

Balancing the Two Faces of ePortfolios

HELEN C. BARRETT

<http://electronicportfolios.org>

eportfolios@gmail.com

Abstract: This paper focuses on the two major purposes for developing ePortfolios, and how to balance both approaches to enhance learner engagement with the ePortfolio process. The paper begins by discussing what an ePortfolio is and how several web 2.0 tools can support ePortfolio development. It then focuses on the two main approaches for ePortfolio development: portfolio as workspace and portfolio as showcase as a framework for developing ePortfolios.

Keywords: ePortfolio, learning, evaluation, feedback, reflection.

WHAT IS AN EPORTFOLIO?

An ePortfolio (electronic portfolio) is an electronic collection of evidence that shows your learning journey over time. Portfolios can relate to specific academic fields or your lifelong learning. Evidence may include writing samples, photos, videos, research projects, observations by mentors and peers, and/or reflective thinking. The key aspect of an eportfolio is your reflection on the evidence, such as why it was chosen and what you learned from the process of developing your eportfolio. (Adapted from Philippa Butler's "Review of the Literature on Portfolios and Eportfolios", 2006, p. 2)

An ePortfolio is not a specific software package, but more a combination of **process** (a series of activities) and **product** (the end result of the ePortfolio process). Presentation portfolios can be created using a variety of tools, both computer desktop tools and online (Barrett, 2000; Barrett,

2004-2008). Most commercial ePortfolio tools are focused on the *product* (right-hand side of the diagram in figure 1, on the next page), although some open source tools contain some of the Web 2.0-type tools that enhance the *process* (left-hand side of the diagram in figure 1), such as blogs, social networking, and RSS feeds.

The real value of an e-portfolio is in the reflection and learning that is documented therein, not just the collection of work. In fact, here are two of my favorite quotes from a book and a resource created by JISC in the UK:

"The overarching purpose of portfolios is to create a sense of personal ownership over one's accomplishments, because ownership engenders feelings of pride, responsibility, and dedication." (Paris & Ayres, 1994, p.10)".

"The e-portfolio is the central _and common point for the student experience. It is a reflection of the student as a person undergoing continuous personal development, _not just a store of evidence." (Geoff Rebbeck, e-Learning Coordinator, Thanet College, quoted in JISC, 2008).

What is a blog? What is a wiki? How are these tools used in ePortfolios?

A web log, or **blog**, is an online journal that encourages communication of ideas, and individual entries are usually displayed in reverse-chronological order. Blogs were one of the first Web.2.0 tools, built on an architecture of

interaction, allowing subscribing through RSS feeds, and feedback in the form of comments on specific entries. Blogs provide an ideal tool to construct learning journals, as discussed by Crichton and Kopp (2008) from the University of Calgary, and illustrated on the left-hand side of the diagram in figure 1.

Their research suggests:

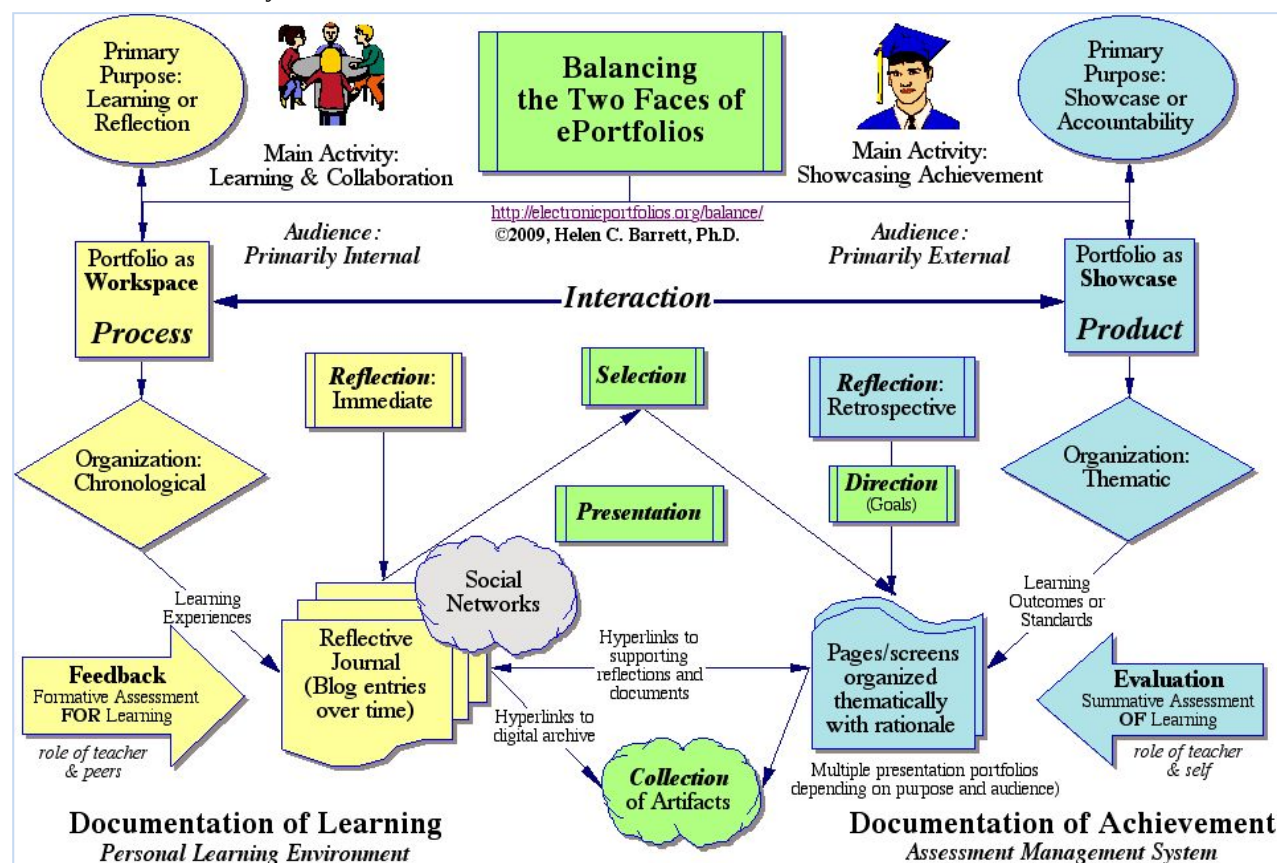
... that eJournals help to make ePortfolios more authentic and relevant to the students' lives. Focusing on reflection and inquiry, [their] study explored the use of social software as a tool to build and sustain a community of practice, recognizing that teacher education lives in a community well beyond the university experience. (Crichton; Kopp, 2008, p. 2)

According to [Wikipedia](http://en.wikipedia.org/wiki/Wikipedia), "A **wiki** is a collection of Web pages designed to enable anyone with access to contribute or modify content, using a simplified markup language. Wikis are often used to create collaborative websites and to power community websites. The collaborative encyclopedia Wikipedia is one of the best-known wikis." (The first developer of wiki software named it after the WikiWiki Shuttle in the Honolulu airport, because *wiki* meant *quick* in Hawaiian.) A wiki tool can be used to construct hyperlinked web pages, organized thematically, as illustrated on the right side of the diagram above.

"TWO DIFFERENT FACES" OF EPORTFOLIOS

Before I discuss the diagram above, I want to share an excerpt from my blog¹, written while at the National Educational Computing Conference in June 2008:

"I just had a wonderful conversation with a high school English teacher, who used my website for resources on working with her 11th grade students on electronic portfolios (she showed me some examples). She started her students with a blog, but many of them went far beyond the blog and created their own presentation portfolios using one of the Web 2.0 tools. She herself had to use one of the commercial e-portfolio/assessment management systems in her graduate program, and she said, "It took all the thinking out of it. They gave me the standards and told me which artifacts to put into each one! It wasn't as effective as what my students did!"



¹ See <http://electronicportfolios.org/blog/2008/07/necc-2008-update.html>

This story points out the challenges we have in the implementation of ePortfolios in education: the tension between what I call the "two different faces" of ePortfolios. I am promoting the concept of two portfolios: the **Working Portfolio**, which Washington State University (WSU) calls the "**workspace**" or some schools have called the [digital] shoebox; and any number of **Presentation Portfolios** (depending on purpose and audience) which WSU calls the "**showcase**" and schools call "showtime!" In order to build more formal presentations, we need the digital archive or the storage of work samples (collection) to draw upon (selection) for inclusion in these presentations.

John Dewey (1933) discusses both retrospective (for analysis of data) and prospective modes of reflection (for planning). Beck and Bear (2009) studied reflection in the teaching cycle, comparing how pre-service teachers rated the development of their reflection skills in both formative and summative e-folios. The results of this research showed that:

...formative e-folios were rated as superior to summative, in terms of general reflective skill supporting teacher development, improved assessment role competencies, greater understanding of connections between assessment and planning, and relatively high value placed on teacher peer collaboration. (Beck and Bear, 2009, p.2)

Reflection is the "heart and soul" of a portfolio, and is essential to brain-based learning (Kolb, 1984; Zull, 2002). We need to develop strategies that better support reflection in the learning process, supporting different types of reflection to improve learning.

Reflection takes place at several points in time: when the piece of work (an artifact) is saved in the digital archive (a contemporaneous reflection while the work is fresh on our minds... or reflection in the *present* tense)... thus the role of a blogging tool; and when (and if) this piece is included in the more formal presentation/showcase or summative assessment portfolio.

The reflection written at this later point of time is more summative or cumulative, providing a much broader perspective on a body of work that represents the author's goals for the showcase portfolio reflection in the *past* tense. Technologically, selection would involve creating a hyperlink to specific blog entries (reflection) which may have documents (artifacts) as

attachments. Finally, once we have looked back over our body of work, then we have an opportunity to look forward, setting a direction for future learning through goals... reflection in the *future* tense.

These types of reflection involve two levels of support for reflection: the reflections completed in a blog format would focus on a specific piece of work or learning experience (such as in service learning), and what has been learned while the experience is very fresh or immediate. The reflection in a presentation portfolio is more of a retrospective as well as an argument, providing a rationale that a collection of work meets specific outcomes or goals (related to the goal of the portfolio). Goals for future learning, which are more prospective, provide a direction to pursue, and should also be part of a presentation portfolio.

Most ePortfolio systems tend to emphasize the showcase (portfolio as product) rather than the workspace (portfolio as process). There are also two different types of organization: Blogs are organized in reverse chronological order; most showcase portfolios are organized thematically, around a set of learning goals, outcomes or standards. Both levels of reflection and organization are important, and require different strategies for supporting different levels of reflection.

LEVELS OF EPORTFOLIO DEVELOPMENT IN K-12 SCHOOLS

Most of the research on the implementation of electronic portfolios has been in higher education. Most of the customized e-portfolio tools, both commercial and open source, have been created in and for higher education, whereas the paper-based portfolio process itself began in K-12 schools. Over the last eight years, there has been a decline in the use of paper portfolios in schools, perhaps due to the dominance of high stakes standardized testing, even though the integration of technology has boomed. Perhaps more K-12 schools will again consider the use of ePortfolios, but adapted for the different culture of elementary and secondary schooling, and focusing on formative, classroom-based assessment *for* learning, which prior research has shown to be the best way to improve student achievement (Black & Wiliam, 1998).

The work below was developed for use in a K-12 school district for implementing electronic portfolios for students across the grade levels (ESUSD, 2009). Any district-wide implementation of electronic portfolios should be addressed as a developmental process, addressing both the diverse and growing technology competency of the students and teachers, as well as the varied experience with the portfolio learning and assessment process. Teachers and schools may start at a minimum level (Level 1 – Portfolio as Storage) and build toward higher levels of implementation as they gain skills and comfort with the portfolio process. These levels are described below.

Level 1: ePortfolio as Storage - Collection regularly – weekly/monthly) A Focus on Contents & Digital Conversion

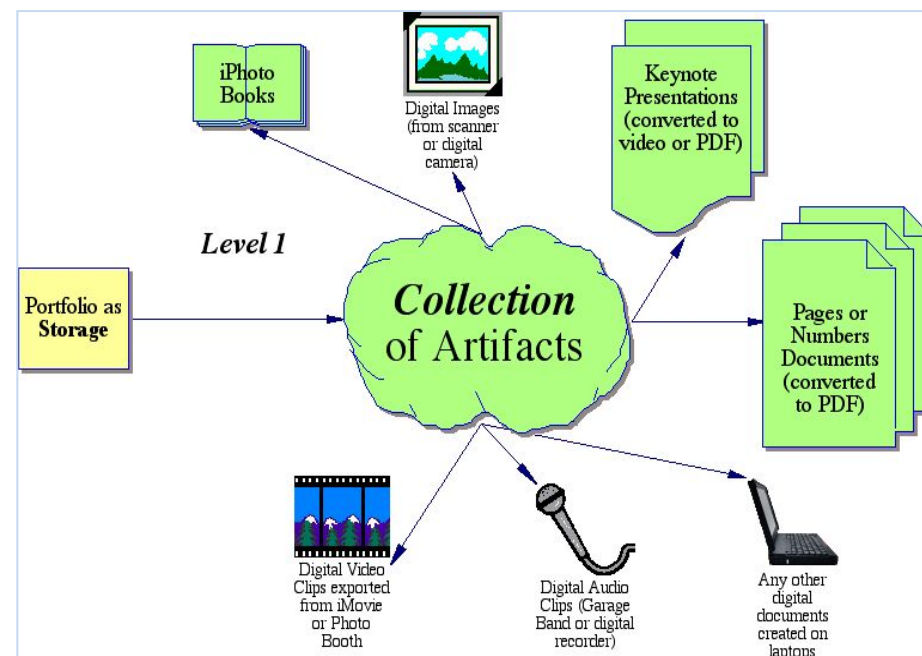
The main points of this level are:

- Digital Conversion (Collection)
- Artifacts represent integration of technology in one curriculum area (i.e., Language Arts)

The most basic level of creating an electronic portfolio is the collection of work in a digital archive, stored on a server, whether locally or on the Internet. At this basic level, the teacher or the student stores the artifacts in folders on a server. Usually the student or teacher collects regularly, on a weekly or monthly basis, the artifacts to store in the digital archive.

The basic organization of the digital archive is based on files in folders on a server. At this level, teachers choose one curriculum area to store student work samples (for example, writing samples in Language Arts).

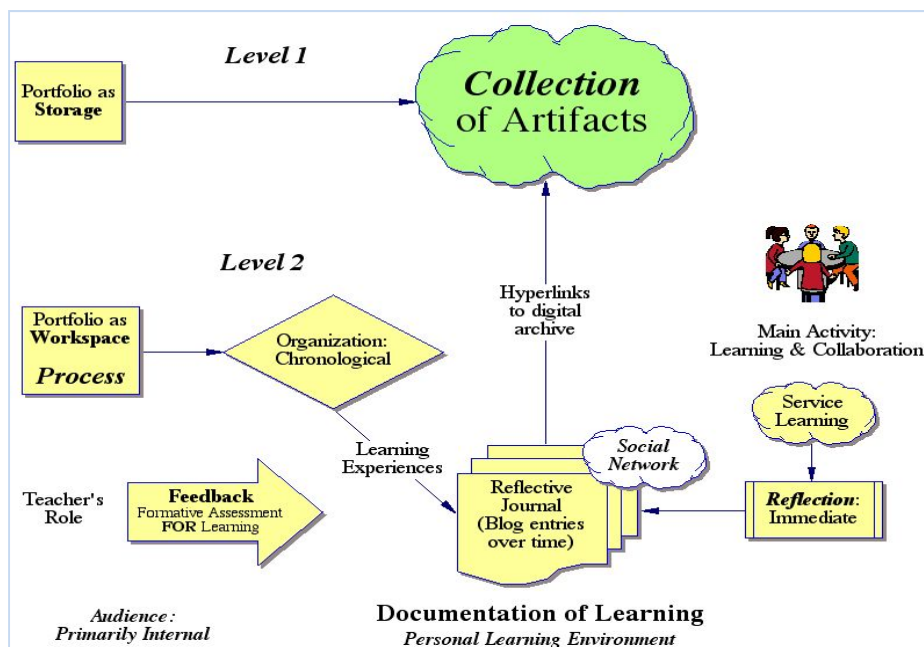
The basic activity at this level is converting student work into digital formats and saving these documents in the designated storage space (not on individual laptops). The role of the teacher at this level is to provide students with guidance on the types of artifacts to save.



Level 2: ePortfolio as Workspace/Process - A Focus on Process & Documentation of Learning - Immediate Reflection on Learning & Artifacts in Collection - Collection + Reflection (regularly)

The main points of this level are:

- Organized chronologically (in a blog) -- "Academic MySpace";
- Captions focus on individual assignments (Background Information on assignment, Response);
- Artifacts represent integration of technology in more than one curriculum area (i.e., Language Arts, Social Studies, Science, Math);
- Reflections on Service Learning Activities.



At this level, a learner keeps a learning journal (organized chronologically, with a blog) and reflects on their learning as represented in the samples of their work (artifacts stored in the Digital Archive) or attached/linked to a blog entry. Teachers may set up a structure for student reflection (fill in the blanks in a "Mad Lib, or provide a set of questions to answer about each assignment). This reflective journal can be used to reflect on (and document) service learning activities.

At this level, the artifacts should represent more than a single curriculum area, and demonstrate the many ways that students are using technology across the curriculum.

The primary role of the teacher at this level is to provide formative feedback on the students' work so that they can recognize opportunities for improvement. For younger students, the teacher can help students collect and select appropriate work samples to showcase learning over time.

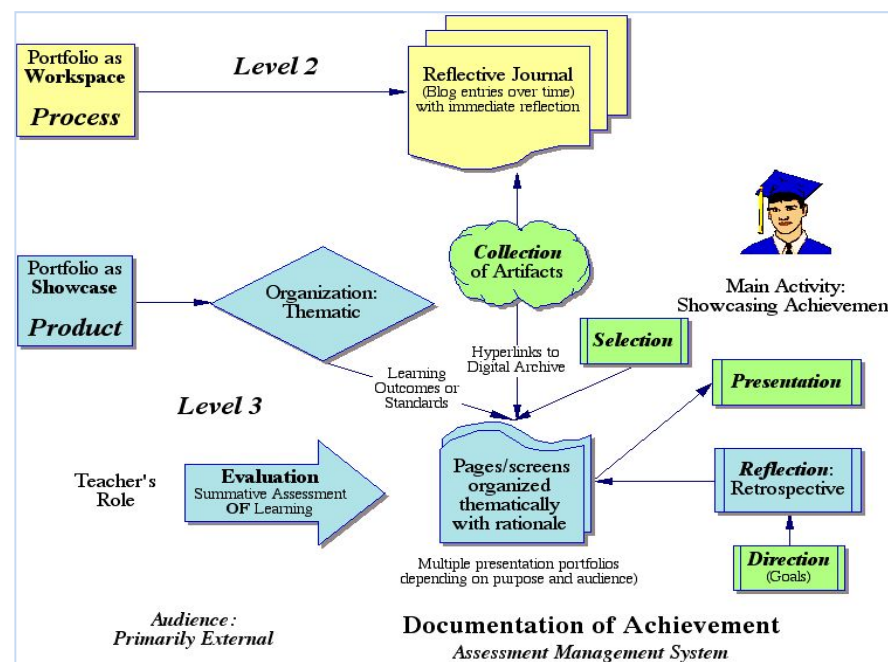
The advantage of this approach is that it is familiar to students (many

students are used to blogging in MySpace), and is a natural way to document learning and change over time.

Level 3: ePortfolio as Showcase/Product - Selection/Reflection + Direction + Presentation (each semester? End of year?) A Focus on Product & Documentation of Achievement

The main points of this level are:

- Organized thematically (in web pages or wiki)
- Selection of artifacts/reflection about...
 - Why did I choose these pieces? What am I most proud to highlight about my work?
 - What does this work show about my learning?
 - What more can I learn (Direction: Goals for the Future)?



This level of portfolio development requires the student to organize one or more presentation portfolios around a set of learning outcomes, goals or standards (depending on purpose and audience). The presentation portfolio can be developed with a variety of tools, but usually consists of a set of hyperlinked web pages. Some schools may choose to have the students use a web page authoring tool, such as Dreamweaver or iWeb, giving students different options for publishing their websites: locally on the school server, on a CD-Recordable disc, or on a publicly-accessible website (with parent permission). Other schools may choose to use server-based wiki software.

The student reflects on the achievement of specific outcomes, goals or standards, based on guidance provided by the school, hyperlinking to the supporting documents. This level of reflection is more retrospective (thinking back over the learning represented in the specific artifacts selected as evidence of learning. In many ways, this reflection is the students' "closing argument" or their rationale for why they believe these artifacts are clear evidence of their achievement of learning.

In addition to answering the "What?" and "So What?" questions, students should also address the "Now What?" question, or include future learning goals in their presentation portfolios. At the end of the year, a school may organize an opportunity for a formal presentation of the portfolio before a committee or a larger audience.

The teacher's role at this level is not only to provide feedback on the students' work, but also to validate the students' self-assessment of their work.

SUMMARY

Table 1 summarizes the ideas presented throughout the text and systematize the main points about ePortfolios as workspace, with focus on the learning process and ePortfolios as showcase, with focus on the products of learning.

You can use these ideas as a framework for organize and develop eportfolios for different student's ages.

TABLE 1

ePortfolio as Workspace/Process	ePortfolio as Showcase/Product
The Collection or Digital Archive Repository of Artifacts Personal Information Reflective Journal (eDOL)* - Portfolio as Process Organization: Chronological – *eDOL² (Electronic Documentation of Learning – Crichton & Kopp (2008)) Documenting growth over time for both internal and external audiences Primary Purpose: Learning or Reflection Reflection: Immediate (focus on artifact or learning experience) - Reflection in the present tense	The "Story" or Narrative Multiple Views (public/private) Varied Audiences (varied permissions) Varied Purposes - Portfolio as Product Organization: Thematic – Electronic Portfolio documenting achievement of Standards, Goals or Learning Outcomes for primarily external audiences Primary Purpose: Accountability or Showcase Reflection: Retrospective (focus on achievement or thematic organization) - Reflection in the past tense Reflection: Prospective (Direction) - Set goals for future learning - Reflection in the future tense

² <http://electronicportfolios.org/blog/2008/04/edol-electronic-documentation-of.html>
more information about eDOL,

TABLE 1(cont.)

Procedure: on a daily/weekly basis Levels 1 & 2	Procedure: on a periodic basis (end of class/term/year) Level 3
• Integrate technology across the curriculum (generate digital artifacts to store in online repository/ digital archive) • Maintain a reflective journal in the form of a blog (organized in reverse-chronological order) • When saving items in digital archive, link to a blog entry that contains an immediate reflection on the document and/or the learning associated with an experience (such as service learning) - reflection in the present tense • Create a label or tag that categorizes the entry (with attached artifact, where appropriate) by learning standard/goal/outcome • Provide feedback to learner in the form of comments in the blog or collaborative editing (by teachers and/or peers) • Periodically review the collection for evidence of growth/change over time	• Review the blog entries and collected evidence and select specific entries to demonstrate the achievement of the selected standards/goals/outcomes • Use the tags/labels in blog entries to review all entries that match selected criteria (generate pages within the blog) • Reflect on why the selected artifacts (with associated reflections) constitute evidence of achieving specific standards/goals/outcomes (retrospective reflection... in the past tense) • Write future learning goals related to specific standards/goals/outcomes (prospective reflection/direction... in the future tense) • Organize a hyperlinked presentation of evidence (with reflections) • Present portfolio to an audience (either real or virtual) • Evaluate the learner's self-assessment of the achievement of the standards/goals/outcomes that are presented (by teachers and others)

REFERENCES

- Barrett, H. (2000). Create Your Own Electronic Portfolio (using off-the-shelf software). *Learning and Leading with Technology*, April, 2000.
- Barrett, H. (2004-2008). *My Online Portfolio Adventure*. [Retrieved April 14, 2009 from <http://electronicportfolios.org/myportfolio/versions.html> (based on 35 Versions of My Online Presentation Portfolio developed between 2004 and 2008)]
- Barrett, H. (2008). "NECC 2008 update" *Electronic Portfolios for Learning blog*. [Retrieved April 13, 2009 from: <http://electronicportfolios.org/blog/2008/07/necc-2008-update.html>]
- Beck, R. & Bear, S. (2009). "Teacher's Self-Assessment of Reflection Skills as an Outcome of E-Folios". In Adamy & Milman (2009) *Evaluating Electronic Portfolios in Teacher Education*. Charlotte: Information Age Publishers.
- Black, P., and Wiliam, D. (1998). "Inside the Black Box: Raising Standards Through Classroom Assessment." *Phi Delta Kappan*, October 1998. [Retrieved June 10, 2004 from: <http://www.pdkintl.org/kappan/kbla9810.htm>].
- Butler, P.(2006). *Review of the Literature on Portfolios and Eportfolios* [Retrieved April 13, 2009 from <https://eduforge.org/docman/view.php/176/1111/ePortfolio%20Project%20Research%20Report.pdf>]
- Crichton, S. and Kopp, G. (2008a). *The Value of eJournals to Support ePortfolio Development for Assessment in Teacher Education*. Paper presented at the Annual Meeting of the American Educational Research Association, New York City, March 24–28, 2008.
- Crichton, S. and Kopp, G. (2008b) The value of eJournals to support ePortfolio development for assessment in teacher education. *Canadian Journal of Learning and Technology*, V34 (3) Fall 2008. [Retrieved February 12, 2010 from <http://www.cjlt.ca/index.php/cjlt/article/view/502/233>]
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Henry Holt.
- Eastern Sierra Unified School District (2009). *Electronic Portfolio Implementation Plan*. [Retrieved April 13, 2009 from: <http://sites.google.com/site/esusd2009/Home>]
- Jisc (2008). *Effective Practice with e-Portfolios*. [Retrievien April 14, 2009 from <http://www.jisc.ac.uk/whatwedo/themes/elearning/eportfolios/effectivepracticeportfolios.aspx>]
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Paris, S & Ayres, L. (1994) *Becoming Reflective Students and Teachers*. _American Psychological Association.
- Petersen, N. (2008). *Case Studies of Electronic Portfolios for Learning*. Center for Teaching, Learning, & Technology, Washington State University [Retrieved April 13, 2009 from: <http://wsuctlt.wordpress.com/2008/03/14/case-studies-of-electronic-portfolios-for-learning/>]
- Wikipedia (2009) [Retrieved April 14, 2009 from <http://en.wikipedia.org/wiki/Wiki>]
- ZulL, J. (2002). *The Art of Changing the Brain*. Sterling, VA: Stylus Publishing

Resumo: Este artigo foca os dois principais propósitos ou focos de desenvolvimento de portefólios e de como equilibrar ambas as abordagens de modo a aumentar o envolvimento dos alunos no desenvolvimento dos seus portefólios. O texto começa por discutir em que consiste um ePortefólio e como diversos serviços da Web 2.0 podem suportar o seu desenvolvimento. De seguida discutem-se as duas principais abordagens ao desenvolvimento de e-Portefólios - portefólios como espaços de trabalho e portefólios como espaços de apresentação – como enquadramento e referencial para o desenvolvimento de ePortefólios.

Palavras-chave: ePortefólio, aprendizagem, avaliação, *feedback*, reflexão.

Texto:

- Submetido em Dezembro de 2009
- Aprovado em Março de 2010

Para citar este artigo:

Barrett, H. (2010). Balancing the Two Faces of ePortfolios. *Educação, Formação & Tecnologias*, 3(1), 6-14. [Online], disponível a partir de: <http://eft.educom.pt>