of e-portfolios in the Practice Teaching course helps the pre-service student-teachers to adopt positive attitudes towards the e-portfolio implementation. The implementation can also affect pre-service student-teachers' affective manners and as a consequence they become successful. Based on the present study, it is recommended that English Language Teacher Education pre-service student-teachers can benefit from using e-portfolios and they can adopt positive attitudes and reach a high level of achievement score at the end of the process.

Further research could be conducted with the interactive software for e-portfolio creation as this study is based upon free, yet non-interactive system. The interactive environment allows immediate and multiple communication among the parties (pre-service student-teachers, peers and supervisors) in the system. Second future research could be designed for more parties such as faculty members, cooperating teachers, peers, pre-service students and supervisors in an interactive system. This could create a wide context for learning and displaying skills for teaching. Another further research may be to seek whether pre-service student-teachers use their e-portfolios in their job applications. The other concern for further research is to implement e-portfolio in sequential courses such as School Experience I, School Experience II and Practice Teaching in teacher education program to observe professional development through e-portfolio progressively.

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APPENDICES

Appendix I: **A questionnaire about computer literacy**

Appendix II: **The Attitude Scale Towards the Use of E-portfolio**

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Appendix I: A questionnaire about computer literacy

A QUESTIONNAIRE ABOUT COMPUTER LITERACY

1. Do you have your own computer?

a) Yes b) No

2. Have you ever taken any computer courses?

a) Yes b) No

3. Do you know how to use MS Word program?

a) Yes b) Partly c) No

4. Can you use applications (literature review etc.) on the internet?

a) Yes b) Partly c) No

5. Do you send or receive e-mail?

a) Yes b) Partly c) No

6. Is computer a part of your life?

a) Yes b) Partly c) No

Appendix II: The Attitude Scale Towards the Use of E-portfolio

AÇIKLAMA

Bu ölçme aracı, öğretmen adaylarının elektronik portfolyo çalışmalarına ilişkin duygu ve düşüncelerini ortaya koymak amacıyla geliştirilmiştir. Sizden istenen, her ifadeyi okuduktan sonra, ifadenin size uygunluk derecesini, Kesinlikle Katılmıyorum, Katılmıyorum, Kararsızım, Katılıyorum ve Tamamen Katılıyorum seçeneklerinden uygun olanın altına, (X) işareti ile belirtmenizdir.

Soruları içtenlikle ve eksiksiz cevaplamanız araştırmanın sürdürülebilmesi ve araştırmadan elde edilecek sonuçların doğru bir biçimde yorumlanabilmesi açısından önemlidir. Araştırmamıza katkınızdan dolayı şimdiden teşekkür ederim

Okt. Betül ARAP

ELEKTRONİK PORTFOLYO ÇALIŞMALARINA İLİŞKİN TUTUM ÖLÇEĞİ

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
1. Elektronik portfolyo çalışması öğrenmelerin kalıcılığını sağlar.					
2. Elektronik portfolyo çalışmasının öğrenci-öğretmen iletişimini daha etkili kılacağına inanıyorum.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
3. Elektronik portfolyo çalışmasının, süreç içerisinde öğrencinin kendi gelişimini izleyebilmesi ve değerlendirebilmesi açısından, etkili olacağını düşünüyorum.					
4. Öğrenmelerimin, hazırladığım elektronik portfolyolar aracılığıyla değerlendirilmesini **istemem.**					
5. Elektronik portfolyo hazırlama düşüncesi, derste başarısız olacağıma ilişkin kaygı düzeyimi arttırıyor.					
6. Elektronik portfolyo çalışması öğretmen adaylarının eğitiminde vazgeçilmez bir süreçtir.					
7. Elektronik portfolyo çalışmasının mesleki hedeflerimi belirlememe yardımcı olacağını düşünüyorum.					
8. Elektronik portfolyo çalışmasının derslerin işleyişini yavaşlatacağını düşünüyorum.					
9. Elektronik portfolyo çalışmasının derslerdeki başarıyı arttıracağına **inanmıyorum**.					
10. Elektronik portfolyo hazırlamak keyifli bir süreçtir.					
11. Elektronik portfolyo çalışması, derse olan ilgimi arttırır.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
12. Elektronik portfolyo çalışması, öğrencilerin duygularını ve düşüncelerini ifade etme becerilerini geliştirir.					
13. Elektronik portfolyo çalışması, öğrencinin çok daha fazla emek harcamasına neden olur.					
14. Elektronik portfolyo çalışmasının, öğretmenin öğrencilerin gelişimlerini yansız bir biçimde gözleyebilmesi ve değerlendirebilmesi açısından, önemli olduğunu düşünüyorum.					
15. Elektronik portfolyo çalışması, öğretmenin öğrencilerini pek çok yönden tanıyabilmesi için bir fırsattır.					
16. Elektronik portfolyo çalışması yaratıcı düşünme becerilerini geliştirir.					
17. Elektronik portfolyo çalışması bireyin sorumluluk duygusunu geliştirir.					
18. Elektronik portfolyo çalışmasının derslerin zamanında bitirilmesini engelleyeceğini düşünüyorum.					
19. Elektronik portfolyo hazırlama fikri bana hiç cazip gelmiyor.					
20. Elektronik portfolyo hazırlamanın öğrencilerin öğrenmelerinin izlenmesinde pratik bir yöntem **olmadığını** düşünüyorum.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
21. Tüm derslerde elektronik portfolyo hazırlamak isterim.					
22. Elektronik portfolyo çalışması, öğretmen adaylarının mesleki gelişimlerinin farkında olmalarını sağlar.					
23. Elektronik portfolyo çalışması öğretmen adaylarının öğrenmelerindeki eksiklikleri-yanlışlıkları görebilmelerine olanak sağlar.					
24. Elektronik portfolyo çalışmasının öğrenciler arasındaki etkileşimi azaltacağına inanıyorum.					
25. Elektronik portfolyo çalışmasının, kişinin ilgili alanlarda planlama, organize etme becerilerini geliştireceğine **inanmıyorum.**					
26. Bence eğitim fakültelerindeki tüm derslerde öğretmen adaylarının mesleki gelişimi elektronik portfolyolar aracılığıyla izlenmeli.					
27. Elektronik portfolyo çalışmasının dersleri daha renkli hale getireceğini düşünüyorum.					
28. Elektronik portfolyo çalışmasının öğrencilerin merak duygusunu geliştirdiğine inanıyorum.					
29. Elektronik portfolyo çalışması, öğrenmelerimde güçlü ve zayıf yanlarımı görmeme olanak sağlar.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
30. Sınıf içi etkinliklerde elektronik portfolyo kullanmanın gerekli olduğunu düşünüyorum.					
31. Elektronik portfolyo çalışmasının önemli olduğuna **inanmıyorum.**					
32. Arkadaşlarımı elektronik portfolyo hazırlamaları konusunda teşvik ederim.					
33. Öğretmenlik mesleğimde meslektaşlarımın da öğrencilerinin öğrenmelerinde elektronik portfolyodan yararlanmaları için çaba harcamam gerektiğini düşünüyorum.					
34. Elektronik portfolyo çalışmasının, öğrencinin yaptığı çalışmalarla ilgili daha hızlı geribildirim almasına olanak sağlayacağını düşünüyorum.					
35. Elektronik portfolyo çalışmasını zaman kaybı olarak görüyorum.					
36. Bence derslerde elektronik portfolyo çalışması **yapmamak** önemli bir kayıp değil.					
37. Elektronik portfolyo çalışması öğrencileri bireyselliğe iter.					
38. Okul Deneyimi dersinde elektronik portfolyo hazırlamak isterim.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
39. Bence her öğretmen adayı, en azından bir kez, elektronik portfolyo çalışması yapmalı.					
40. Elektronik portfolyo çalışması derse olan ilgiyi sürekli tutar.					
41. Elektronik portfolyo çalışmasını, yapılan çalışmaların elektronik ortamda saklanabilmesi açısından önemli buluyorum.					
42. Elektronik portfolyo çalışması öğrencinin sorumluluklarının bilincinde olmalarını sağlar.					
43. Elektronik portfolyonun etkili bir öğrenme-öğretme süreci olduğuna **inanmıyorum**.					
44. Zorunlu olmasam elektronik portfolyo hazırlamak istemem.					
45. Elektronik portfolyo çalışması yapmak bana sıkıntı verir.					
46. Elektronik portfolyo çalışmasının öğrenciler arasındaki sosyal ilişkileri azaltacağını düşünüyorum.					
47. Elektronik portfolyo çalışması öğrenmelerin günlük hayatta karşılıklarını bulmama olanak sağlar.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
48. Elektronik portfolyo çalışmasının, öğrencilerin öğrenmelerini, yaptıkları çalışmalara göre değerlendirmek adına güvenilir bir yöntem **olmadığını** düşünüyorum.					
49. Öğretmen adaylarının eğitiminde elektronik portfolyolardan yararlanmanın öğrencilerin mesleki gelişiminde önemli olduğuna **inanmıyorum.**					
50. Öğretmenlik mesleğimde öğrencilerimin öğrenmelerini, hazırlayacakları elektronik portfolyolar aracılığıyla değerlendirmeyi **düşünmüyorum.**					
51. Elektronik portfolyo çalışması, öğrencinin eleştirel düşünme becerilerini geliştirir.					
52. Elektronik portfolyo çalışması, öğretmenin, öğrencilerinin öğrenme düzeylerini daha iyi anlamasını sağlar.					
53. Elektronik portfolyo çalışması, öğrencilerin çalışmalara harcayacakları zamandan tasarruf etmelerine olanak sağlar.					
54. Elektronik portfolyo çalışması, yapılan çalışmaların kağıt kalemle raporlaştırılması yerine bilgisayar çıktıları şeklinde alınmasından ibarettir.					
55. Elektronik portfolyo çalışması, öğretmenlere ve öğrencilere sistemli çalışma olanağı sağlar.					

	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
56. Elektronik portfolyo çalışması, öğrencinin zamanının çoğunu bu uygulama için ayırmasına neden olur.					
57. Elektronik portfolyo çalışması, bireyin araştırma yeteneğini geliştirir.					
58. Elektronik portfolyo çalışmasını, öğretmen-öğrenci iletişimini sürekli tutması açısından önemli buluyorum.					
59. Elektronik portfolyo çalışması, ilgili hedef davranışların kazandırılmasında kalıcı bir yöntemdir.					
60. Öğretmenlik mesleğimde, öğrencilerime elektronik portfolyo çalışması yaptırmayı **düşünmüyorum**.					
61. Elektronik portfolyo çalışmasının, öğrencilerin derslerdeki gelişimleri konusunda yanıltıcı bilgi vereceğini düşünüyorum.					
62. Elektronik portfolyo çalışması, öğrenmelerimde karşılaştığım güçlükleri kolay aşmamı sağlar.					
63. Elektronik portfolyo çalışması, öğrencinin derse motivasyonunu arttırır.					
64. Elektronik portfolyo çalışmasının eğlenceli olacağını düşünüyorum.					

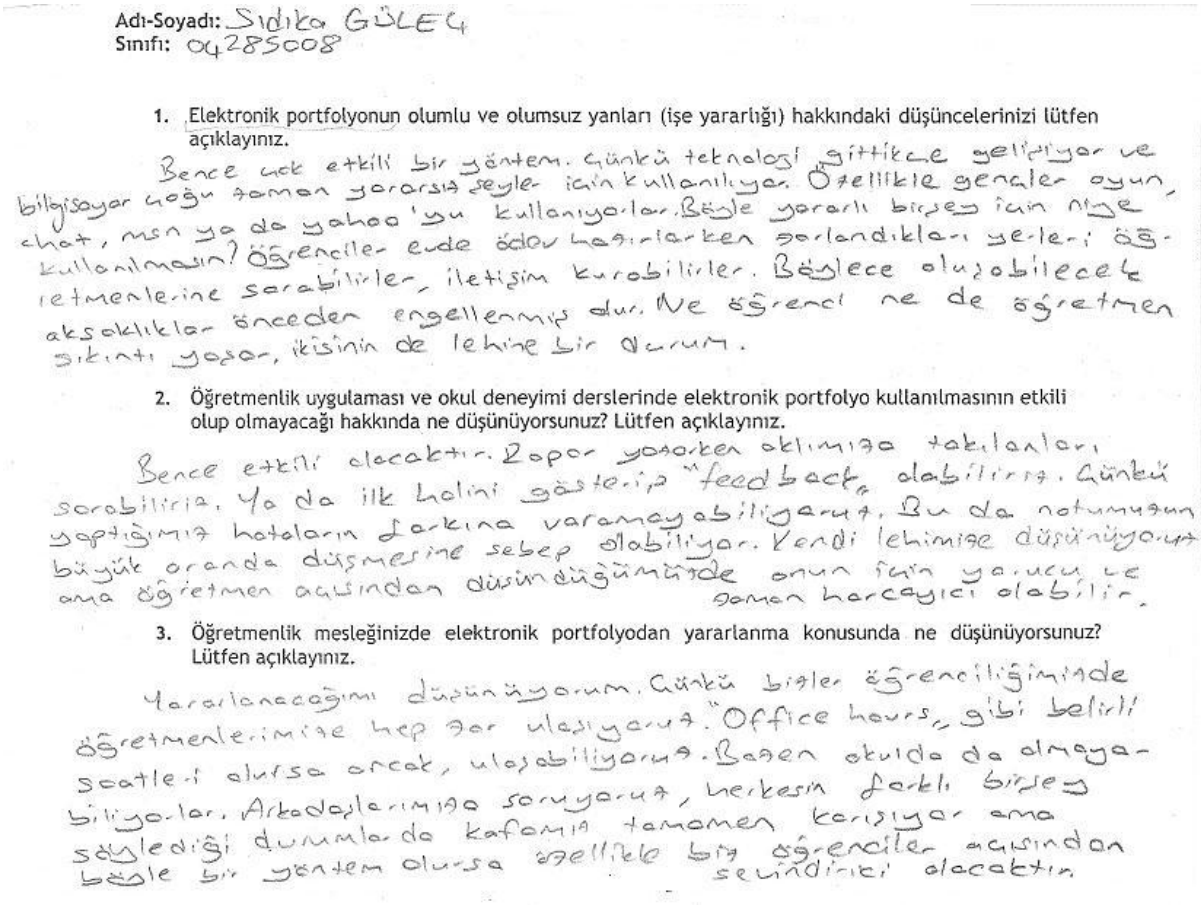
	KESİNLİKLE KATILMIYORUM	KATILMIYORUM	KARARSIZIM	KATILIYORUM	TAMAMEN KATILIYORUM
65. Elektronik portfolyo çalışması, bireyin teknolojiyle etkileşimini geliştirir.					
66. Elektronik portfolyo çalışması, kendi gelişimimi değerlendirmeme olanak sağlar.					
67. Öğretmenlik mesleğimde, öğrencilerimin elektronik portfolyo hazırlamalarını gerekli **görmüyorum.**					
68. Elektronik portfolyo çalışması, bireyin problem çözme becerilerini geliştirir.					
69. Hazırladığım elektronik portfolyo çalışmalarımı arkadaşlarımla paylaşmak isterim.					
70. Öğretmenlik Uygulaması dersinde elektronik portfolyo hazırlamak isterim.					

Appendix III: Open-ended questions

1. Elektronik portfolyonun olumlu ve olumsuz yanları (işe yararlılığı) hakkındaki düşüncelerinizi lütfen açıklayınız.

2. Öğretmenlik uygulaması ve okul deneyimi derslerinde elektronik portfolyo kullanılmasının etkili olup olmayacağı hakkında ne düşünüyorsunuz? Lütfen açıklayınız.

3. Öğretmenlik mesleğinizde elektronik portfolyodan yararlanma konusunda ne düşünüyorsunuz? Lütfen açıklayınız.



Adı-Soyadı: Sıdıka GÜLEÇ
Sınıfı: 04285008

1. Elektronik portfolyonun olumlu ve olumsuz yanları (işe yararlığı) hakkındaki düşüncelerinizi lütfen açıklayınız.

Bence çok etkili bir yöntem. Çünkü teknoloji gittikçe geliştiriyor ve bilgisayar çoğu zaman yararsız şeyler için kullanılıyor. Özellikle gençler oyun, chat, msn ya da yahoo'yu kullanıyorlar. Böyle yararlı birşey için niye kullanılmasın? Öğrenciler evde ödev hazırlarken sorlandıkları yerleri öğretmenlerine sorabilirler, iletişim kurabilirler. Böylece oluşabilecek aksaklıklar önceden engellenmiş olur. Ne öğrenci ne de öğretmen sıkıntı yaşar, ikisinin de lehine bir durum.

2. Öğretmenlik uygulaması ve okul deneyimi derslerinde elektronik portfolyo kullanılmasının etkili olup olmayacağı hakkında ne düşünüyorsunuz? Lütfen açıklayınız.

Bence etkili olacaktır. Rapor yazarken aklımıza takılanları sorabiliriz. Ya da ilk halini gösterip "feedback" alabiliriz. Çünkü yaptığımız hataların farkına varamayabiliyoruz. Bu da notumuzun büyük oranda düşmesine sebep olabiliyor. Kendi lehimize düşünüyoruz ama öğretmen açısından düşündüğümüzde onun için yorucu ve zaman harcayıcı olabilir.

3. Öğretmenlik mesleğinizde elektronik portfolyodan yararlanma konusunda ne düşünüyorsunuz? Lütfen açıklayınız.

Yararlanacağımı düşünüyorum. Çünkü bizler öğrenciliğimizde öğretmenlerimize hep zor ulaşıyoruz. "Office hours" gibi belirli saatler olursa ancak, ulaşabiliyoruz. Bazen okulda da olmayabiliyorlar. Arkadaşlarımıza soruyoruz, herkesin farklı birşey söylediği durumlarda kafamız tamamen karışıyor ama böyle bir yöntem olursa özellikle bir öğrenciler açısından sevindirici olacaktır.

Appendix IV: Researcher's e-portfolio

(Retrieved June 1, 2008, from http://betularap.googlepages.com)

E-portfolio samples for pre-service teachers

Mersin University- ELT Department

Practice Teaching Course

Home

CV

Methodology

Tasks

Pre-service students' E-portfolios

"Tell me and I'll forget; show me and I may remember; involve me and I'll understand."

This is the website that pre-service students in ELT Dept. of Mersin University will display their artifacts in regard with the course "Practice Teaching". The trainee students are observing 4-hour-class everyweek in different state high schools in Mersin. Each week, they prepare a task to practice and show their artifacts on their website.

I am supervising a group of pre-service students, facilitating their creation of e-portfolios and mentoring them about their professional development.

contact info

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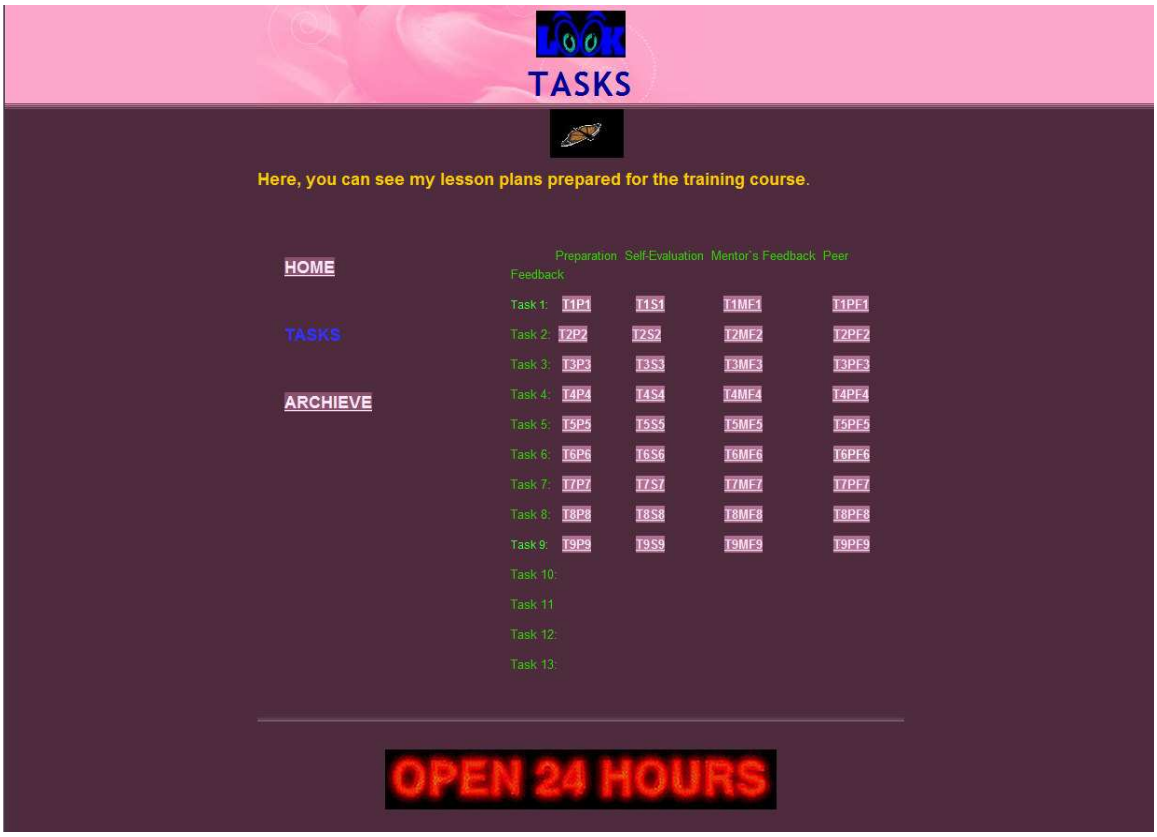
Appendix V: Pre-service student-teacher e-portfolio [entry page]
(Retrieved June 3, 2008, from http://janmiraa.googlepages.com)

Pre-service student-teacher e-portfolio [task page]



Pre-service student-teacher e-portfolio [lesson plan page]

LESSON PLÂN

A) PREPARATION

Lesson : English
Teacher : Fatma Öz
Class : 9F
Unit : Jobs for the future
Class Period : 40'
Main Skill : Reading
Level : Lower Intermediate
Approach And Method : Communicative Approach
Techniques : Reading, Speaking, Question and Answer Drills, Multiple Choice, Fill in the Blanks, Role Play.
Materials and Equipments : Trainer`s handbook, Teacher`s workbook Reach by Araminta Crace & Jenny Quintana, Reach course book, a dialogue for reading, a picture related to the dialogue.

Overall Objectives

1) Skill in reading.

Behavioral Objectives of the Lesson

By the end of this lesson, the students will be able to;

1) answer the questions about the dialogue that they read.
2) decide whether the sentences given are true or false according to their reading.
3) fill in the blanks according to the dialogue they have read.
4) act the dialogue they have read out properly.

B)PRESANTATION

1) Warm-up period

The teacher says that " Hello class." Then asks " How are you today? Do you feel well?"

2) Motivation

The teacher tries to motivate the students by talking about their feeling, their day, their family. She asks " how was your day, what did you do during the day?" She tries to ask many questions to all students to make them participate to the lesson

3) Stating the instructional objectives

The teacher tries to introduce the lesson and the teacher asks the students to open the page where the dialogue they are going to read is. Then she says "today we are going to start a new unit and read this dialogue –***jobs for the future***-"

4) Presenting the instructional objectives and practice

Firstly the teacher asks the students to look at the headline and the photo related to that dialogue. Then asks " what do you think the dialogue is about? What do you think the ones in photo are talking about?" She wants the students try to guess the theme of the dialogue according to the headline and the photo. After she takes their answers she asks a few questions related to the dialogue. Again she wants the students to guess many things about the dialogue and the characters in it. Here are the questions before reading the dialogue;

Before you read

A) Look at the photo. Mel is thinking about the future. What are her predictions? Choose the correct alternatives.

1) Jack will be a famous ……..

a) news reporter **b) Dj**

2) Mel will be ……..

a) a model b) an actress

3) Holly will be a ……..

a) nurse b) teacher

4) Tom will be a ……..

a) basketball player **b) footballer**

Here the teacher doesn`t say anything about whether the students` predictions are true or not. She only takes their opinions. After they read the dialogue they will see whether their predictions come true or not. Then the teacher starts reading the dialogue and asks the students follow her from the book while she is reading. Here is the reading;(you can also see the real reading passage and the photo in the appendix part.)

Jobs for the future

Jack: Look at this!

Holly: What is it?

Jack: It is an article about James Wilson, the first teenage astronaut!

Holly: A teenage astronaut?

Jack: Yeah. He won a competition. He is going to go into space next year. They`re training him now.

Holly: Was that the prize?

Jack: Yeah.

Holly: Wow! That sounds great.

Jack: Mm, it does! But that kind of thing never happens to people like us. We won`tbecome famous.

Mel: I don`t agree. You`re great Dj, and one day you`ll be on Radio1.

Jack: I don`t think so.

Mel: Yes, you will! Why not? And maybe I`ll be a model!

Holly: I don`t want to be famous. I`d like to be a nurse or a teacher.

Mel: I think you`ll be a fantastic nurse. Anyway, one day Tom will play for Manchester United, and then he`ll be a superstar.

Jack: I don`t think so. Tom is a good player but he isn`t good enough to play for Manchester United.

Mel: Don`t be such a pessimistic, Jack!

Then she asks them " have you understood what is happening in the dialogue?" According to their answers, she goes on lesson. Then, they check their answers given for the questions above together. For a while, they talk about their predictions and answers. Then the teacher asks the students to read the dialogue silently and then to complete the sentences given with the correct names to check their understanding of the dialogue. Here are the sentences;

Comprehension

B) Read the story again and complete the sentences with the correct names.

1) **JACK** is reading about an astronaut.
2) **JAMES *WILSON*** won a competition.
3) **MEL** is optimistic.
4) **HOLLY** doesn`t want to be famous.
5) **MEL** thinks **TOM** will be very famous one day.

6) **JACK** doesn`t think **TOM** will play for Manchester United.

After this exercise, the teacher goes on checking their understanding with another exercise. Here is this exercise;

C) Who says the expressions?

1)	Look at this!	**JACK**
2)	That sounds great.	**HOLLY**
3)	I don`t agree.	**MEL**
4)	Why not?	**MEL**
5)	I don`t think so.	**JACK**
6)	Don`t be such a pessimistic	**MEL**

After they have finished this exercise the teacher asks " ok! Is everything clear? Did you understand the dialogue clearly?" according to their answers the teacher goes on lesson. And then, she wants them to summarize the dialogue to check what they have understood from the dialogue.

C) PRODUCTION

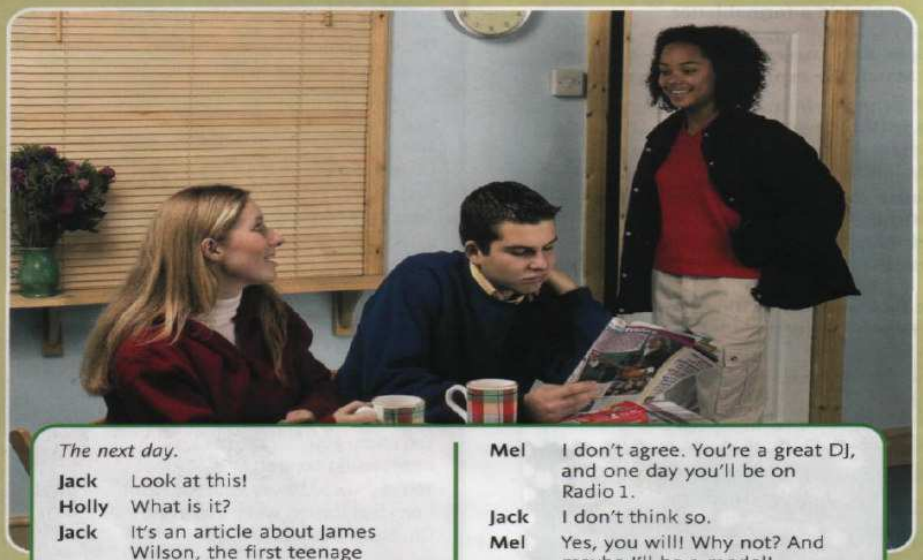
Then the teacher asks a few general questions related to the topic of the lesson such as " Which job would you like to do in the future? Would you like to be famous? Why? Why not?" With these questions the teacher motivates the students to express their ideas fort he future and discuss their plans with each other. Then, as a last step of the lesson she asks the students to act the dialogue out so that they could feel the atmosphere of the situation and reflect this in front of the class in an enjoyable way.

D) CLOSURE

The teacher ends the lesson by saying " yes class, that`s enough for today. In this lesson we have learnt the plans of a few characters in our book through reading. I hope you all enjoyed the lesson. See you next lesson.

14 Jobs for the future

Clifton Hill



The next day.

Jack Look at this!

Holly What is it?

Jack It's an article about James Wilson, the first teenage astronaut!

Holly A teenage astronaut?

Jack Yeah. He won a competition. He's going to go into space next year. They're training him now.

Holly Was that the prize?

Jack Yeah.

Holly Wow! That sounds great.

Jack Mm, it does! But that kind of thing never happens to people like us. We won't become famous.

Mel I don't agree. You're a great DJ, and one day you'll be on Radio 1.

Jack I don't think so.

Mel Yes, you will! Why not? And *maybe* I'll be a model!

Holly I don't want to be famous. I'd like to be a nurse, or a teacher.

Mel I think you'll be a fantastic nurse. Anyway, one day Tom will play for Manchester United, and then he'll be a superstar!

Jack I don't think so. Tom is a good player, but he isn't good enough to play for Manchester United.

Mel Don't be such a pessimist, Jack!

Pre-service student-teacher e-portfolio [self evaluation page]

MY EVALUATION about myself..

1. **My preparation <u>before</u> the class.**

"Reading" ağırlıklı olan bu derse hazırlanırken aslında çok fazla tedirgin değildim. Çünkü, 1. dönemde aynı sınıfa ders anlattım ve dolayısıyla sınıf hakkında az çok bilgi sahibiydim. Dersin konusunu staj öğretmeni belirledi. Daha doğrusu kaldıkları bölümden devam etmemi istedi. Yeni bir üniteydi ve reading parçası olarak bir diyalog vardı. Dersten önce diyalogu inceledim. Diyalogda neler olup bittiğini kavradıktan sonra, ders kitabının bu konu için hazırlamış olduğu alıştırmaları inceledim. Bu alıştırmaları birkaç değişiklikle birlikte uyguladım. Çünkü, alıştırmalar genel olarak öğrencilerin diyalogu okuduklarında anlayıp anlamadıklarını test etmeye yarar nitelikte ve seviyelerine oldukça uygundu. Örneğin, kitabın son bölüm için hazırlamış olduğu birkaç soruda değişiklik yaparak onu "warm-up activity" olarak değiştirdim. Alıştırmaları öncelikle kendim yapmaya çalıştım, daha sonrada öğretmen kitabından doğru olup olmadıklarını kontrol ettim ki ders esnasında öğrencilere yanlış bir şeyler söylemeyeyim. Başta da belirttiğim gibi, sınıfı ve sınıfın özelliklerini bildiğim için oldukça rahattım derse girmeden önce ve öğrenciler için dersi etkili ve kalıcı bir hale getirmek için neler yapmam gerektiğini, hangi yöntemleri kullanmam gerektiğini biliyordum. Ve herhangi bir olumsuzluk anında nasıl hareket etmem gerektiği konusunda da tecrübeli olduğum için derse girmeden önce staj öğretmeniyle detaylı bir görüşme yapmadım. Sadece yapacaklarımı ilettim o kadar.

2. **My performance <u>during</u> the class (the strengths and weaknesses!)**

Derse direkt okuma parçasıyla başlamak yerine öğrencilerden parçanın başlığına göre konunun ne olabileceğini düşünmelerini ve fikirlerini belirtmelerini istedim. Bu "warm-up activity", öğrencilerin ne işleyeceklerine dair bir ipucu oluşturdu ve dolayısıyla bu da öğrencilerin konuyu anlamasında oldukça yardımcı oldu. Okuma parçasında öğrencilerden her kelimenin anlamını bilmelerini beklemedim, sadece önemli olan ya da tahmin etmede zorluk çekebileceklerinin düşündüğüm kelimelerde onlara yardımcı olmaya çalıştım. Ayrıca, okuma sırasında özellikle telaffuzla ilgili yanlışlıklarda düzeltmeler yapmaya çalıştım. Ders esnasında olabildiğince çok sayıda öğrenciye söz hakkı vermeye çalıştım. Parmak kaldırmayanlara söz hakkı verip, onlardan derse katılmalarını istemekte öncelikle tereddüt ettim ama daha sonra onları derse katmaya karar verdim. Ve dersi sadece parmak kaldıranlarla değil parmak kaldırmayanlara da istedikleri ve denedikleri takdirde sorulan sorulara cevap verebileceklerini gösterdim. Ve daha sonra kendileri derse katılmak istediler. Ve son olarak da okuma parçasını öğrencilerden tahtaya gelerek canlandırmalarını istedim. Bence bu öğrencilerin konuyu anlamalarında ve anladıklarını yansıtabilmelerinde oldukça etkili oldu ve dersi eğlenceli bir şekilde sonlandırmamızı sağladı. Bunların dışında ders esnasında kimi zaman ingilizce olarak yaptığım açıklamalar öğrencilere ağır gelmiş olacak ki bazı zamanlarda sessizce yüzüme baktılar ve ne dediğimi anlamaya çalıştılar. Ben de bunu fark edince gerekli gördüğüm yerlerde Türkçe açıklamalar yapmaya başladım.

3. **My action <u>after</u> the class**

Dersten sonra kendimi değerlendirdiğimde kendi performansımı beğenmiştim. Çünkü sınıfın çoğunun konuyu anladığını düşünüyordum. Staj öğretmeniyle konuştuğum zamanda aynı şeyi söyledi. Öğrencilerin derse katılmaya heveslendiklerini ve anlamak için çaba gösterdiklerini belirtti. Ama yine de anlaşılmayan konularda İngilizce olarak yaptığım açıklamalarımda ve öğrencilerin konuya yönelik soruları cevaplandırmaları için yeterli süre verme konusunda biraz daha dikkatli olmam gerektiği kanısına vardım. Ayrıca okuma parçasını okuduktan sonra öğrencilere konuyla ilgili kendi düşüncelerini söylemeleri için sorular yöneltmenin konuyu anlamalarında ve kendilerini de konuya dahil etmelerinde çok etkili olduğunun farkına vardım.

Pre-service student-teacher e-portfolio [peer evaluation page]

Janmiraacım,
Bu hafta hazırladığın reading dersi gayet normal ve çoğu zaman karşılaştığımız bir ders. Derse öğrencileri resimler hakkında konuşturarak ve konu başlığı konusunda tahminde bulundurarak başlaman gayet iyi ama derse ilk girdiğinde genel sorular sorduktan sonra kitabınızda şu sayfayı açın yerine bir soruyla konuya giriş yapman daha iyi ve dikkat çekici olabilirdi. Belki production bölümünde sorduğun soruları giriş bölümünde sorabilirdin. Bunlara ek olarak dersteki aktiviteler çok zevkli. Konuya hakimiyeti ve anlamayı gerektiriyor. Bu belki de benim reading dersindeki eksersizleri çok sevmemden kaynaklanıyordur. Eminim sen ve öğrencilerin derste sıkılmamışlardır çünkü konu güncel ve bu yaştaki gençlerin dikkatini çekecek niteliktedir.

Başarılar
Coolnila

Appendix VI: Tasks

WEEK	TASKS	PURPOSE	COMMENTS
1st WEEK	Observation 1. How T teaches a topic (any intro, presentation, practice?) 2. What type of activities T does 3. How T checks Ss understanding 4. How T gets feedback and replies 5. How T manages the class	1. Motivation 2. Monitoring/Assisting class teacher 3. Preparing for actual teaching	
2nd WEEK	Observation 1. How T teaches a topic: (any stage of intro, presentation, practice, production?) 2. How T manages the class 3. How T gets feedback and replies 4. What type of activities T does 5. How T checks Ss understanding 6. Cooperation with the classroom teacher for the next lesson	1. Motivation 2. Monitoring/Assisting class teacher 3. Preparing for actual teaching	

WEEK	TASKS	PURPOSE	COMMENTS
3rd WEEK	Skill-based mini lesson based on the students' book, choice of classroom T & pre-service teacher's experience and knowledge. 1. Listening Practice: practicing teaching listening (prediction, listening for specific or general info, confirmation, etc) 2. Cooperation with the classroom teacher for the next lesson	1. Developing materials for listening class 2. Submitting a lesson plan for listening lesson (aims, presentation, practice, production) 3. Preparing activities (pre-listening, while listening, post-listening activities) 4. Self-evaluation	
4th WEEK	Skill-based mini lesson based on the students' book, choice of classroom T & pre-service teacher's experience and knowledge 1. Reading Practice : (practicing teaching reading based on any reading strategy such as skimming, scanning, detailed reading{key words teaching, looking for specific information} etc) 2. Cooperation with the classroom teacher for the next lesson	1. Developing materials for reading class 2. Submitting a lesson plan for reading lesson (aims, presentation, practice, production) 3. Preparing activities (pre-reading, while reading, post-reading activities, vocabulary and comprehension check) 4. Self-evaluation	

WEEK	TASKS	PURPOSE	COMMENTS
5th WEEK	Skill-based mini lesson based on the students' book, choice of classroom T& pre-service teacher's experience and knowledge. 1. Writing: practicing teaching writing based on any types of writing such as sentence writing, copying, parallel writing, etc) 2. Cooperation with the classroom teacher for the next lesson	1. Developing materials for writing class 2. Submitting a lesson plan for writing lesson (aims, presentation, practice, production) 3. Preparing activities for writing class 4. Self-evaluation	
6th WEEK	Skill-based mini lesson based on the students' book, choice of classroom T & pre-service teacher's experience and knowledge 1. Speaking: practising teaching speaking through communicative activities such as role plays, acting, etc) 2. Cooperation with the classroom teacher for the next lesson	1. Developing materials for speaking class 2. Submitting a lesson plan for speaking lesson (aims, presentation, practice, production) 3. Preparing activities for speaking class (games, role plays, problem solving, discussion, etc) 4. Self-evaluation	

WEEK	TASKS	PURPOSE	COMMENTS
7th WEEK	Grammar-focus mini lesson: based on the students' book, choice of classroom T& pre-service teacher's experience and knowledge 1. Grammar: practicing teaching grammar: inductive or deductive grammar teaching 2. Cooperation with the classroom teacher for the next lesson	1. Developing materials for grammar class 2. Submitting a lesson plan for grammar lesson (aims, presentation {deductive or inductive}, practice {mechanical drills, fill in the gaps, etc.} production {communicative practice, pairwork, etc}) 3. Preparing activities (explanation on rules, drilling, fill the gap, cloze or tense conjugation activity) 4. Self-evaluation	
8th WEEK	Making art craft 1. Learning by doing activity (e.g. preparing posters, boards for National Anniversary such as May 19th etc.)	1. Fostering creative skills 2. Learning by doing 3. Visual Learning 4. Transforming skills 5. Encouraging cooperative work within class 6. Self-evaluation	

WEEK	TASKS	PURPOSE	COMMENTS
9th WEEK	Student Evaluation		
10th WEEK	Student-Teacher Evaluation		
11th WEEK	Student-Teacher Evaluation		
12th WEEK	Student-Teacher Evaluation		
13th WEEK	Student-Teacher Evaluation		

Appendix VII: Classroom teacher observation checklist

KNOWLEDGE, AND AWARENESS	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Knowledge about students' level				
Knowledge about students' abilities				
Knowledge about students' interests				
Knowledge about students' needs				
Knowledge about class dynamics				
Knowledge about student's names				
Knowledge about students' interests				
Knowledge about students' learning styles				
Knowledge about students' study habits				

PLANNING AND PREPARATION	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
General preparation for the class				
Lesson aims and objectives are relevant to course aims				
Lesson aims and objectives are appropriate to students' needs				
Lesson aims and objectives are clear				
Lesson aims and objectives are realistic				
Materials and resources are well-chosen				
Materials and resources are well-prepared				
Materials and resources are relevant to lesson				
Materials and resources are appropriate to level and students				

PLANNING AND PREPARATION (continues)	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Choice of teaching strategies are appropriate to students' needs and interests				
Choice of teaching strategies are motivating				
Choice of teaching strategies are varied				
Choice of teaching activities are appropriate to students' needs and interests				
Choice of teaching activities are motivating				
Choice of teaching activities are varied				

TEACHER-STUDENT INTERACTION	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Attitude towards students				
Using students' names				
Knowledge about students				
Empathetic				
Ability to motivate students to learn				
Helping students to see the value of learning				
Ability to build individual communication with students				
Giving praise and encouragement				

LESSON PRESENTATION	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Nominating students using humor				
Giving students time to think				
Giving students equal opportunities to participate				
Making use of students' existing knowledge				
Encouraging independent learning e.g. Encouraging using dictionaries in class				
Encouraging students to think critically				
Giving clear instructions				
Questioning techniques e.g. Varied, challenging, motivating				
Encouraging students to use English as much as possible				

LESSON PRESENTATION (continues)	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Encouraging students to interact with each other				
Use of voice is clear and audible				
Using body language				
Using of teaching aids and materials				
Using technology in class				

LESSON MANAGEMENT	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Reviewing previous day's course content				
Giving overview of day's course content				

LESSON MANAGEMENT (continues)	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Summarizing the main points at the end of the lesson				
Flexibility and ability to adapt lesson to students' needs and interests				
Monitoring of students' work and providing support where necessary				
Involving different students in activities				
Error correction techniques are constructive				
Checking of learning and feedback is appropriate and encouraging				
Staging of activities				

LESSON MANAGEMENT (continues)	COULD BE IMPROVED	ACCEPTABLE	EXCELLENT	NOT OBSERVED
Timing of the activities and the lesson				
Control and handling of discipline				

YOUR EVALUATION about the Classroom Teacher you are working with.

1. His/Her preparation before the class

2. His/Her performance during the class (mark the strengths and weaknesses!)

3. His/Her action after the class (e.g. any kind of self-evaluation made by the classroom teacher, any material development for better practice, etc.)

YOUR EVALUATION about the Classroom Teacher you are working with.

(Retrieved June 10, 2008 from http://janmiraa.googlepages.com/evaluation.pdf)

1. His/Her preparation before the class.

Gözlemledigim kadarıyla öğretmen derse gelmeden önce çok ayrıntılı bir hazırlık yapmıyor. Mutlaka kağıt üstünde bir plan hazırlıyordur; fakat bunun sadece zorunluluktan yapıldığı kanısındayım. Bilindiği gibi etkili bir öğretimi sağlamak için sadece plan hazırlamak yeterli değildir. Öğrencilerin dikkatini çekecek seviyelerine uygun özellikle görsel olmak üzere çesitli materyaller hazırladığı takdirde etkili öğretim gerçekleştirilmiş olur. Fakat, benim gözlemlediğim ögretmen ders kitabından başka bir kaynak kullanmamakta, ekstradan kendince bir hazırlık yapmamaktadır. Ama, bu hazırlıksızlığına rağmen alt kısımda da belirttiğim gibi öğretmen sınıfta kabul edilebilir ölçüde etkilidir. Bu da bence hocanın kendine olan güvenini ve kapasitesini göstermektedir.

2. His/Her performance during the class (mark the strengths and weaknesses!)

Öncelikle şunu söylemeliyim ki öğretmen sınıfa oldukça hakimdir. Sınıfta ders esnasında olup biten hemen hemen her şeyden haberdar olmakla beraber herhangi bir olumsuzluk anında onunla kolayca baş edebilmektedir. Bu olumsuzluklarla kolayca baş edebilmesinde tabi ki de ögretmenin öğrencilerin yetenekleri, ihtiyaçları, karakterleri gibi özelliklerinin de bilincinde olmasının etkisi vardır. Bunun yanı sıra öğretmen ders esnasında öğrencilere çoğunlukla isimleriyle hitap etmekte ve bu da etkili öğretim için oldukça önemli bir unsur olarak görülmektedir. Ayrıca, öğretmen yönergeleri o kadar açık, net ve anlasılır bir biçimde vermekte ki ögrenciler hiç zorlanmadan yapmaları gerekenleri anlayabilmektedirler. Tüm bu saydıklarım gözlem yaptığım öğretmenin etkili özellikleri arasında sayılabilir. Bunlara ek olarak ögretmen, beden dilini de oldukça etkili kullanmakta ki bu sekilde öğrenciler ingilizce olarak anlayamadıkları şeyleri, öğretmenin o hareketlerini takip ederek kolayca anlayabilmektedirler. Öte yandan, ders esnasında degisik teknik ve yöntemler kullanmamakta. Önceden de belirttiğim gibi materyaller kullanımı oldukça eksik. Tabi ki bunların eksikliği kalıcı ögrenme saglamayı da zorlaştırmaktadır. Bu özellikler de öğretmenin zayıf yönleri olarak gösterilebilir.

3. His/Her action after the class (e.g. any kind of self-evaluation made by the classroom teacher, any material development for better practice, etc.)

Gözlemlediğim öğretmenin en beğendiğim ve örnek almaya çalıstıgım özelliği kendine olan güveni, sınıf içerisinde ve ders esnasında olan rahatlığıdır. Belki de kendine olan bu güveninden dolayı öğretmen derse gelmeden önce ayrıntılı bir biçimde hazırlık yapmıyor. Ama tabi ki de kendine güveniyorsa bir öğretmen derse hazırlık yapmadan gidebilir düşüncesine de katılmıyorum. Aksine kendine olan güven ve kendi alanındaki hakimiyetini

ders öncesinde yaptıgı hazırlıkla birleştirebilen bir öğretmenin çok etkili ve kalıcı bir öğretim gerçekleştirebilecegi düşüncesindeyim. Öğretmen, her dersten sonra "Nasıldı dersim güzel miydi?" diye sormakta bu da her ne kadar kendine güvense de dersi daha iyi bir hale getirebilir miyim diye bir stajyerin bile fikrini almaktan çekinmemekte. Bu özelligi iyi bir özellik olarak sayılabilir. Kimi zaman da dersten sonra "aslında su önemli noktayı su sekilde anlatsaydım daha etkili olabilirdim galiba" diyerek özeleştiri yapabilmekte ve bir sonraki derste bu değişiklikleri uygulayabilmektedir. Öğretmen kendini çok rahat bir biçimde eleştirebilmekte ve başkalarından gelen eleştirileri ki bu bir stajyer de olsa dikkate almakta ve ona göre yöntemini degiştirmektedir. Bu özellikler Öğretmende begendigim özelliklerden bazılarıdır. Fakat öte yandan, öğretmenin tek bir özelligine eleştirim var. O da materyal kullanımındaki eksikligi ve bunu bir eksiklik gibi görüp de bunu degistirmek için bir seyler yapmaya çalışmamasıdır. Aslında önceden belirtmiş olduğum tüm iyi özelliklere sahip olan bir öğretmenin nasıl oluyor da bu kadar önemli olan bir konuyu dikkate almaması aslında beni çok şaşırtıyor. Kendi kendime düşünüp neden olabileceğini düşündüm ama bir türlü geçerli bir neden bulamadım. Çünkü, farklı ve derse ve ögrenciye uygun farklı materyal kullanımının ingilizce öğretiminde gerçekten de çok etkili oldugunun tam anlamıyla bilincindeyim. Bu yüzden bana göre, tüm ögretmenler ellerinden geldiğince materyal kullanımına özen göstermek durumundalar. Fakat, benim gözlemlediğim öğretmen sadece okulun sunmuş oldugu cd çalardan yararlanmaktadır. Ama biliyoruz ki sadece işitsel materyal tek başına pek de etkili değildir. Tüm materyalleri olabildiğince sıklıkta kullanmak gerekir ki gerçekten etkili ve kalıcı bir ögretimden söz edebilelim.

Appendix VIII: Supervisor Observation Points

	SUPERVISOR OBSERVATION POINTS	1	2	3	4
I. PRE-LESSON					
1	Preparation: Lesson, teacher, class, level, subject, class period, approach & method, techniques, materials, overall & behavioral objectives.				
2	Presentation: Warm up, motivation, stating the instructional objectives.				
II.DURING THE LESSON					
3.	Lesson aims and objectives are clear and relevant to course aims				
4.	Lesson aims and objectives are appropriate to students' needs				
5.	Materials and resources are appropriate to the level of the students				
6.	Choice of teaching strategies are appropriate to students' needs and interests				
7.	Addressing to students using humor				
8.	Providing equal opportunities for students to participate				
9.	Making use of students' existing knowledge				
10.	Encouraging independent learning e.g. encouraging using dictionaries in class				
11.	Giving clear instructions				
12.	Use of technology in class				
13.	Reviewing previous day's course content				
14.	Giving overview of day's course content				
15.	Summarizing the main points at the end of the lesson				
16.	Monitoring of students' work and providing support where necessary				
17.	Error correction techniques are constructive				
18.	Control and handling of discipline				

19.	Using students' names				
20.	Ability to motivate students to learn				
III.	**POST-LESSON**				
21.	Strong points				
22.	Weak points				
23.	Most effective part of the lesson				
24.	Least effective part of the lesson				
25.	Implication				

Appendix IX: Pre-service student-teacher paper-based portfolio

I. PREPARATION

Lesson: English
Subject: Listening
Class Period: 40'
Approach and Method: Communicative Approach, Eclectic Method
Techniques: Filling in the blanks, Question and answer
Materials: worksheet, CD player
Overall objectives of the lesson:
Ability to comprehend the listening passage.
Behavioral Objectives:
By the end of the lesson the students will be able to fill in the blanks in the listening passage.

II. PRESENTATION

1- WARM-UP PERIOD
The teacher says "Good morning class."

2- MOTIVATION
In order to motivate students the teacher some questions as "How are you today?" The students respond to these questions. After that the teacher asks some questions again. "Do you like listening to music? who is your favourite singer?

3- STATING THE INSTRUCTIONAL OBJECTIVES
The teacher says "today we will listen a song

4- PRESENTING THE INSTRUCTIONAL OBJECTIVES
The teacher gives worksheet to the students. She says "Ok class, look at your handouts a few minutes, then I will play the CD player. while you are listening try to fill in the gaps.

III. PRACTICE

The teacher plays the cD player two or three times. After she is sure that they do the task. They start to give their answers. When they give wrong answers the teacher plays that part again and try to make students find the answer.

After they finish filling the gaps. The teacher asks students "Do you like the song? What is the weather like today?" Then she wants them to sing the song. "Let's listen one more time." she says. Then sing the song together.

IV. SUMMARY

The teacher summarizes the lesson. She says "Yes class, we have learned a song today. I think all of you have enjoyed the lesson.

DEĞERLENDİRME

Öğrencilerin ilgisini çekmesi açısından dinleme dersinde bir şarkı seçmeye karar verdim. Seçtiğim şarkı seviyelerine uygun bir şarkı ve bırakılan boşlukların ilk harfini vererek onların işini kolaylaştırmak istedim. Çünkü daha önce dinleme dersi yapmadıkları için heveslerı kırılmasın istedim.

Öğrenciler şarkı dinleme fikrini çok sevdiler. Şarkıyı bir çok kez dinlettim, birlikte söylemeye çalıştılar. Boşlukların çoğunu da doldurdular. Şarkının türkçesini öğrenmek istediler. Şarkıyı çevirdim biraz, birkısmını da onların çevirmesini sağladım. Ders planım dışında olan bir işti. Ama öğrenciler gördükleri her cümleyi çevirme eğilimindeler.

Özetle eğlenceli bir ders saati geçirdik. Öğrencilerin derse istekle kalkmasını sağladı.