Electronic Portfolios: A Turning Point in EFL Teacher Education Programs

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Abstract

Electronic portfolios are a new trend in learning, teaching, and assessment. The present study offers a literature review of portfolios (both traditional and electronic), conclusions related to the comparison of traditional and electronic portfolios, and a framework for implementing electronic portfolios in teacher education programs.

Introduction and Background

Educational Assessment is an integral part of the quest for improved education (Pellegrino, Chudowsky, & Glaser, 2001) playing an important role throughout learners' journeys towards achievement (Rolfe & Wilson, 2007) showing what they know and do not know (Ali, 2005b). Until recently the assessment scene in EFL classes has been dominated by summative evaluation of learner achievement, focusing on mastery of discrete language points and linguistic accuracy wit

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test items typically consisting of matching or gap-filling (Shaaban, 2001). However, standardized tests have been criticized for representing activities students typically perform in classrooms (Pierce & O'Malley, 1992), undermining regular classroom instruction (Coombe & Barlow, 2004), not meeting the cognitive demands of the world today (Sternberg, 2008), narrowing curricula to

skills readily tested by multiple-choice items as well as reducing pedagogy to the teaching and memorizing of miscellaneous dead facts (Mabry, cited in Vanides, 2002). This view is confirmed by Valencia (cited in Farris, 1993, p. 233) who states that "no single test, single observation, or single piece of student work could possibly capture the authentic, continuous, multidimensional interactive requirement of sound assessment." Therefore, the field of assessment has witnessed a major shift from strictly summative testing tools and procedures to a more humanistic approach using assessment techniques that stress formative assessment (O'Neil, cited in Shaaban, 2001).

Labels such as performance, authentic, informal, alternative, and situated, have been used to describe formative assessment (Huerta-Macias, 1995). Despite the different labels, what is common among these types of assessment is that they do not adhere to the traditional testing criteria of objectivity, machine scorability, standardization, or cost-effectiveness (ibid). On the contrary, they require students to generate rather than choose a response (Herman, Aschbacher & Winters, cited in Barrett, 2006a) involving them realistically in the evaluation of their own achievements (Grace, 1992).

The growing interest among mainstream educators in alternative assessment (Pierce & O'Malley, 1992) is due to many reasons. It helps to rectify the problem of mismatches between tests and classroom activities (Chapelle & Douglas, cited in Puhl, 1997), does not require a separate block of time to be administered because it can be easily incorporated into the daily activities of the school or classroom (Hamayan, cited in Coombe & Barlow, 2004), reduces the confusion and frustration that test takers often face (Puhl, 1997), and involves a positive interaction between the assessor and the assessee (Burke, cited in Barrett, 2003a). Therefore, assessment is no longer something done to the learners but rather something that they actively contribute to (Lafi, 2002). Moreover, alternative forms of assessment are important means of gathering evidence regarding how learners approach, process, and complete real life tasks (Gaith, 2002) by utilizing various procedures and formats that provide multiple sources of evidence (ibid.) which helps in gaining a dynamic picture of students' academic and linguistic development (Tannenbaum, cited in Coombe & Barlow, 2004).

Alternative assessment uses a wide variety of formats such as oral interviews, individual or group projects, dialogue journals, story retelling, oral reading, group discussions, role playing, teacher-student conferences, retrospective and introspective verbal reports (El-Koumy, 2003). One of the most popular forms of alternative assessment now is the construction of portfolios (Barrett, 2000a; Brown, 2001). While exams show the end result, portfolios depict the journey; i.e., they show how the student learned the relevant concept and how the learning took place (Kudlas, Davison, & Mannelin, 2003). This is important because there is a difference between knowing enough about a concept to choose

the correct answer on a multiple choice test and having truly mastered the concept (ibid.) Moreover, portfolios show what students do know rather than what they do not know (Norton-Meier, 2003). Therefore, in 1993 the United States Office of Educational Research and Improvement (OERI) put the idea that performance assessments should be used to augment or replace norm-referenced tests at all educational levels and included the use of portfolios as an effective means of quality performance assessment.

At the beginning of using portfolios in education, they were assembled from collections of work stored in boxes or three-ring binders (Gibson & Barrett, 2003; Johnson & Lamb, 2007). However, with advances in technology, a new type of portfolios appeared—the electronic portfolio which suggests that perhaps the new medium of the electronic portfolio, in part, can be looked at through lenses from the past (Gibson & Barrett, 2003). That is why any understanding of what electronic portfolios are should build on the effective use of traditional portfolios (McNair & Marshall, 2006). Thus, the structure of the literature review in this paper goes in two main sections. Section One tackles traditional portfolios while Section Two deals with electronic portfolios. The then concludes with a framework for implementing electronic portfolios in an essay course in EFL teacher education.

Literature review
Section One: Traditional Portfolios

Linguistically, a portfolio means a hinged cover or flexible case for carrying loose papers, pictures, or pamphlets (Portfolio, 2007). The word portfolio comes from Latin (portāre, to carry + folium, leaf) (The American Heritage Dictionary of the English Language, 2006).

Pedagogically, there are many definitions of portfolios. Most of them are similar and agree on the view that a portfolio is a collection of the person's work that shows his/her progress over time. However, they vary among themselves according to the aspects of the portfolio on which each of them focuses. Some definitions focus on the content of the portfolio (Adams & Hamm, 1994; Barrett, 2003a; Blake *et al.*, cited in Takona, 2003; Coombe and Barlow, 2004; Kemp & Toperoff, 1998; Lafi, 2002; O'Malley & Valdez Pierce, cited in Gomez, 2000; Paulson, Paulson & Meyer, 1991; Powell & Jankovich, cited in Campbell, 2002; Puhl, 1997; Sweet, 1993; Tenbrink, 2003; Wade, Abrami & Sclater, 2005), other definitions focus on the process of gathering such content (Barrett, 2006b; Butler, 2006; Hancock, 1994; Lin, Liu & Yuan, 2004; Ogan-Bekiroglua & Gunayb, 2008; Scott, 2005; Tombari, cited in Kudlas *et al.*, 2003) while some other definitions focus on the purpose for building the portfolio (Pierce & O'Malley, 1992; Rocha, 2005).

Portfolios depend on three general and overlapping theoretical bases: constructivism—giving students the ability to construct meaning using the learning style that suits them best (Roeder, 2007), learner-centered instruction—providing opportunities for students to become active learners as they set goals for learning, engage in self-reflections, review goals, and assume responsibility for their own learning (Barrett, cited in Sweat-Guy & Buzzetto-More, 2007), and the sociocognitive theory—helping the learner get feedback from his/her classmates as well as give feedback to them (Brown, 2001).

Portfolios are not new (Siemens, 2004). They have been used for years by artists (Adams & Hamm, 1994; Bastidas, 1996; Greenberg, 2004; Kudlas *et al.*, 2003; Shaaban, 2001) and more recently, as part of the employment process, has spread to other fields such as radio and television broadcasting, journalism, graphic art, photography, and architecture (Soares & Goldgehn, cited in Campbell, 2002).

Tracing the beginning of using the portfolio concept in the educational field, Kalz (2005) assures that the French teacher, Celestine Freinet, introduced it in the late twenties of the last century in his classes. However, the real use of portfolio assessment in education emerged in the late 1980s (Barrett, 2005b) and has become an increasingly popular assessment method throughout the 1990s (Ewell, cited in Knight, Hakel & Gromko, 2006). Portfolios came as a logical follow-up to writing folders which included daily pieces of writing (Bastidas, 1996). Soon after, the portfolio has been adapted for use as an alternative form of assessment to traditional methods (Herman & Winters, 1994; Knight, cited in Campbell, 2002). Three main characteristics of traditional portfolios can be identified:

1. The portfolio is not just a collection of student work (Kemp & Toperoff, 1998) but rather a reflective tool which demonstrates growth over time (Barrett, 2000a). Portfolio development is not a scavenger hunt that results in the creation of a scrapbook but rather, it is a responsive and purposeful activity (Takona, 2003).

2. The portfolio emphasizes both learning processes and products (Adams & Hamm, cited in Roeder, 2007). It pays attention not only to the results but also to the process involved (Chang, 2002). It can combine process and product teaching approaches (Kathpalia & Heah, 2008). Therefore, the product alone is not all that makes the portfolio a powerful educational tool; the very process of creating the portfolio is an important learning experience (Chen *et al.*, 2005).

3. The portfolio is owned by the student. A portfolio that is truly a story of learning is owned by the learner, structured by the learner, and told in the learner's own voice (Barrett, 2005b).

Literature provides so many purposes for portfolios that Barrett (2003b) confirms it is necessary that the term portfolio have a modifier or adjective that

describes its purpose. These purposes include: assessing learning (Barrett, 2003b; Popper, 2005), showing and documenting progress (Airasian, cited in McLoughlin & Lewis, 2005; Barrett, 2000c; ePortConsortium, 2003; Sweet, 1993), offering feedback (Clayton, 1998; Farris, 1993; Knight *et al.*, 2006), improving curricula (Knight *et al.*, 2006; Popper, 2005; Sweet, 1993), and reflecting on learning (Barrett, 2005b; Murphy & Smith, cited in Grace, 1992; Zubizarreta, 2009).

Portfolios have advantages related to students, teachers as well as other stakeholders. As for students, portfolios have a positive impact on students' cognitive, affective and social aspects. Concerning the cognitive aspect of students, portfolios help students develop awareness of their own learning (Kemp & Toperoff, 1998) by increasing their understanding of what, why, and how they learned (Brown, cited in Barrett, 2004), provide students with the opportunity of understanding their own thoughts about certain issues (Partridge, 1993), and help connect those thoughts to real-world understandings (Adams & Hamm, 1994) which helps them to become independent thinkers (Hancock, 1994). Concerning the affective side of the students, portfolios promote a feeling of security because a healthier, non-threatening learning environment is created (Lafi, 2002). The portfolio gives students a sense of accomplishment (Schauweker, 1995), self confidence (Chang, 2002), responsibility, involvement (Lafi, 2002), ownership, pride, high self-esteem (Frazier & Paulson, cited in Campbell, 2002) as well as motivation for learning (Kemp & Toperoff, 1998). As for the social side of the students, Kemp and Toperoff (1998) assure that portfolios develop students' social skills as they enable students to show quality work, which is done with the help of others. Smolen, Newman, Wathen, and Lee (1995) explain that, in portfolios, students can work collaboratively with teachers and classmates to establish standards of excellence that provide the framework for learning.

The portfolio also has some benefits for teachers. It allows opportunities to observe students in a broader context (Paulson et al., 1991) which provides the teacher with authentic picture of learning (Gomez, 2000) which helps teachers diagnose a student's strengths and weaknesses (Roeder, 2007) on the basis of a collection of student work rather than by using test scores (Lever-Duffy et al., 2003). Moreover, the portfolio is a tool for assessing a variety of skills (Kemp & Toperoff, 1998) which provides the teacher with a detailed picture of a student's performance in a variety of different tasks (Shaaban, 2001). Therefore, portfolios as assessment tools have largely evaded validity scrutiny because they are seen as more representative of students' work (Kelly-Riley, 2006). An additional advantage of the portfolio for teachers is that it provides opportunity for student-teacher dialogue (Kemp & Toperoff, 1998) which allows the teacher to plan instruction that is responsive to students' needs (Lafi, 2002). Moreover, the portfolio facilitates good instruction (Wolfe, 1996) as it links teaching to learning (Belk & Calais, 1993), teaching to assessment (Adams & Hamm, 1994) as well as assessment to teaching and learning (Hirvela & Pierson, 2000). Moreover, portfolios are valuable assets for planning both within the classroom and on a

school-wide basis (Farr, 1991) as well as making decisions regarding student progress and program evaluation (Belk & Calais, 1993). A final advantage of portfolios for teachers is that they reduce the teacher's daily burden of grading papers (Koca & Lee, 1998) as well as free the teacher from the constraints of standardized tests (Grace, 1992).

Portfolio advantages are not confined to students and teachers; they are extended to other external stakeholders such as parents. For parents, a student's portfolio is one way to connect them to schools (Calfee, 1994). Through portfolios parents can be provided with a richer picture of what students know and are able to do (Barrett, 2006b), with a credible evidence of student achievement (Herman & Winters, 1994), and with opportunities to trace a student's progress over time (Lafi, 2002).

The literature on the types of portfolios shows many different ways that portfolios have been conceptualized. Portfolios can be classified according to the owner of the portfolio—learning portfolios (Batson, 2007; Bach, 2007; Chen et al., 2005) and teaching portfolios (Murdoch, 1998; Petty, 2006), according to the purpose of the portfolio—working portfolios, showcase portfolios, and assessment portfolios (Danielson & Abrutyn, 1997), and according to the content of the portfolio—best-work portfolios and growth and learning-progress portfolios (Tenbrink, 2003).

There is no single formula for what a traditional portfolio should include (Adams & Hamm, 1994). However, there are a number of essential components that any portfolio should include. Those components are listed below.

1. Cover letter (Adams & Hamm, 1994) with student's basic information and learning goals (Chang, 2002)
2. Table of contents (Petty, 2006; Takona, 2003) or index (Adams & Hamm, 1994) with numbered pages (Kemp & Toperoff, 1998)
3. Artifacts: These can be student's best pieces as well as works in progress (Sweet, 1993) and can include collaborative projects, lists of books read, reports written, documentation of performances, (Grady, cited in McLoughlin & Lewis, 2005) anecdotal records, tests and quizzes (Tannenbaum, 1996), checklists or inventories, rating scales, questions and requests (Grace, 1992), and any material the learner judges to be relevant to and illustrative of his/her progress (Lafi, 2002).
4. Feedback: teachers' feedback and peer feedback (Chang, 2002) through conference or interview notes or checklists by teacher or peers (Tannenbaum, 1996)
5. Reflections: on individual artifacts as well as on the whole portfolio (Kemp & Toperoff, 1998; Indiana University East, 2007)

Five major stages are usually covered in literature related to portfolios. These stages are: collection, selection, reflection, organization, and presentation. These stages are described below:

1. Collection

   In this stage, students learn to save artifacts that represent the successes in their day-to-day learning (Barrett, 2000c). According to Huerta-Macias (1995), the contents of the portfolio are collected from three different sources—the student, the teacher, and a third party (perhaps another teacher, a family member, or a peer). For Pierce and O'Malley (1992), the teacher or portfolio assessment team determines the contents of each portfolio by identifying learning goals and specifying minimal levels of student performance that show whether students have attained these goals.

2. Selection

   In this stage, students review and evaluate the artifacts they have saved, and identify those that demonstrate achievement of specific standards (Barrett, 2000c). Whereas McLoughlin and Lewis (2005) believe that portfolios can contain almost anything that documents the student's progress, Tenbrink (2003) thinks that to include every thing the student produces makes the portfolio difficult to interpret whereas a carefully selected sample of work makes the portfolio manageable and easier to evaluate.

3. Reflection

   In this stage, students become reflective practitioners, evaluating their own growth as well as the gaps in their development (Barrett, 2000c). There are two types of reflections required within the portfolio: overall reflection and artifact reflection (Indiana University East, 2007). Kemp and Toperoff (1998) explain these two types by indicating that overall reflection is for the whole portfolio while artifact reflection is reflection on each item—a brief rationale for choosing that item. This can relate to students' performance and to their feelings regarding their progress and/or themselves as learners.

4. Organization

   This step is related to the organization of the portfolio content. While some educators believe that the material in a portfolio should be organized by chronological order (Grace, 1992) some others suggest organizing the material according to curriculum area or category of development (cognitive, gross motor,

fine motor, and so forth) (Meisels & Steele, cited in Grace, 1992). Birgin and Baki (2007) believe that three aspects should be considered during the organization of the portfolio contents. These aspects are: determining the purpose of the portfolio, determining the evidence included in the portfolio, and determining assessment criteria.

5. Presentation

This is the last stage of portfolio development where the portfolio contents are made ready to be presented for viewers. For Takona (2003), a well-designed portfolio is aesthetically appealing and easy to navigate. He adds that a two-inch, three-ring binder with a clear cover and inside pockets works well. He advises users to consider using color-coded section dividers, a table of contents, and consecutive numbering of all documents in the portfolio (even though some may have an internal numbering system). Lafi (2002) points out that a portfolio should be kept in a common, readily accessible area to which the student can have easy access.

Assessment in portfolios takes two forms: formative, throughout the portfolio implementation process, and summative, for the whole portfolio. Formative assessment implies self- (Paris & Turner, 1994; Todd, 2002), peer (Clayton, 1998; Fleak, Romine & Gilchrist, 2003), and teacher assessment (Clayton, 1998; Wiener & Cohen, 1997). In addition to the formative assessment that takes place during the portfolio implementation process, the whole portfolio should be evaluated after it is completed. Some researchers offer criteria for that evaluation. For example, Hauser (1993) believes that criteria for portfolio evaluation include: 1) positive appearance; 2) organization of contents; 3) mediations; 4) significant meaning; 5) position papers; and 6) originality. Also, Adams and Hamm (1994) think that criteria for evaluating student portfolios fall into four primary categories: 1) evidence of critical and creative thinking; 2) quality of activities and investigations; 3) variety of approaches and investigations; and 4) evidence of understanding and skill in situations that parallel prior classroom experience.

Portfolios require the participation of both the teacher and the student. As for the teachers' roles in the portfolio process, teachers can review the portfolio and provide formative feedback to students on where they could improve (Barrett, 2006a), introduce the idea of portfolios to the class, specify portfolio content, give clear and detailed guidelines for portfolio presentation, notify other interested parties, support and encourage students during the preparation period, and assess the portfolios (Kemp & Toperoff, 1998). As for the students' roles in the portfolio process, portfolios achieve a goal that many other assessment methods can not; they change students' role in assessment from passive subjects to active participants as they are called upon to select samples of their classroom work products for the portfolio and to reflect upon

why these artifacts were selected and how they demonstrate learning (Knight *et al*., 2006). Furthermore, Lafi (2002) believes that for portfolios to be used successfully, students should be involved in all or as much decision making about portfolios as possible.

Some researchers investigated teachers' and/or students' views on traditional portfolios. Investigating teachers' views on traditional portfolios after using them, Webre (2001) found that portfolios promoted teachers' self-reflection and self-evaluation, Goff, Colton, and Langer (2000) found that teachers changed their way of thinking about their students' work and gained confidence in solving student learning challenges, and Rogers (1997) found that portfolios were useful for teachers in showing growth, collecting information for district progress reports, accurately reflecting students' achievement, and helping in communicating with parents about their children's performance. Moreover, Athanases (1994) found that teachers reported using more varied strategies for assessing student progress and improvement in planning and adapting literature-based language arts instruction. Those teachers also reported enhanced reflection about teaching, self-confidence, and sense of collegiality. Investigating students' views on traditional portfolios after using them, Frazier and Paulson (cited in Roeder, 2007) found that students became active stakeholders in their learning process and were genuinely excited about writing and improving their writing skills, Anselmo (1998) found that students felt that their motivation increased, and Wagner (1992) found that students generally liked maintaining working portfolios and constructing showcase portfolios. Investigating both teachers' and students' views on traditional portfolios, Jones (1994) found a high amount of satisfaction and confidence in portfolio assessment among students and teachers who used portfolios.

Since institutions vary in philosophies, needs, and structures, there can be no singular prescriptive formula for a portfolio assessment model that will work effectively at all institutions (Nelson, 1993). However, some researchers offer guidelines for implementing portfolios. These guidelines include:

1. **Portfolio programs must be carefully designed, because predesigning, planning, and management are essential to their success (Johns, 1995).**
2. **Portfolios should be an integral part of the classroom activities on an ongoing basis throughout the year (Tenbrink, 2003).**
3. **Students should be engaged in self-reflection and in selecting the pieces to be included and should be supported with models of portfolios as well as examples of how others develop and reflect upon portfolios (Paulson et al., 1991).**
4. **Educators planning and using portfolios should develop a portfolio assessment process specific to their own situation; use a collaborative planning approach that involves the teachers and learners who will use the portfolio process; define the purposes and audiences for portfolio assessment prior to the development of the portfolio materials; implement portfolios gradually; recognize the importance of students as partners in the assessment process;**

plan additional time for students to construct portfolios; and conduct student-teacher conferences (Hayes, 1998).

Educators who use portfolios are increasingly faced by various hurdles, which are largely due to the fact that portfolio construction is more than the procedure of putting documents and artifacts together (Tisani, 2008). Some researchers believe that there are some barriers or problems with using portfolios. Some of those barriers are listed below.

1. Portfolios are time consuming (Adams & Hamm, 1994; McNamara & Bailey, 2006) requiring a great deal of faculty and student time (Knight et al., 2006) because some teachers need training in portfolio use (Fritz, 1999) and some students need extra time and guidance with reflection (Coombe & Barlow, 2004; Santos, 1997).

2. Teachers using portfolios will have increased work load reviewing and responding to portfolios (Lafi, 2002) and may also face the difficult task of changing his/her teaching style (Koca & Lee, 1998).

3. Portfolios are expensive to compile and maintain (Adams & Hamm, 1994; Gomez, 2000).

4. Portfolios have low validity (Koca & Lee, 1998), comparability, and reliability Gomez, 2000). Therefore, instructors need to be sure that what is included in portfolios portrays a representative picture of student performance (Fritz, 1999).

5. Portfolios may cause difficulty ensuring standardized testing conditions (Gomez, 2000) and they may get in the way of standardized comparisons like national assessment exams (Adams & Hamm, 1994).

6. With portfolios, evaluation is more subjective than traditional testing (Koretz, cited in Koca & Lee, 1998; McLoughlin & Lewis, 2005; McNamara & Bailey, 2006).

7. Portfolios may cause student resistance (Horvath, 1997).

8. Portfolios may raise issues of ambiguity, confidentiality, and honesty (Gannon, Draper, Watson, Proctor & Norman, 2001) as they may be susceptible to cheating (Lafi, 2002).

Section Two: Electronic Portfolios

Definitions of electronic portfolios can be classified into three categories: definitions that focus on the portfolio approach, definitions that focus on the electronic component, and definitions that focus on both the portfolio approach and the electronic component. The first category includes the definitions of Barrett (2005b), Ash (cited in McNair & Marshall, 2006), and Buzzetto-More and Alade (2008). The second category of electronic portfolio, in which focus is on the electronic component in electronic portfolios, includes a larger number of definitions than the previous category. It includes the definitions of Barrett

(2000a), Chang (2001), Ali (2005b), Batson (2002), Gathercoal, Love, Bryde and McKean (2002), Cambridge cited in McNair and Marshall (2006), Butler (2006), and Abrami and Barrett (2005). The third category of electronic portfolio definitions gives attention to both the portfolio approach and the electronic component. This category includes the definitions of DiBiase (2002), Weidmer (cited in Capraro, 2003), Challis (2005), Light and Sproule (2007), Reardon, Lumsden and Meyer (2004), Richards (2005), MacDonald, Liu, Lowell, Tsai and Lohr (2004), and Guo and Greer (2006).

Electronic Portfolios depend on the same theoretical bases of traditional portfolios: constructivism, learner-centered instruction and sociocognitive theory. In addition to these three theoretical underpinnings, there is another theoretical basis for electronic portfolios. This basis is Gardner's multiple intelligences theory. According to Martin and Burnette (2000), an electronic portfolio can be an instrument to both establishing baselines and measuring growth in all of the intelligence sets that Gardner has identified. Hoerr (2000) adds that as electronic portfolios are filled with documents and photos, along with audio and videotapes, therefore, they address every intelligence. Holding the same notion, Lever-Duffy, McDonald, and Mizell (2003) indicate that the electronic portfolio opens up a way of assessing student performance more accurately than the traditional nonelectronic format because there is a greater opportunity for students possessing learning styles and multiple intelligences other than the verbal-visual-linguistic and logical-mathematical to demonstrate achievement and growth. They point out that the multimedia capabilities of presentation software as an instrument for the creation and display of the electronic portfolio allow teachers to design portfolio requirements to accommodate all learning styles and multiple intelligences.

Since the mid-nineties, the term electronic portfolio has been used to describe collections of student work at a web site (Batson, 2002). In the latter part of the last millennium, portfolio advocates talked of portfolios showcasing student work, making them proud of their achievement in addition to helping them believe that they owned their own academic work (2007). Significant advances already made in e-learning have paved the way to enable widespread adoption of electronic portfolios (ePortConsortium, 2003). New electronic communications technology and the Web, together with a desire to have learners assume responsibility for documenting, reflecting, and assessing their own learning, are key motivators behind the growth of the electronic portfolio movement (Ittelson, 2001).

Three main characteristics of electronic portfolios can be identified:

1. All artifacts in electronic portfolios are electronic (Lynch & Purnawarman, 2004) and are usually available on the Internet (Greenberg, 2004).

2. **Electronic portfolios are multimedia-oriented (Meeus, Questier, & Derks, 2006). Artifact formats such as video and sound recordings that are difficult to include in traditional portfolios are easily included in electronic portfolios (Knight et al., 2006).**

3. **The electronic portfolio is not a digital scrapbook or a multimedia presentation because it is not a haphazard collection of artifacts but rather a reflective tool that demonstrates growth over time (Barrett, 2000a). The electronic portfolio is not also a personal homepage even though materials may be published on the Internet (Greenberg, 2004).**

   The flexibility of the electronic portfolio makes it useful for students, teachers, administrators, and human resource personnel (Bhattacharya & Mimirinis, 2007) with the potential to meet such diverse purposes (Gibson & Barrett, 2003) as assessment and evaluation (Barrett, 2004; Miller & Morgaine, 2009; Weinmann, 2001); showcasing (Attwell, 2005; Dorn, Madeja, & Sabol, 2003; Fiedler & Pick, 2004; Niguidula, 2002; Yancey, 2009); enhancing interaction, communication, and collaboration with others in the community (Bhattacharya & Mimirinis, 2007; Dorn et al., 2003; Tolsby, 2001); reflecting on learning (Attwell, 2005; Barrett, 2005a); supporting ongoing learning and professional development (Barrett, 2004; Fiedler & Pick, 2004; Ramey & Hay, 2003); supporting college admissions (Dorn et al., 2003) and employment (Barrett, 2004); and making archives for future generations of learners to build on (Bull et al., cited in cited in Gathercoal, Love, Bryde, & McKean, 2002).

   Academic leaders are excited by electronic portfolios (Jafari, 2004). They view this growing phenomenon as a powerful tool for learning and assessment (Skiba, 2005). Therefore, it is gaining recognition as a valuable tool for learners, instructors, and academic organizations (Siemens, 2004) holding the promise of being an important component of future educational models (Guo & Greer, 2006) or at least a starting point for the type of learning communities that educational organizations will need to offer future students (Greenberg, 2004). That is why Batson (2002) and Meyer and Latham (2008) agree that electronic portfolios have the potential to change the face of higher education. Love, McKean and Gathercoal (2004) go even further to consider electronic portfolios to have "the most significant effect on education since the introduction of formal schooling" (p. 24). Ring and Foti (2003) maintain that the development of an electronic portfolio promotes the engagement of students in authentic tasks in authentic contexts. Moreover, Guo and Greer (2006) point out that electronic portfolios can offer many advantages in demonstration of skills, learner reflection, collaboration, and assessment.

   Many researchers (e.g., Demirli & Gürol, 2007; Hung, 2006; Knight et al., 2006) agree that electronic portfolios offer all of the advantages of traditional portfolios and have more advantages related to the added element of using technology. Among those advantages are: the elimination of physical storage

problems (Buzzetto-More, 2006; Gathercoal, Bryde, Mahler, Love & McKean, 2002; Meyer & Latham, 2008), accessibility to a variety of reviewers (ePortConsortium, 2003; Taggart & Wilson, 2005), duplicability (Heath, 2005), use of multimedia (Barrett, 2006b; Knight et al., 2006; Love & Cooper, 2004; Milman & Kilbane, 2005), enhancement of students' and teachers' technological skills (Barrett, 2003a; Ledoux & McHenry, 2006; Wall, Higgins, Miller & Packard, 2006), support of lifelong learning (Fournier, Lane, & Corbett, 2007; Rathburn, 2007), low cost (Lynch & Purnawarman, 2004), ease (Landone, Vrasidas, Christodoulou, & Retalis, 2004; Wielenga, 2000), and organization (Ahn, 2004; Canada, 2002; Wade et al., 2005; Young, 2002).

Some educators attempt to classify electronic portfolios according to some aspects such as purpose, digital format, developer, and time of organization. According to purpose, Batson (2007) classifies electronic portfolios into learning portfolios, advising portfolios, student showcase portfolios, and assessment management systems while Tosh and Werdmuller (2004) classify them into: a) the electronic portfolio used for final assessment or job seeking where the emphasis is on the product and b) the electronic portfolio used for reflection, deep learning, knowledge growth, and social interaction where the emphasis lies on the process. Also attempting to classify electronic portfolios according to purpose, Ramey and Hay (2003, p. 31) indicate that prototypes of electronic portfolios described in the literature include working portfolios and presentation or collection portfolios.

According to digital format electronic portfolios can be classified into electronic portfolios—contain both computer-readable and analog formats, digital portfolios—which are computer readable, and webfolios—which are accessible over the web (Learning e-portfolio, 2008). Electronic portfolios can also be classified according to who developed them into those developed by students, faculty members, and institutions (Ittelson, 2001). Greenberg (2004) offers another classification of electronic portfolios as he classifies them in terms of when the work is organized relative to when the work is created as follows:

1. The showcase electronic portfolio: organization occurs after the work has been created.
2. The structured electronic portfolio: a predefined organization exists for work that is yet to be created.
3. The learning electronic portfolio: organization of the work evolves as the work is created.

What distinguishes the electronic portfolio from a paper portfolio is the container—electronic media rather than paper (Keefe, Kobrinski, Keen, Mattia, & Moersch, 2002). Electronic portfolios are an effective way to present information not only through text, but also through audio and video formats (Abrami & Barrett, 2005; Canada, 2002; Heath, 2005; Johnson & Lamb, 2007;

Love & Cooper, 2004; Wade et al., 2005). Moreover, Barrett (1997) mentions mixed media products such as integrated text, graphics, sound, and video. In this concern, Ring, Weaver, and Jones (2008) point out that we must move beyond text-centric electronic portfolios to multimedia rich portfolios. For example, a video clip can be used as an introduction to an electronic portfolio or to a new page in the portfolio (Walker, 2004) giving students an opportunity to introduce themselves and their ideas in a more personalized way (Ring et al., 2008).

Electronic portfolio artifacts can be arranged in many ways. Ali (2005a) suggests that a simple student electronic portfolio should include: a title card—with student's and teacher's names and the academic year, table of contents, samples of work, a short resume, student's reflective notes, letter to viewers, and viewer comments box. Ritter (2009) points out that the easiest way to create the electronic portfolio is to use an electronic format from the start. That is, the portfolio developer can place the documents on the web page or disc as they are originated rather than trying to collect nonelectronic information and transfer it to the electronic version later. However, Heath (2005) assures that there is a need for balance between portfolio content and portfolio technology. For him, content is always more important than the technology used to create it. He also assures that technology, as marvelous or aggravating as it can be, is merely a tool—a means to an end.

Many institutions have indicated that it is essential to implement an electronic portfolio system in steps instead of all at once (Meyer & Latham, 2008). Despite various views on the process of developing electronic portfolios, five main stages are agreed upon by educational researchers as the main stages of developing electronic portfolios. As with traditional portfolios, these stages are collection, selection, reflection, organization and presentation. As the five stages were previously covered in the discussion of traditional portfolios, the researcher will confine her discussion of those stages to how technology used in developing electronic portfolios affects or enhances each of the five stages.

1. Collection

Adding technology to the portfolio approach enables the portfolio developer to incorporate more kinds of artifact into electronic portfolios (Butler, 2006). Electronic portfolios can integrate text and multimedia elements such as pictures, graphics, and audio and video recordings (Abrami & Barrett, 2005; Canada, 2002; Heath, 2005; Love & Cooper, 2004; Wade et al., 2005). They also take advantage of work that is already in an electronic format (Heath, 2002, 2005).

2. Selection

MacDonald et al. (2004) point out that although producing an electronic portfolio makes it possible to include more documents without increasing the physical size, the creators should remind themselves of the argument for quality versus quantity when selecting artifacts for portfolios. In this concern, Kilbane and Milman (2003) recommend that some guidelines be considered when selecting artifacts and items for inclusion in the electronic portfolio.

3. Reflection

As mentioned by Barrett (1998), an electronic portfolio without reflections is just a multimedia presentation, a fancy electronic resume, or a digital scrapbook. The process of reflection is what makes electronic portfolios a tool for life-long learning and professional development rather than a mere collection of electronic work (Foote & Vermette, cited in Wade, Abrami, White, Nicolaidou, & Morris, 2006). Kimball (2002, p.22) thinks that in an electronic portfolio, reflective statements usually appears before the reader sees the artifacts. He gives the example that reflective statements can appear on the homepage where the author introduces the portfolio as a whole and looks back on the entire period in which the artifacts were created. He adds that reflective statements can also appear on separate reflection pages where the author introduces the individual artifacts.

4. Organization

Capraro (2003) and Barrett (2005b) agree that electronic portfolios use hypertext links to organize the material and connect evidence to appropriate outcomes, goals or standards. Similarly, Gibson and Barrett (2003) indicate that an electronic portfolio should take advantage of the linking capabilities of digital technology to make easy connections between various work products. Tuttle (1997) explains that using hyperlinks to connect various parts of electronic portfolios help in saving documents and materials from getting lost or misplaced. In the same context, Ring et al. (2008) assure that through the use of hypertext, students are able to connect ideas, projects, and outside links.

According to Gathercoal, Love, Bryde and McKean (2002), electronic portfolios can be organized to be accessible in a searchable form. Ramey and Hay (2003) add that the inclusion of a menu of items assists the reader in navigating through the portfolio while relevant links connect the sections and facilitate smooth mobility throughout the collection of artifacts. Moreover, he adds, new student work can replace older work with minimal effort; therefore, there is no need to search through a thick manila folder.

5. Presentation

Researchers do not have a unanimous opinion regarding the presentation of electronic portfolios. Ramey and Hay (2003) point out that it includes a homepage which should reflect the individuality of the student and which anchors the student and the portfolio. On the other hand, Galloway (cited in Ali, 2005a) is not in favor of restricting electronic portfolios to online WebPages. He feels that well formatted and linked Microsoft Office (Word, Excel, PowerPoint) documents would be just as effective as web pages while also maintaining the originality of the portfolio. Holding an eclectic approach, Reiss (2006) suggests that students be encouraged but not required to publish their electronic portfolios on the World Wide Web. For Meeus et al. (2006), putting together an electronic portfolio and publishing it on CD-ROM or on the Internet is a challenging option and makes portfolios easier to read, attractive and compact. Demirli and Gürol (2007) maintain that the presentation of electronic portfolios can be adjusted as new technological options become available.

Like traditional portfolios, assessment in electronic portfolios includes self-, peer and teacher assessment (Greenberg, 2004) throughout the electronic portfolio implementation process as well as assessment of the whole portfolio after it is finished (Meyer & Latham, 2008). However, assessment in electronic portfolios includes a new dimension which does not exist in traditional portfolios; i.e., feedback from outside reviewers. In this respect, Greenberg (2004) points out that communication and interaction in electronic portfolios are not restricted to the immediate class or instructors and can include mentors, advisors, friends, and outside reviewers. Online collaboration tools used in electronic portfolios help assessment in many ways as listed below:

1. They help students to produce high-quality work, to learn the importance of paying attention to details, and to learn how to direct their work to a particular audience (McManus, 2000).
2. They allow each student to be judged based on a more complete body of evidence (ePortConsortium, 2003).
3. They enable students to have access to the system when they are off-campus (Vanides, 2002) and enable peers (Grier et al., 2006) and teachers (Ali, 2005a) as well as anyone in the world who has access to the Internet to view students' electronic portfolios (Gathercoal, Bryde, Mahler, Love, & McKean, 2002) because any student can send an email message with a URL embedded and anyone in the world can have access to that students' electronic portfolio (Gathercoal, Bryde, Mahler, Love & McKean, 2002).
4. They create new opportunities for in-depth, real-time feedback and discussion (Vanides, 2002) enhancing peer and teacher feedback—two major components of portfolio assessment (Hung, 2006).

5. They create more interaction between students and teachers (Gathercoal, Bryde, Mahler, Love, & McKean, 2002; Meyer & Latham, 2008) as well as among students themselves (Grier et al., 2006); therefore, the social context of learning is exemplified (Dysthe & Engelsen, cited in Grier et al., 2006).

The successful implementation of electronic portfolios requires teacher and student support (Ramey & Hay, 2003). Some roles can be assigned for teachers and some others for students in this process of implementation. As for teachers' roles in electronic portfolios, Pedroni (1996) points out that teachers provide rich learning environments, experiences, and activities as well as create opportunities for students to work collaboratively, solve problems, do authentic tasks, and share knowledge and responsibility. Similarly, Ramey and Hay (2003) define the roles of teachers as teaching the concepts, requiring the finished product, modeling the use of electronic portfolios, introducing the electronic template for the portfolio, clearly defining the criteria and expectations of the portfolio, and providing illustrations suggesting how current course activities could be realigned to become portfolio activities. For Ali (2005a), those roles include: defining the aim of the portfolio, taking students' consent as well as parents' permission for portfolio development, defining portfolio audience, allowing students to select work that best shows their achievement, involving students in peer correction or review, incorporating feedback mechanism into student portfolios, encouraging reflective practice, and evaluating the presented portfolio. However, Barrett (2006a) confines teachers' roles in electronic portfolios to reviewing students' work and providing feedback in narrative form based on a rubric, if available. As for students' roles in electronic portfolios, Pedroni (1996) believes that one important student role is that of an explorer; i.e., students discover concepts and connections as well as apply skills by interacting with the physical world. Ramey and Hay (2003) define the roles of students in electronic portfolios by indicating that students select artifacts for inclusion that support achievement of the key indicators. They add that what is most important is students' reflection on why an artifact is chosen for inclusion in the portfolio, what was gained from a particular experience, and how the experience will impact future behavior and learning. Similarly, Barrett (2006a) mentions that students create, store artifacts and reflections, and organize their work, preferably with hyperlinks.

As for teachers' views on electronic portfolios, Pott (1993) concluded that the computer based portfolio was viewed by teachers as an effective method, helping them with the evaluation process. Moreover, Kavaliauskienė and Suchanova (2009) found that the use of online portfolios for various assignments helps teachers foster students' learning. As for students' views on electronic portfolios, Chang (2001) found that most students consider electronic portfolios to be helpful with respect to improving learning and accomplishing quality. In the same vein, Chen (2002) reported on a survey of students' opinions on an

electronic portfolio which revealed that students were comfortable with using the electronic portfolio. Moreover, MacDonald et al.'s (2004) case study suggested that seeing other people's work was noted as a continuous process for revision, reselection of artifacts, and interface design. Attempting also to investigate students' reactions to the use of electronic portfolios, Chang, Wu, and Ku (2005) found that students had an overwhelmingly positive reaction. Gülbahar and Tinmaz (2006) also found that electronic portfolios were favored by students who indicated that they enjoyed getting weekly feedback about the assignments and having the opportunity to redesign the assignments before final submission. Moreover, students stated that they gained more knowledge about the software development process and learned more from their class as they started to create their electronic portfolios.

Kocoglu (2008) interviewed EFL student teachers for their perceptions of electronic portfolios as a learning tool and could identify several themes, indicating that the electronic portfolio is a tool that helps student teachers keep current with innovations in the digital world, a fancy tool that serves them in the job search, a collection of materials showing their best work, and an opportunity to work collaboratively which in turn supports their ongoing professional development. Similarly, Lopez-Fernandez and Rodriguez-Illera (2009) analyzed undergraduate students' perceptions, attitudes and, behaviors when using an electronic portfolio to support their learning and assessment in practice based courses at two traditional Spanish universities. They found that students had positive opinions and self-efficiency through the electronic portfolio. Although the expected impact on their learning was not so significant, students emphasized that the electronic portfolio was valuable as a personal developmental learning tool. In the same vein, Kavaliauskienė and Suchanova (2009) investigated learners' perceptions of employing electronic language portfolios for conducting various assignments in English for Specific Purposes and found that students were positive about the application of electronic portfolios in ESP classes.

Institutions intending to adopt electronic portfolios should consider some issues. For example, such institutions should take into consideration the budget available for additional hardware and software as well as for staff training (Barrett, 1997). They should also determine which tool to use, which assignments will become part of the student electronic portfolios, and who will make these decisions (Meyer & Latham, 2008). Moreover, such institutions should develop an electronic template for individuals new to the electronic portfolio development process (Ramey and Hay, 2003). Institutions that are going to use electronic portfolios are also highly recommended to be clear about the purpose for using the electronic portfolio, to provide appropriate faculty support, and to hold individual meetings with those groups that resist using electronic portfolios (Wetzel & Strudler, 2005). Additionally, Chappell and Schermerhorn (1999) and

Siemens (2004) suggest that educational institutions must make electronic portfolios mandatory in order to overcome resistance from students and faculty.

Teachers can also be offered some guidelines on how to use electronic portfolios. They should understand and promote the value of electronic portfolios (Siemens, 2004); be realistic with their own expectations from electronic portfolios (Bergman, cited in Ali, 2005a); decide whether to take a teacher-centered or student-centered approach (Barrett, 1997); and incorporate assessment from other stakeholders (parents, department heads, etc.) in all the phases and components of the electronic portfolio development (Bergman, cited in Ali, 2005a).

More guidelines for electronic portfolio implementation include: infusing electronic portfolios across the whole learning process as well as allotting adequate time for the process of electronic portfolio development. Concerning the first issue, Challis (2005) believes that electronic portfolios should be integrated across the learning process; therefore, courses may need to be restructured to accommodate electronic portfolios. Siemens (2004) adds that implementing an institutional approach for electronic portfolios can be a difficult task. To be effective, he continues, the concept needs to be embedded into the process of instruction and assessment. As for the second issue, Ramey and Hay (2003) believe that adequate time should be allotted for the process of electronic portfolio development because the construction process cannot and should not be rushed as it is a lengthy, ongoing process best approached as a long-term project. They add that students and faculty should be introduced to the concepts and desired outcomes early in their academic career which will promote and facilitate student development of organizational skills and reflective patterns.

A number of issues and challenges arise with the use of electronic portfolios in education (Butler, 2006). The first challenge is that they require much time (Heath, 2005) and effort (Papadimitriou, 2009). Westhoff (2003) points out that the problem lies in training students in how to identify the bodies of evidence that best demonstrate their knowledge and how to effectively incorporate it into their portfolios.

Another challenge for electronic portfolios is related to the technologies and technological skills required for them. In this concern, Ali (2005a) believes that the wide range of media through which electronic portfolios can be developed may add to their sophistication and consequently the effort involved in their development and maintenance. Gathercoal, Love, Bryde, and McKean (2002) point out that students are the problem because they do not have the necessary technical skills to make the electronic portfolio work well. Within this context, Woodward and Nanlohy (cited in Grier et al., 2006) found that students who developed and utilized an electronic portfolio rather than a traditional paper portfolio encountered problems learning the new software as well as navigating copyright restrictions on music and photographs. Also, tapping the issue of

technological problems, Purves (1996) indicates such problems as hardware and software incompatibility while Fiedler and Pick (2004) mention the issue of usability and accessibility by special needs populations. Moreover, Demirli and Gürol (2007) believe that problems may emerge when storing documents electronically and yet making them accessible as part of a portfolio. They explain this notion by pointing out that while diskettes may be used to prepare some portfolios, others with big files such as video recordings necessitate other solutions. Moreover, Batson (2002) has identified four areas of concern. These areas are: storage, security, certification, and industry stability.

A final challenge for the adoption of electronic portfolios is a pedagogical one. Batson wonders how the curriculum can be altered to integrate electronic portfolios. In the same context, Song and August (cited in Demirli & Gürol, 2007) believe that before implementing electronic portfolios, some readjustments are needed in classroom instruction and organizing learning activities. Purves (1996) taps such problems as classroom logistics like requiring students to be in the lab to work on their electronic portfolios. Rathburn (2007) also indicates that teachers might have to change course assignments so that they are appropriate for selection as artifacts. Demirli and Gürol (2007) add that assessing student electronic portfolios may cause difficulties in developing specific and feasible marking criteria. According to Ledoux and McHenry (2006), another illustration of a pedagogical problem that occurs with electronic portfolios is the resistance of teachers to use electronic media.

Conclusions

From reviewing the literature on traditional portfolios and electronic portfolios, it can be concluded that they share the same theoretical bases—learner-centered instruction, sociocognitive theory, and constructivism—as well as the same processes or stages of implementation—collection, selection, reflection, organization, and presentation. However, they differ as to the medium in which the portfolio is stored. In traditional portfolios the medium is mainly paper while in electronic portfolios the medium is digital. Moreover, electronic portfolios have an additional theoretical basis—Gardner's multiple intelligences theory. Additionally, electronic portfolios have more advantages than traditional portfolios (e. g., storage, accessibility, duplicability, use of multimedia, enhancement of technological skills, support of lifelong learning, low cost, ease, organization, and flexibility). Figure 1 below illustrates the similarities and differences between the traditional portfolio and the electronic portfolio.

Figure 1 The Similarities and Differences between the Traditional Portfolio and the Electronic Portfolio.

From the literature reviewed and the conclusions reached, the researchers can suggest a conceptual framework for implementing electronic portfolios in an argumentative essay writing course for 4th-year EFL student teachers at Egyptian

faculties of education. This implementation process can go through two main stages: setting the scene and applying electronic portfolios.

1. Setting the scene

Fourth-year EFL student teachers at Egyptian faculties of education had acquired many computer skills because they studied computer for four years. The most important of these skills are those related to using Microsoft Word® as well as the mechanics of using e-mail and the rules of netiquette. However, those students need training in some additional skills necessary for creating electronic portfolios. These are the skills of creating websites. For this purpose, the researcher prepared a manual for creating electronic portfolios (See
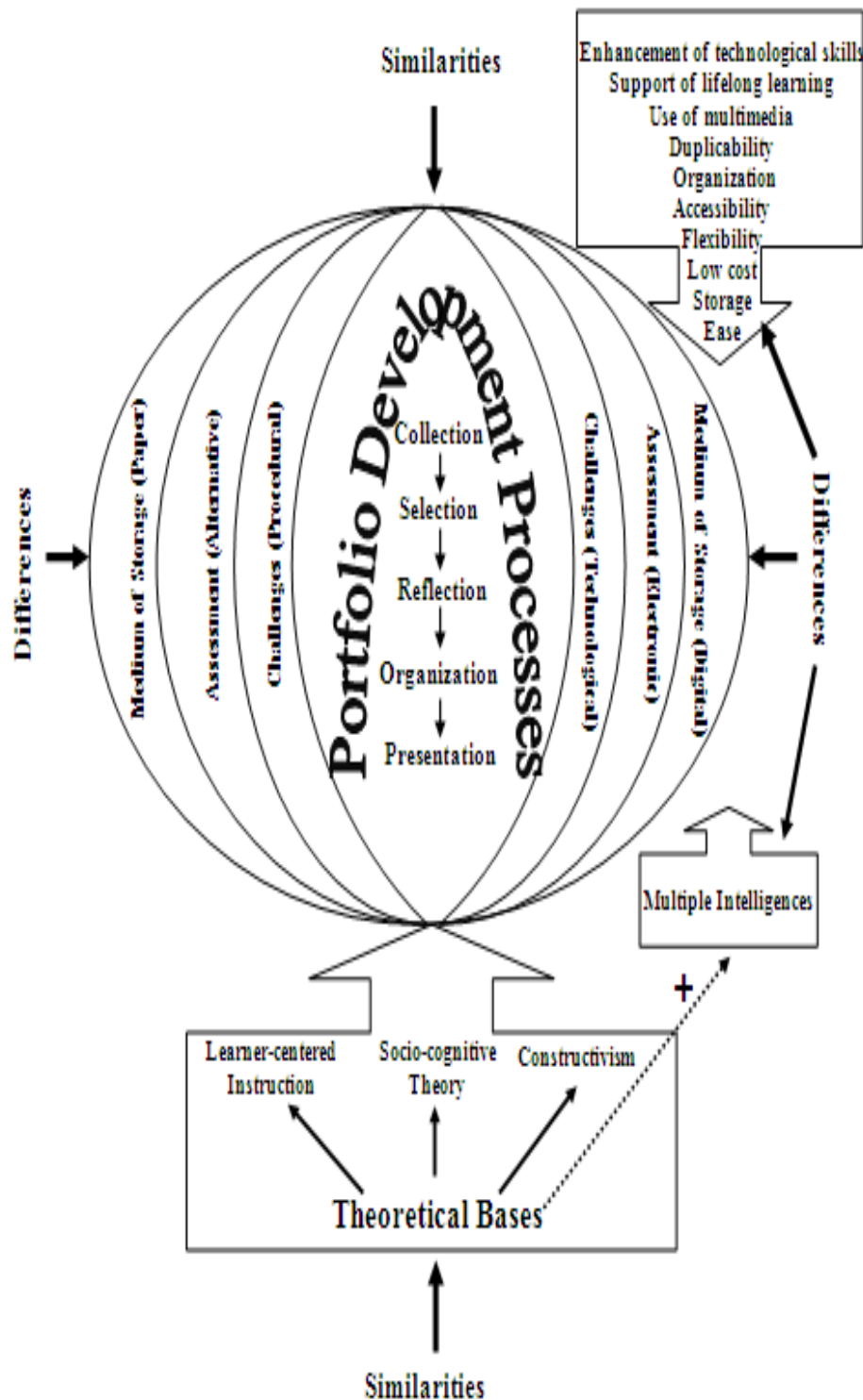
Appendix A). This manual describes, in detail and with pictures, how to build a website and how to use this website as an electronic portfolio. It answers the following questions which students might need to ask:

- What is an electronic portfolio?
- Why should an electronic portfolio be created?
- What should be put in an electronic portfolio?
- How can an electronic portfolio be constructed?
- Where can sample student electronic portfolios be found?

Moreover, the manual includes the following guides:

a) A website creation guide which helps students build websites (See Appendix B).
b) A hyperlinking guide which helps students attach their artifacts to their websites (See Appendix C).
c) A review and revision guide which helps students revise and edit their websites before publishing them (See Appendix D).
d) A publishing guide which helps students publish their websites on CD-ROMs or on the Internet (See Appendix E)

2. Using electronic portfolios

This process went through five successive phases: collection, selection, reflection, organization, and presentation.

a) Collection

As its name suggests, this is the phase where students collect the digital essays from which they would later select specific items to be included in their electronic portfolios. Students can attend weekly sessions with the teacher where they can vote on a topic from a list of topics (see Appendix I for a list of argumentative topics) and held a discussion on that topic. After each session, students should write essays on Microsoft Word® and send them to the teacher by e-mail. The teacher should read the essays and send feedback to students. Students then edit their essays based on the teacher's feedback. Students keep their essays (raw and revised) to include them in their electronic portfolios.

b) Selection

After the weekly assignments are completed, students will select the entries they will include into their electronic portfolios. Each student will be required to include some of the essays he/she wrote during the collection phase (e. g., five essays). These essays should include the best essay as well as the worst essay from the student's point of view in addition to more essays of the student's own selection. For each essay, the student should include the first draft as well as revised draft(s). Students can also be allowed to include optional entries to reflect the personality and individuality of each of them. Examples of these optional entries are links to some sources the student will use in writing his/her essays, names of the colleagues who will help him/her, or the essays he/she will not include as core entries.

c) Reflection

Two types of reflection can be required within the electronic portfolio, artifact reflection and overall reflection. Both types of reflection are described below:

- **Artifact reflection**

Artifact reflection is related to the essays included in the electronic portfolio. Students are required to attach with each essay their reflection on that essay. To help students in writing their reflections, the researcher prepared a reflection template. In this template, each student is recommended to complete some statements for each essay he/she decides to include into his/her electronic portfolio. The statements are phrased in such a manner that they compel students to take an 'I' approach to their writing, to make them aware of their feelings and attitudes towards their writing, to size up their strengths and weaknesses as writers, and to think about how they can apply these skills to future writing tasks in their course of study. See Appendix F for the reflection template.

- **Overall reflection**

Overall reflection provides perspective on where the student is as a writer. Students should be instructed to provide information on the overall quality of their portfolio, what they find difficult about the experience, and what they like about the process. They should also be asked to detail areas where they feel they improve and areas where they feel they need further work. Students should be recommended to follow the steps below while preparing their overall reflection:

- Giving personal information (name, age, grade, faculty, e-mail).
- Describing electronic portfolio objectives.
- Reflecting on the whole electronic portfolio through the following two steps:
  - Describing the electronic portfolio composing and development process. This can include:
    - ❖ Previous experience constructing Web pages
    - ❖ Software programs used to develop the electronic portfolio
    - ❖ Selection and organization process for the artifacts
    - ❖ Challenges, successes, and/or surprises
  - Describing the review and revision process through:
    - ❖ identifying by name and connection to the student the people who reviewed his/her electronic portfolio.
    - ❖ mentioning their recommendations and the changes he/she made based on their comments
    - ❖ summarizing his/her own review process and any changes that resulted from his/her own review.
- Describing future learning objectives.

d) **Organization**

In this phase, each student organizes his/her artifacts into a website (see appendix B for the *Website Creation Guide*) and makes a table of contents with hyperlinks to those artifacts. Moreover, he/she prepares a cover letter which includes his/her personal information in addition to the overall reflection he/she prepares in the previous phase. The cover letter also includes access information for their audience. Entries should be arranged in the website's pages, each with a hyperlink in the table of contents (see Appendix C for the *Hyperlinking Guide*). Each entry should consist of one of the selected essays (both the raw draft and the revised version). Each student is also allowed to include some optional entries (discussed in the selection phase).

e) **Presentation**

In this step, each student reviewes his/her electronic portfolio using the *Review and Revision* Guide (see Appendix D). Following this guide will help the student ensure that the final electronic portfolio adheres to the guidelines and that all the links work properly before publishing the portfolio. After the electronic portfolios are reviewed, they are ready to be presented. *The Publishing Guide* (in Appendix E) is designed to help students publish their electronic portfolios on CD-ROMs and/or on the Internet.

References

Abrami, P. & Barrett, H. (2005). Directions for research & development on electronic portfolios. *Canadian Journal of Learning & Technology*, *31*(3), 1-15.

Adams, D. & Hamm, M. (1994). *New designs for teaching & learning: Promoting active learning in tomorrow's schools*. San Francisco: Jossey-Bass.

Ahn, J. (2004). Electronic portfolios: Blending technology, accountability, & assessment. *T.H.E. Journal, 31*(9), 12–18.

Ali, S. (2005a). An introduction to electronic portfolios in the language classroom. *The Internet TESL Journal*, *11*(8). (Online). Retrieved November 3, 2007, from http://iteslj.org/Techniques/Ali-Portfolios.html.

Ali, S. (2005b). Self-assessment as a tool for empowerment. *EFLIS Newsletter*, *5*(1). (Online). Retrieved May 3, 2008, from http://www.tesol.org/s_tesol/docs/11800/11720.html?nid=2994 .

Anselmo, C. (1998). Experiences students encounter with portfolio assessment. *DAI-A*, *58*(11), 4237.

Athanases, S. (1994). Teachers' reports of the effects of preparing portfolios of literacy instruction. *The Elementary School Journal*, *94*(4), 421-439.

Attwell, G. (2005): *Recognizing Learning: Educational & Pedagogic Issues in e-Portfolios*. (Online). Retrieved November 15, 2007, from http://www.knownet.com/writing/weblogs/Graham_Attwell/entries/5565143946/7575578504/attach/graham_cambridge.pdf.

Bach, D. (2007). *The Learning Portfolio: Promoting Intentional Learning*. (Online). Retrieved May 10, 2008, from http://trc.virginia.edu/Publications/Teaching_Concerns/Fall_2007/TC_Fall_2007_Bach.htm.

Barrett, H. (1997). *Collaborative Planning for Electronic Portfolios: Asking Strategic Questions*. (Online). Retrieved August 10, 2009, from http://electronicportfolios.com/portfolios/LLTMay98.pdf.

Barrett, H (1998) *Electronic Portfolios & Standards*. (Online). Retrieved December 10, 2007, from http://electronicportfolios.org/portfolios/TelEd98Abstract.html.

Barrett, H. (2000a). Create your own electronic portfolio. *Learning & Leading with Technology*, *21*(7), 14-21.

Barrett, H. (2000b). *Electronic Portfolios = Multimedia Development + Portfolio Development: The Electronic Portfolio Development Process*. (Online). Retrieved December 22, 2008, from http://electronicportfolios.org/portfolios/EPDevProcess.html.

Barrett, H. (2000c). *Electronic Teaching Portfolios: Multimedia Skills+ Portfolio Development=Powerful Professional Development*. ERIC Document No. ED 444 514.

Barrett, H. (2003a). Electronic portfolios. In A. Kovalchick & K. Dawson (Eds.), *Educational Technology: An Encyclopedia*. Santa Barbara, CA: ABC-Clio.

Barrett, H. (2003b). *The Research on Portfolios in Education.* (Online). Retrieved March 26, 2009, from http://electronicportfolios.org/ALI/research.html.

Barrett, H. (2004). *Electronic Portfolios as Digital Stories of Deep Learning*. (Online). Retrieved November, 30, 2007, from http://electronicportfolios.org/digistory/epstory.html.

Barrett, H. (2005a). Foreword. *Digital portfolios in teacher education* by L. Mullen, J. Britten, & J. McFadden. Indianapolis IN: Jist Publishing.

Barrett, H. (2005b). *Researching Electronic Portfolios & Learner Engagement*. (Online). Retrieved August 19, 2008, from http://www.taskstream.com/reflect/whitepaper.pdf.

Barrett, H. (2006a) *Authentic Assessment with Electronic Portfolios Using Common Software & Web 2.0 Tools*. (Online). Retrieved August 12, 2008, from http://helenbarrett.com/web20.html.

Barrett, H. (2006b). Using electronic portfolios for classroom assessment. *Connected Newsletter*, 13(2), 4-6.

Bastidas, A. (1996). The teaching portfolio: A tool to become a reflective teacher. *Forum*, 34(3-4), 24-28.

Batson, T. (2002). The electronic portfolio boom: What's it all about? *Syllabus*, 16(5). (Online). Retrieved February 19, 2008, from http://campustechnology.com/articles/2002/11/the-electronic-portfolio-boom-whats-it-all-about.aspx.

Batson, T. (2007). *The ePortfolio Hijacked*. (Online). Retrieved January 19, 2009, from www.ctl.calpoly.edu/workshops/fliers/2008_Spring_ePortfolioHijacked.pdf.

Belk, J. & Calais, G. (1993). *Portfolio Assessment in Reading & Writing: Linking Assessment & Instruction to Learning*. ERIC Document No. ED 365 732.

Bhattacharya, M. & Mimirinis, M. (2007). Creating e-portfolio with OSP. Paper presented at the Seventh IEEE International Conference on Advanced Learning Technologies, 18th-20th July 2007 (pp. 947-948).

Birgin, O. & Baki, A. (2007). The use of portfolio to assess student's performance. *Journal of Turkish Science Education 4*(2), 75-90.

Brown, H. (2001). *Teaching by principles: An interactive approach to language pedagogy* (6th ed.). New York: Pearson Education.

Butler, P. (2006). *A Review of the Literature on Portfolios & Electronic Portfolios*. (Online). Retrieved April 20, 2009 from https://eduforge.org/docman/view.php/176/1111/ePortfolio%20Project%20Research%20Report.pdf.

Buzzetto-More, N. (2006). The e-Learning & business education paradigm: Enhancing education, assessment, & accountability. Proceedings of the Maryland Business Education Association Conference. Ocean City, MD,

March 2006.

Buzzetto-More, N. & Alade, A. (2008). The pentagonal e-portfolio model for selecting, adopting, building, & implementing an e-portfolio. *Journal of Information Technology Education*, *7*, IIP 45-IIP 70.

Calfee, R. (1994). *Ahead to the Past: Assessing Student Achievement in Writing.* ERIC Document No. ED. 374 433.

Campbell, N. (2002). Getting rid of the yawn factor: Using a portfolio assignment to motivate students in a professional writing class. *Business Communication Quarterly*; *65*(3), 42-54.

Canada, M. (2002). Assessing e-folios in the on-line class. *New Directions for Teaching & Learning, 91*, 69-75.

Capraro, M. (2003). *Electronic Teaching Portfolios: Technology Skills + Portfolio Development= Powerful Preservice Teachers.* ERIC Document No. ED 476 367.

Challis, D. (2005). Towards the mature ePortfolio: Some implications for higher education. *Canadian Journal of Learning & Technology, 31*(3). (Online). Retrieved December 13, 2008 from http://www.cjlt.ca/index.php/cjlt/article/view/93/87.

Chang, C. (2001). Construction & evaluation of a web-based learning portfolio system: An electronic assessment tool. *Innovations in Education & Teaching International*, *38*(2), 144-155.

Chang, C. (2002). *Assessing & Analyzing the Effects of WBLP on Learning Processes & Achievements: Using the Electronic Portfolio for Authentic Assessment on University Students' Learning*. ERIC Document No. ED 476 984.

Chang, Y., Wu, C., & Ku, H. (2005). The introduction of electronic portfolios to teach & assess English as a foreign language in Taiwan. *TechTrends*, *49*(1), 30-35.

Chappell, D. & Schermerhorn, J. (1999). Using electronic student portfolios in management education: A stakeholder perspective. *Journal of Management Education*, *23*(6), 651-662.

Chen, I. (2002). *Experiencing, Learning & Teaching of Secondary Business Education in a Virtual Environment: The Use of Electronic Portfolio as Curriculum Framework for a Preservice Course "Advanced Information Technology."* ERIC Document No. 466 796.

Chen, H., Cannon, D., Gabrio, J., Leifer, L. Toye, G. & Bailey, T. (2005). Using wikis & weblogs to support reflective learning in an introductory engineering design course. *Proceeding of the American Society for Engineering Education Annual Conference & Exposition.* The American Society for Engineering Education.

Clayton, M. (1998). *Computer-Assisted, Portfolio-Based Composition: The Next Step for Freshman Composition at MTSU.* ERIC Document No. ED 431 388.

Coombe, C. & Barlow, L. (2004). The reflective portfolio: Two case studies from the United Arab Emirates. *Forum*, *42*(1), 18-23.

Danielson, C. & Abrutyn, L. (1997). *An introduction to using portfolios in the classroom*. Alexandria: Association for Supervision & Curriculum Development.

Demirli, C. & Gürol, M. (2007). An overview of the electronic portfolio process. *E-Journal of New World Sciences Academy*, *2*(3), 254-271.

DiBiase, D. (2002) *Using E-Portfolios at Penn State to Enhance Student Learning: Status, Prospects, & Strategies*. (Online). Retrieved August 10, 2007, from http://www.e-education.psu.edu/portfolios/e-port_report.shtml.

Dorn, C., Madeja, S., & Sabol, F. (2003). *Assessing Expressive learning: A practical guide for teacher-directed authentic assessment in K-12 visual arts education.* New Jersey: Lawrence Erlbaum Associates.

El-Koumy, A. (2003). *Language performance assessment: Current trends in theory & research.* Cairo: Dar An-Nahda Al-Arabya.

EPortConsortium. (2003). *Electronic Portfolio White Paper [Version 1.0].* (Online). Retrieved April 14, 2006, from http://eportconsortium.org.

Farr, R. (1991). *Portfolios: Assessment in Language Arts*. ERIC Digest. No. ED 334 603.

Farris, P. (1993). *Language arts: A process approach*. Dubuque: Wm. C. Brown Communications.

Fiedler, R. & Pick, D. (2004). *Adopting an Electronic Portfolio System: Key Considerations for Decision Makers*. ERIC Document No. ED 485 082.

Fleak, S., Romine, J., & Gilchrist, N. (2003). Portfolio peer review: A tool for program change. *Journal of Education for Business*, *78*(3), 139-146.

Fournier, J., Lane, C. & Corbett, S. (2007). The journey to best practices: Results of a two-year study of e-portfolio implementation in beginning composition courses. In C. Montgomerie & J. Seale (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia & Telecommunications 2007* (pp. 2008-2016). Chesapeake, VA: AACE.

Fritz, N. (1999). *Assessment of ESOL Learners: Mini-Grant Report*. (Online). Retrieved August 10, 2007, from www.brown.edu/Departments/Swearer_Center/Literacy_Resources/fritzassess.htm

Gaith, G. (2002). Using cooperative learning to facilitate alternative assessment. *Forum*, *40*(3), 26-31.

Gannon, F, Draper, P., Watson, R., Proctor, S., & Norman, I. (2001). Putting portfolios in their place. *Nurse Education Today*, *21*(7), 534-540.

Gathercoal, P., Bryde, B., Mahler, J., Love, D., & McKean, G. (2002). *Preservice Teacher Standards & the Magnetic Connections Electronic Portfolio*. ERIC Document No. ED 466 451.

Gathercoal, P., Love, D., Bryde, B. & McKean, G. (2002). On implementing web-based electronic portfolios. *Educause Quarterly*, *2*, 29-37.

Gibson, D. & Barrett, H. (2003). Directions in electronic portfolio development. *Contemporary Issues in Technology & Teacher Education*, *2*(4), 559-576.

Goff, L. Colton, A. & Langer, G. (2000). Power of the portfolio: Project uses student work analysis to improve teaching. *Journal of Staff Development*, *21*(4) (Online). Retrieved April 15, 2008, from http://education.alberta.ca/media/439571/Ft_Vermilion_Powerofthe_Portfolio.pdf.

Gomez, E. (2000). *Assessment Portfolios: Including English Language Learners in Large-Scale Assessments*. ERIC Digest No. ED 447 725.

Grace, C. (1992). *The Portfolio & Its Use: Developmentally Appropriate Assessment of Young Children*. ERIC Digest No. ED 351 150.

Greenberg, G. (2004). The digital convergence: Extending the portfolio model. *Educause Review*, *39*(4), *28*, 30-32, 34, & 36.

Grier, J., Denney, M., & Clark, M. (2006). *A Tale of Two Programs: A Comparative Study of Electronic Portfolio Assessment in Teacher Education.* ERIC Document No. ED 494 953.

Gülbahar, Y. & Tinmaz, H. (2006). Implementing project-based learning & e-portfolio assessment in an undergraduate course. *Journal of Research on Technology in Education 38*(3), 309-327.

Guo, Z. & Greer, J. (2006). Electronic portfolios as a means for initializing learner models for adaptive tutorials (pp. 482-487). W. Nejdl & K. Tochtermann (Eds.), *Innovative Approaches for Learning & Knowledge Sharing*, First European Conference on Technology Enhanced Learning, EC-TEL 2006, Crete, Greece, October 1-4, 2006.

Hancock, C. (1994). *Alternative Assessment & Second Language Study: What & Why?* ERIC Document No. ED376 695.

Hauser, J. (1993). *College Student Portfolios: A Representational Format for Best Profile Dimensions*. ERIC Document No. ED 362 090.

Hayes, E. (1998). *Professional Tips for Adult & Continuing Educators Planning & Using Portfolio Assessment.* (Online). Retrieved August 10, 2007, from http://muse.widener.edu/~aad0002/portfoliotips.htm.

Heath, M. (2002). Electronic portfolios for reflective self-assessment. *Teacher Librarian*, *30*(1), 19-23.

Heath, M. (2005). Are you ready to go digital? The pros & cons of electronic portfolio development. *Library Media Connection*, *23*(7), 66-70.

Herman, J. & Winters, L. (1994). Portfolio research: A slim collection. *Educational Leadership*, *52*(2), 48-55.

Hirvela, A. & Pierson, H. (2000). Portfolios: Vehicles for authentic self-assessment. In G. Ekbatani & H. Pierson (Eds.), *Learner-directed assessment in ESL* (pp. 105-126). New Jersey: Mahwah.

Hoerr, T. (2000). *Technology & MI*. **(Online). Retrieved December 21, 2008, from** http://www.newhorizons.org/strategies/mi/hoerr.htm.

Horvath, L. (1997). Portfolio assessment of writing, development & innovation in the secondary setting: A case study. *DAI-A*, *58*(8), 2985.

Huerta-Macias, A. (1995). Alternative assessment: Responses to commonly asked questions. *TESOL Journal*, *5*(1), 8–11.

Hung, S. (2006). Alternative EFL assessment: Integrating electronic portfolios into the classroom. Doctoral Dissertation. Indiana University, Bloomington.

Indiana University East, Division of Education: Portfolio Guidelines. **(2007). Online. Retrieved May 25, 2009 from** http://webdev.iue.edu/departments/doe/portfolio%20guidelines%204-7-03.pdf.

Ittelson, J. (2001). Building an e-dentity for each student. *Educause Quarterly, 4*, **43-45.**

Jafari, A. (2004). The sticky eportfolio system: Tackling challenges & identifying attributes. *Educause Review, 39(4)*, **40-48.**

Johns, A. (1995). An excellent match: Literacy portfolios & ESP. *Forum*, *33*(4), **16-21.**

Johnson, L. & Lamb, A. (2007). *Electronic Portfolios: Students, Teachers, & Life Long Learners*. **(Online). Retrieved May 5, 2009 from** http://eduscapes.com/tap/topic82.htm.

Jones, J. (1994). The development of a plan to replace the Writing Assessment Test with portfolio assessment in the City University of New York. Ed.D. dissertation, Nova Southeastern University, United States, Florida. Proquest Dissertations & Theses: Full Text Database. Publication No. (AAT 9501448).

Kalz, M. (2005). *Building Eclectic Personal Learning Landscapes with Open Source Tools*. **(Online). Retrieved November 5, 2007, from** http://blog.marcokalz.de/media/kalz_oss_europe_fullpaper.pdf.

Kathpalia, S. & Heah, C. (2008). Reflective writing: Insights into what lies beneath. *RELC Journal: A Journal of Language Teaching & Research*, *39*(3) 300-317.

Kavaliauskienė, G. & Suchanova, J. (2009). Portfolio at tertiary level: Lifelong learning tool. *Santalka. Filologija. Edukologija,* 17(2), 38-43.

Keefe, A., Kobrinski, E., Keen, P., Mattia, C. & Moersch, C. (2002). Electronic portfolio production for performance assessment of undergraduate learners. *Journal of Virginia Society for Technology in Education, 17(1), 24-32.*

Kelly-Riley, D. (2006). A validity inquiry into minority students' performances in a large-scale writing portfolio assessment. Ph.D. dissertation, Washington State University, United States, Washington. Retrieved July 9, 2008, from

Dissertations & Theses: Full Text database. (Publication No. AAT 3227443).

Kemp, J. & Toperoff, D. (1998). *Guidelines for Portfolio Assessment in Teaching English.* (Online). Retrieved November 5, 2007, from http://rumutha.ru.funpic.de/Guidelines_for_Portfolio_Assessment.pdf.

Kilbane, C. & Milman, N. (2003). *The digital teaching portfolio handbook: A how-to guide for educators*. Boston: Allyn & Bacon.

Kimball, M. (2002). *The web portfolio guide*. New York: Addison-Wesley Longman.

Knight, W., Hakel, M., & Gromko, M. (2006). *The Relationship between Electronic Portfolio Participation & Student Success.* ERIC Document No. ED 493 824.

Koca, S. & Lee, H. (1998). *Portfolio Assessment in Mathematics Education*. ERIC Document No. ED 434 802.

Kocoglu, Z. (2008). Turkish EFL student teachers' perceptions on the role of electronic portfolios in their professional development. *The Turkish Online Journal of Educational Technology*, 7(3), Article 8. (Online). Retrieved May 3, 2007, from http://www.tojet.net/articles/738.pdf.

Kudlas, M., Davison, H. & Mannelin, L. (2003). Portfolios & critical thinking: Teaching techniques. *Radiologic Technology*, *74* (6):509-516.

Lafi, T. (2002). *Monastir Regional Board of Education*. (Online). Retrieved November 3, 2007, from http://www.edunet.tn/tnelt/tutorials/elt_train/pdf/Alternatives_Assessment.pdf.

Landone, E., Vrasidas, C., Christodoulou, N., & Retalis, S. (2004). The *Digital European Language Portfolio.* (Online). Retrieved November 3, 2007, from http://eelp.gap.it/doc/proposal.pdf.

Learning e-portfolio. (2008). *EduTech Wiki*. (Online). Retrieved July 22, 2008 from http://edutechwiki.unige.ch/mediawiki/index.php?title=   Learning_e-portfolio&oldid=17763.

Ledoux, M. & McHenry, N. (2006). Electronic portfolio adoption for teacher education candidates. *Early Childhood Education Journal*, *34*, (2), 103-116.

Lever-Duffy, J., McDonald, J. & Mizell, A. (2003). *Teaching & Learning with Technology.* Boston: Allyn & Bacon.

Lin, H., Liu, Z., & Yuan, S. (2004). Networked portfolio with real time learning monitoring system. *Proceedings of the IEEE International Conference on Advanced Learning Technologies* 30th Aug.-1st Sept. 2004 (pp. 753 – 755).

Lopez-Fernandez, O. & Rodriguez-Illera, J. (2009). Investigating university students' adaptation to a digital learner course portfolio. *Computers & Education, 52*(3), 608-616.

Love, D., McKean, G., & Gathercoal, P. (2004). Portfolios to webfolios & beyond: Levels of maturation. *Educause Quarterly*, 2, 24-37.

Love, T. & Cooper, T. (2004). Designing online information systems for portfolio-based assessment: Design criteria & heuristics. *Journal of Information Technology Education, 3*, 65-81.

Lynch, L. & Purnawarman, P. (2004). Electronic portfolio assessments in U.S. educational & instructional technology programs: Are they supporting teacher education? *TechTrends, 48*(1), 50–56.

MacDonald, L., Liu, P., Lowell, K., Tsai, H. & Lohr, L. (2004). Part one: Graduate student perspectives on the development of electronic portfolios. *TechTrends*, *48*(3), 52-55.

Martin, G. & Burnette, C. (2000). *Maximizing Multiple Intelligence Through Multimedia: A Real Application of Gardner's Theories.* (Online). Retrieved November 3, 2007, from http://www.infotoday.com/MMSchools/oct00/martin&burnette.htm.

McLoughlin, J. & Lewis, R. (2005). *Assessing students with special needs*. (6ᵗʰ ed.). New Jersey: Merrill.

McManus, B. (2000). *Creative Teaching with Internet Technology*. (Online). Retrieved November 3, 2007, from http://www.vroma.org/~bmcmanus/presentation/loyola.html.

McNair, V. & Marshall, K. (2006). *E-portfolios: Reflection, Collaboration & Sustainability in Early Teacher Education*. (Online). Retrieved November 3, 2007, from http://www.eifel.org/publications/eportfolio/proceedings/ep06/ep2006_papers/mcnair/preview_popup/file.

McNamara, T. & Bailey, L. (2006). Faculty/staff perceptions of a standards-based exit portfolio system for graduate students. *Innovative Higher Education*, *31*(2), 129-141.

Meeus, W., Questier, F. & Derks, T. (2006). Open source eportfolio: Development & implementation of an institution-wide electronic portfolio platform for students. *Educational Media International*, *43*(2), 133–145.

Meyer, B. & Latham, N. (2008). Implementing electronic portfolios: Benefits, challenges, & suggestions. *Educause Quarterly, 31*(1) 34–41.

Miller, R. & Morgaine, W. (2009). The benefits of e-portfolios for students & faculty in their own words. *Peer Review, 11* (1), 8-12.

Milman, N. & Kilbane, C. (2005). Digital teaching portfolios: Catalysts for fostering authentic professional development. *Canadian Journal of Learning & Technology, 31*(3), 51-65.

Murdoch, G. (1998). A progressive teacher evaluation system. *Forum*, *36*(3), 2-7.

Nelson, D. (1993). Portfolio assessment as a tool for training composition instructors: A consideration of the model implemented by the General Studies Writing Program at Bowling Green State University. Ph.D. dissertation, Bowling Green State University, United States, Ohio. Retrieved July 9, 2008, from Dissertations & Theses: Full Text database.

(Publication No. AAT 9423935).

Niguidula, D. (2002). The writing & reading of digital portfolios. Ed.D. dissertation, Columbia University Teachers College, United States, New York. Retrieved July 9, 2008, from Dissertations & Theses: Full Text database. (Publication No. AAT 3042347).

Norton-Meier, L. (2003). To efoliate or not to efoliate? The rise of the electronic portfolio in teacher education. *Journal of Adolescent & Adult Literacy*, *46*(6), 516-518.

Office of Educational Research & Improvement (OERI) of the U.S. Department of Education. (1993). *Consumer Guide: Student Portfolios, Classroom Uses.* (Online). Retrieved November 3, 2007, from http://www.ed.gov/OR/ConsumerGuides/classuse.html.

Ogan-Bekiroglua, F. & Gunayb, A. (2008). Physics students' perceptions on their journey through portfolio assessment. Paper presented at the *Conference of Asian Science Education (CASE).* Kaohsiung, Taiwan, Feb 20-23, 2008.

Papadimitriou, A. (2009). Motivating freshman students in a business management course via portfolios: Practice from a Greek public university. *Assessment Update*, *21*(1), 10-12.

Paris, S., & Turner, J. (1994). Situated motivation. In P. Pintrich, C. Weinstein, & D. Brown (Eds.), *Student motivation, cognition, & learning: Essays in honor of Wilbert J. McKeachie* (pp.213-237). Hillsdale, NJ: Lawrence Erlabaum.

Partridge, S. (1993). *Portfolio Programs & their Assessment Discussed*. ERIC Document No. ED 361 725.

Paulson, F., Paulson, P., & Meyer, C. (1991). What makes a portfolio a portfolio? *Educational Leadership*, *48*(5), 60-63.

Pedroni, G. (1996). *The Importance of the World Wide Web in Education K-12.* (Online). Retrieved November 3, 2007, from http://www.geocities.com/Athens/5461/paper_1.html.

Pellegrino, J., Chudowsky, N., & Glaser, R. (2001). *Knowing what students know: The science & design of educational assessment.* Washington, DC: Committee on the Foundations of Assessment, National Academies Press.

Petty, P. (2006). *Professional Portfolio Development.* (Online). Retrieved November 3, 2007, from http://www.pampetty.com/profportfolio.htm.

Pierce, J. & O'Malley, J. (1992). *Performance & Portfolio Assessment for Language Minority Students*. (Online). Retrieved November 3, 2007, from http://www.ksde.org/LinkClick.aspx?fileticket=Az7KFG3vyFw%3D&tabid=362&mid=893

Popper, E. (2005). Learning goals: The foundation of curriculum development & assessment. In K. Martell & T. Calderon (Eds.), *Assessment of student learning in business schools: Best practices each step of the way* (Vol 1, No. 2) (pp. 1-23). Tallahassee, Florida: Association for Institutional Research.

Portfolio. (2007). In *Merriam-Webster Online Dictionary*. Retrieved January 6, 2007, from http://www.merriam-webster.com/dictionary/portfolio.

Pott, L. (1993). The effectiveness of a computer portfolio assessment as perceived by students, teachers, parents, & principals. *DAI-A*, *55*(1), 4655.

Puhl, C. (1997). Develop, not judge: Continuous assessment in the ESL classroom. *Forum*, *35* (2), 2-9.

Purves, A. C. (1996). Electronic portfolios. *Computers & Composition, 13*, 135-146.

Ramey, S. & Hay, M. (2003). Using electronic portfolios to measure student achievement & assess curricular integrity. *Nurse Educator*, *28*(1), 31-36.

Rathburn, J. (2007). Using electronic portfolios to document & assess student learning: Implications for business education & accreditation. *AACSB Faculty Conference on Learning*, Orlando, Fl, June 5-9, 2007. (Online). Retrieved December 8, 2007, from http://www.aacsb.edu/h&outs/FCL07/E1%20Rathburn.pdf.

Reardon, R., Lumsden, J., & Meyer, K. (2004). Developing an e-portfolio program: Providing a comprehensive tool for student development, reflection, & integration. *NASPA Journal*, *42*(3), 368-380.

Reiss, D. (2006). *Webfolio (Electronic Portfolio) Project.* (Online). Retrieved January 6, 2007, from http://wordsworth2.net/webfolio/webfolioedu.htm.

Richards, C. (2005). Activity-reflection e-portfolios: An approach to the problem of effectively integrating ICTs in teaching & learning. In *The Reflective Practitioner.* Proceedings of the 14th Annual Teaching Learning Forum, 3-4 Feb. 2005. Perth: Murdoch University. (Online). Retrieved May 8, 2007 from http://lsn.curtin.edu.au/tlf/tlf2005/refereed/richards.html

Ring, G. & Foti, S. (2003). Addressing standards at the program level with electronic portfolios. *TechTrends*, *47*(2), 28-32.

Ring, G., Weaver, B., & Jones, J. (2008). Electronic portfolios: Engaged students create multimedia-rich artifacts. *Journal of the Research Center for Educational Technology*, *4*(2), 103-114.

Ritter, B. (2009). *The Accomplishments Portfolio*. (Online). Retrieved December 23, 2009 from http://www.adultstudent.com/student/asg5/port.html.

Roeder, J. (2007). *The Use of Student Portfolios to Teach the Bill of Rights*. (Online). Retrieved November 1, 2007 from http://ted.coe.wayne.edu/sse/finding/Roeder.doc.

Rogers, L. (1997). Implementation of a literary portfolio project: One school's efforts. Unpublished doctoral dissertation, University of Delaware.

Rolfe, M. & Wilson, L. (2007). *Good Practice Guide: Key Skills Portfolio Assessment. Key Skills Support Program, Learning & Skills Network, UK.* (Online). Retrieved November 1, 2007 from http://www.pedagogy.ir/images/stories/media/key-skills-portfolio-

assessment.pdf.

Santos, M. (1997). Portfolio assessment & the role of learner reflection. *Forum, 35*(2), 10-14.

Schauweker, M. (1995). A review of standards for the assessment of reading & writing. *Clearing House*, *68* (4), 233.

Scott, T. (2005). Creating the subject of portfolios: Reflective writing & the conveyance of institutional prerogatives. *Written Communication*, *22*(1), 3-35.

Shaaban, K. (2001). Assessment of young learners, *Forum, 39*(4), 16-23.

Siemens, G. (2004). *EPortfolios*. (Online). Retrieved July 22, 2007 from http://www.elearnspace.org/Articles/eportfolios.htm.

Skiba, D. (2005). E-portfolios, webfolio, & e-dentity: Promises & challenges. *Nursing Education Perspectives*, *26*(4), 246-247.

Smolen, L., Newman, C., Wathen, T., & Lee, D. (1995). Developing student self-assessment strategies. *TESOL Journal*, *5*(1), 22-27.

Sternberg, R. (2008). Assessing what matters. *Educational Leadership*, *65*(4), 20-26.

Sweat-Guy, R. & Buzzetto-More, N. (2007). *A Comparative Analysis of Common E-Portfolio Features & Available Platforms*. (Online). Retrieved November 3, 2007, from http://proceedings.informingscience.org/InSITE2007/IISITv4p327-342Guy255.pdf .

Sweet, D. (1993). *Student Portfolios: Classroom Uses, Education Research Consumer Guide, 8*. ERIC Document ED 366 634.

Taggart, G. & Wilson, A. (2005). *Promoting reflective thinking in teachers: 50 action strategies (2nd ed.)*. CA: Corwin Press.

Takona, J. (2003). *Portfolio Development for Teacher Candidates*. ERIC Digest. No. ED 481 816.

Tannenbaum, J. (1996). *Practical Ideas on Alternative Assessment for ESL Students*. ERIC Digest No. ED 395 500.

Tenbrink, T. (2003). Assessment. In J. Cooper (Ed.), *Classroom teaching skills (7th ed.)*. (pp. 313-353). Boston: Houghton Mifflin.

The American Heritage Dictionary of the English Language, (4th ed.).(2006). New York: Houghton Mifflin.

Tisani, N. (2008). Challenges in producing a portfolio for assessment: In search of underpinning educational theories. *Teaching in Higher Education*, 13(5) 549-557.

Todd, R. (2002). Using self-assessment for evaluation. *Forum*, *40*(1), 16-19.

Tolsby, H. (2001). *Digital Portfolio: A Tool for Learning, Self-Reflection, Sharing, & Collaboration*. (Online). Retrieved April, 3, 2007 from: http://www.public.iastate.edu/~rema/Dissertation%20Files/Articles_diss/e-portfolio%20articles/dig_port_Tolsby.pdf.

Tosh, D. & Werdmuller, B. (2004). *Creation of a Learning Landscape: Weblogging & Social Networking in the Context of E-Portfolios.* (Online). Retrieved April 14, 2007 from http://eduspaces.net/dtosh/files/7371/16865/Learning_l&scape.pdf

Tuttle, H. (1997). The multimedia report: Electronic portfolios tell a personal story. *Multimedia Schools*. *4*(1), 32-37.

Vanides, J. (2002). *My.STEP.Stanford: A Personalized, Web-Based Electronic Portfolio Workspace*. (Online). Retrieved November 3, 2007, from http://ldt.stanford.edu/~jvanides/eportfolio/STEP-eportfolio-workspace.pdf.

Wade, A., Abrami, P., & Sclater, J. (2005). An electronic portfolio to support learning. *Canadian Journal of Learning & Technology, 31*(3), 33-50.

Wade, A., Abrami, P., White, B., Nicolaidou, I., & Morris, K. (2006). EPEARL: Electronic portfolio encouraging active reflection learning. Paper presented at the *4th international ePortfolio conference, EIFEL* (Cambridge, UK; October 2006). (Online). Retrieved December 6, 2007, from http://grover.concordia.ca/epearl/en/download/Wade_ePearl_electronic_portfolio_encouraging.pdf.

Wagner, D. (1992). Portfolio assessment: 7th grade students' self-evaluation & reflection of personal reading & writing. Ph.D. dissertation, Auburn University, United States, Alabama. Retrieved December 6, 2007, from ProQuest Digital Dissertations database. (Publication No. AAT 9306594).

Walker, V. (2004). *Integrating Video in Electronic Portfolios*. ERIC Document No. ED 490 538.

Wall, K., Higgins, S., Miller, J., & Packard, N. (2006). Developing digital portfolios: Investigating how digital portfolios can facilitate pupil talk about learning. *Technology, Pedagogy, & Education*, *15*(3), 261-273.

Webre, E. (2001). *Instructor & Student Reflection on Portfolio Use in the Reading Practicum.* ERIC Document No. ED 456 110.

Weinmann, J. (2001). Knowledge management for multi-assessment portfolios. *European Journal of Engineering Education*, *26*, (3), 311.

Westhoff, G. (2003). Training preservice students to utilize web-based portfolios & select appropriate bodies of evidence. In C. Crawford *et al*. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference, 2003* (pp. 206-209). Chesapeake, VA: AACE.

Wetzel, K., & Strudler, N. (2005). The diffusion of electronic portfolios in teacher education: Next steps & recommendations from accomplished users. *Journal of Research on Technology in Education, 38*(2), 231-243.

Wiener, R. & Cohen, J. (1997). *Literacy Portfolios: Using Assessment to Guide Instruction.* ERIC Document No. ED 412 532.

Wolfe, E. (1996). *Student Reflection in Portfolio Assessment*. ERIC Document No. ED 396 004.

Yancey, K. (2009). Electronic portfolios a decade into the twenty-first century: What we know, what we need to know. *Peer Review,* 11(1), 28-32.

Young, J. (2002). E-portfolios could give students a new sense of their accomplishments. *Chronicle of Higher Education*, 48(26), A31-A32.

Zubizarreta, J. (2009). *The learning portfolio: Reflective practice for improving student learning (2*nd *ed.).* San Francisco: Jossey-Bass.

ملفات الإنجاز الإلكترونية: نقطة تحول في برامج
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الملخص:

تمثل ملفات الإنجاز الإلكترونية اتجاهاً جديداً في التدريس والتعلم والتقويم. وتقدم هذه الدراسة إطاراً نظرياً حول ملفات الإنجاز (التقليدية والإلكترونية) يتناول هذا الإطار النظري كل من تعريف ملفات الإنجاز (التقليدية والإلكترونية) وأساسها النظري وتطورها التاريخي وخصائصها وأغراضها ومميزاتها وأنواعها ومكوناتها وخطوات إعدادها وتقييمها ودور المعلم والطالب فيها ووجهة نظر كل منهما تجاهها وبعض التوجيهات التي تساعد في تنفيذها وبعض التحديات التي تواجه من ينفذونها كما تقدم الدراسة خلاصات في ضوء مقارنة ملفات الإنجاز التقليدية والإلكترونية كما تقدم إطارا لاستخدام ملفات الإنجاز الإلكترونية في برامج إعداد المعلم.