# Portfolios: An Argument for Going Digital

Juanita Heigham

*Sugiyama Jogakuen University*

Although electronic portfolios (ePortfolios) have been used in education around the world for over twenty years, they are still underutilized, particularly in higher education in Japan. As they can enhance student learning and help students build invaluable technology skills, employing them in English language curriculum is a worthwhile undertaking. The purpose of this article is to demystify this practical educational tool by explaining what ePortfolios are, highlighting some of their benefits and challenges, and providing some practical steps to help teachers implement them in their classrooms. The paper also suggests some basic ePortfolio tool options that are available for free or at low cost on the Web.

ePortfolio（electronic portfolio、電子ポートフォリオ）は20年以上前から世界中の教育の場で採用されているにも拘らず、今日に至るまで、特に日本の大学教育においては未だ充分に活用されているとは言い難い。ePortfolioは生徒の学習の質を高めると同時に貴重なテクノロジースキルの習得をもたらすものであり、これを英語学習カリキュラムに活用することは価値のある取り組みである。本論の趣旨は、その有益性と難点に焦点を当てながらePortfolioとは何かを解説し、教育現場に採り入れるための実際的なステップを提供することで、この実践的教育ツールの解明と導入の支援を行うことである。また、インターネットを通じて無料あるいは安価に入手できるePortfolio関連のツールについても紹介する。

Traditional paper-based portfolios have long been employed in the visual arts and in various educational fields since the late 1980s (see Harvard University Project Zero's APPLE Project); however, their electronic cousin has yet to make major inroads into general curricula worldwide, particularly in higher education in Japan. Electronic portfolios (ePortfolios) were first used in education in the early 1990s (Campbell, 1996), yet over twenty years later, they are still underutilized. In this paper, I aim to demystify this practical educational tool by explaining what ePortfolios are, highlighting some of their benefits and challenges, and providing some suggestions to help teachers implement them in their classroom. Some basic tools to use in making ePortfolios are also suggested.

Electronic portfolios are known by a myriad of names such as e-folios, multimedia portfolios, web-folios, net-folios, and digital portfolios. The variety of names for this tool suggests the array of definitions that exist for it. Traditional portfolios are purposeful collections of student self-selected work on which students have reflected, commented, and compiled for a particular purpose (Danielson & Abrutyn, 1997), and ePortfolios have retained these features but are expressly digital. Abrami and Barrett (2005, para. 1) describe ePortfolios as "...digital container[s] capable of storing visual and auditory content including text, images, video, and sound." ePortfolios have been hailed because they "present the process that leads to the product" (Nordeng, Dicheva, Garshol, Ronningsbakk & Meloy, 2005, p. 201), and because their "power lies in the monitoring of the process as well as product" (Tosh & Werdmuller, 2004, p. 3). The hands-on experience with process helps build student motivation and learner independence as students make choices throughout their learning experience and "discover that education is not something that is done to them, but done by them" (Wiggers, 2009, p. 5).

This praise also befits traditional portfolios as ePortfolios have much in common with them. The creation of both traditional portfolios and

ePortfolios is a multistepped iterative process that includes but is not limited to collection, selection, reflection and projection (Danielson & Abrutyn, 1997). Students collect their work on an ongoing basis and later select pieces, or artifacts, from their collection and reflect on them. Although there is a reflection "step," reflection typically goes on throughout the entire portfolio building experience. Finally, based on what students have learned through the process, they project goals for themselves for the future. This process is frequently thought to generate two basic types of portfolios: a working portfolio and a presentation portfolio (Barrett, 2010), with the presentation portfolio often being divided into presentation for display/showcase or presentation for assessment (Danielson & Abrutyn, 1997). The working portfolio comprises the collection step, and as students go through the selection, reflection and projection steps, the working portfolio can grow into a presentation portfolio.

It is fairly common for people to associate portfolios principally with written work; however, ePortfolios can represent materials and events in manifold ways. The foci of ePortfolios include writing (Marefat, 2004), but also such things as speaking (Heng-Tsung & Shao-Ting, 2010), self-assessment (Hung, 2009), and preservice teaching (Gatlin & Jacob, 2002). Word processed documents, spreadsheets, audio and video recordings, photographs, scanned images and text, presentation slides, hyperlinks, and so on can be contained in ePortfolios.

Although ePortfolios typically look quite similar to websites, depending on the tool used to make them, they can vary dramatically in appearance. To provide a picture of what they can look like, Figure 1 is a sample ePortfolio made using PBWorks, an online service that can be used to build ePortfolios.

*Figure 1.* Screen shots of an ePortfolio made for a first-year speaking class.

## Benefits and Challenges

The fundamental steps to create traditional portfolios and ePortfolios are the same; however, ePortfolios offer many more options to students than their predecessors. Since they are digital, they are easy to edit, update, and store. They are also much easier to copy and distribute than their forerunners. Students can use a variety of media in making ePortfolios, so they may draw from a wider range of skills and abilities than they can in traditional portfolios, and the higher number of options

open to students gives them greater control over and ownership of their learning. The fact that ePortfolios are created with technology gives students purposeful opportunities to use technology and increases their proficiency with it, and the portfolio itself can be used to demonstrate students' technology literacy. Teachers, drawing from student work, can build a library of samples to show future students—with students' permission, of course.

Certainly there are drawbacks to ePortfolios. First and foremost, they can be challenging to implement. Sometimes technology is simply not available, and when it is, teachers and students alike may have limited knowledge of it. Even when teachers are confident in their own use of technology, the technology is not always reliable. Additionally, explaining how to use the technology to students can be time-consuming, and it takes students time to learn it, time that could be spent doing other learning. While this is true, if the global education of students is considered, the sacrifice of time serves a higher purpose since students gain technology skills that can help them at university as well in the future, both professionally and personally. Sherman (2006) explains the value of using technology in portfolios:

> …the act of creating something for inclusion in an ePortfolio becomes a context for learning and applying a variety of skills… Instead of assigning word-processing, scanning, and Web development lessons simply for the sake of learning [the technology], the journey toward successful portfolio development can be rich with practice using technology for a very definite purpose. (pp. 2-4)

Other issues of time are that it is time-consuming for students to make ePortfolios and that it takes teachers significant time to assess them, but ePortfolios are often found by both students and teachers to be worth the effort (Strudler & Wetzel, 2008).

Further concerns teachers must consider are access and security, specifically who will be able to view the ePortfolios and what could

those viewers do with the information found in them. Clearly, there are challenges that must be faced when implementing ePortfolios. Nevertheless, despite these drawbacks, generally the positive can outweigh the negative if adequate preparation and caution are used when introducing ePortfolios to students.

# Step-by-Step Implementation of the Portfolio

In some higher education institutions around the world (notably Australia, the UK, and the USA), ePortfolios span different courses and in some cases are built over an entire degree program. However, these are not the types of ePortfolios I describe here. In the situations previously mentioned, strong institutional support is required and not all universities can provide it. What is suggested in this paper are small-scale ePortfolios that students can build from their work in a single course using free tools available on the Web. Following are five basic steps to help implement them: establish learning goals, consider the technology available, find or create models, create evaluation rubrics, and explain and train. Throughout the steps, where relevant, examples from a first-year speaking class using ePortfolios at a Japanese university are provided.

**Establish learning goals.** The starting point of preparation for any course is to determine the desired learning outcomes for students. What should they learn and how will it be known that they learned it? "Using portfolios should result from what one intends to accomplish" (Sharp, 1997, para. 5), and focusing on goals will prepare a solid course foundation. For a speaking class, one might plan to have students master communicative skills for a set group of situations such as introductions, giving directions, sharing opinions, and so on.

**Consider the technology available.** Next, there are several technology questions that need to be addressed. What hardware and software are available to students? What types of equipment will they have access to? Video cameras? Digital cameras? Digital recorders?

iPods? While considering equipment, do not forget cellular phones. Phones, especially smart phones, can be used in countless ways to build artifacts for an ePortfolio. What is available to students will direct teacher planning because students cannot be required to do an activity that they do not have the means to complete.

At this stage, choose a tool for the students to use in creating their ePortfolios. There are numerous options available ranging from free to exorbitant, from fairly simple to outrageously complicated. Specific tool information will be briefly discussed in the next section, but whatever tool is chosen, it would probably be unrealistic to expect average Japanese university students to be able to use it and build ePortfolios without allocating some class time in a computer room. The reason for this is because Japanese students typically have limited technology skills (UNESCO, 2007; Vallance, 2008). However, it is important to note that an entire course does not need to be held in a computer room because most, if not all, the actual organization of the ePortfolio can be done outside of class.

Once the course goals are established and tool availability has been determined, decide what artifacts students should collect and what ways they could be collected. These artifacts will be the results of whatever activities are required of students; for example, in a speaking class, students might be asked to record a conversation where they are getting to know each other (audio artifact), write a reflection on a speaking experience (text artifact), make a video recording of a conversation about a controversial topic (video artifact), and so on. As previously mentioned, ePortfolios themselves are often built outside of class, but the artifacts students create may also be done in class. Although there may seem to be an endless array of possibilities, it is important to start small. Focus on a few basic activities that students can do variations of throughout the course. While the baseline should be attainable by all, avoid restricting students too much; they should have substantial creative choice both in topics and technology—some

may have considerable technology skills they will want to exercise.

Find or create models. After deciding what is possible, it is important to provide models for students of what they are expected to create. Supplying examples and non-examples—what students should not do, (Sherman, 2006) will help students grasp project expectations more quickly. Creating models yourself can be good at the start because you will have hands-on experience with the tools and can share the experiences you had, both positive and otherwise, with your students. Look back at Figure 1 to see screen shots of a model for a speaking ePortfolio. When teachers explain the ePortfolio, ideally students will be able to work through the set-up steps on computers in class. Screen shots alone would probably be insufficient.

**Create evaluation rubrics.** Thoroughly planning goal-focused activities and finding or creating models should help clarify what is to be evaluated. Based on this information, build evaluation rubrics for students. The rubrics, which should be provided at the introduction of each artifact-creation activity, will help students understand what is expected for each assignment, and they can refer to them throughout the process of building their ePortfolios. Rubrics also help teachers assess student work later. For help creating rubrics, see RubiStar at http://rubistar.4teachers.org/ and see the Appendix for an example.

**Explain and train.** When introducing the project to students be sure to highlight how ePortfolios are a long-term project that can profoundly enhance their learning. Tosh, Light, Fleming, and Haywood (2005) remark that:

> [s]tudents have to know what an e-portfolio is, how to use one and, most importantly, how it may benefit them in order for the project to succeed. Without this, students will not view the approach as being meaningful and will not understand that e-portfolios can work to engage them more deeply in learning. (para. 29)

Based on perceived student needs, provide training to prepare the students for the work that will be required of them. This training will

likely include training for technology use and reflection. Reflection training is an area that can be overshadowed by the need for technology training, but the quality of reflection represents the quality of the learning gained from the portfolio experience (Barrett, 2000); therefore, careful attention should be given to this training as well.

Although the majority of training is likely to be at the beginning, time needs to be allocated for ongoing support, and feedback checkpoints should be planned throughout the course. Moores and Parks (2010) found that student motivation is raised if they are given constructive feedback early in the process, and through periodic checks, work that is headed in the wrong direction can be guided back on track. Thus, it is imperative to allocate time to view students' ePortfolio progress.

## What Tools Should Be Used?

As mentioned above, there is a multitude of options for creating ePortfolios, but since this is a basic introduction to ePortfolios, the recommendation list here is quite abbreviated. Table 1 presents some manageable tools that are free or fairly low cost and are worth investigating, but unless you have firsthand experience using a specific tool, I recommend starting with a wiki. A wiki is a website that can hold pages created and edited by different people in different locations via the Internet. Wikipedia, the hugely popular, free online encyclopedia is the most well-known and the most frequently edited wiki. The collaborative feature of wikis is what they are best known for; however, the reasons I like them for beginning ePortfolios are for their ease of use; for example, embedding audio and video files is quite simple, and importantly, they maintain a running history of all saved changes. Having this history means that once something has been saved, it cannot be completely deleted, ever, unless the author purposefully goes through a series of steps to delete the page in its entirety. Perhaps something is lost in the most recent version of a page, but if the user clicks on "page history," all earlier saved edits will be

found in chronological order, and old data can be retrieved. When using new technology, a failsafe feature such as this can be invaluable.

There is a wide variety of wikis, but the one I find best for this purpose is PBWorks. There is a free option (PBWorks Basic Edition) that is straightforward and allows users to select who has access to it, whereas some other free wikis are automatically public. The model in Figure 1 was made with PBWorks Basic Edition.

Table 1

*Recommended Tools for ePortfolios*

| Tool | Address |
|---|---|
| PBWorks (PB Works Basic Edition—free) Discussed above. | http://pbworks.com/content/edu-classroom-teachers |
| Blogger (free) Slightly unconventional ePortfolio tool, but since audio and video files can be uploaded easily and posting text is simple, it is worth considering. | http://blogger.com |
| Google Docs (free) Basic Web service—better for text and presentations than audio and video. Through Google Sites (also free), a website to hold an ePortfolio can also be made, but it is more complicated. | Google Docs: http://www.google.com/a/help/intl/en/edu/ Google Sites: https://sites.google.com/site/sites/ |
| eFolioWorld (minimal charge) A comprehensive ePortfolio service designed for university students by Minnesota State Colleges and Universities that is also available for others to use. | http://www.external2.project.mnscu.edu/index.asp?Type=B_DIR&SEC=%7B4B811D14-6CB7-4DCA-A661-5F720256F0E0%7D |

# Conclusion

As smart phones get smarter and the Internet makes further inroads into our professional and personal lives, it is worthwhile introducing students to the diverse benefits of ePortfolios since ePortfolios have

immense potential to open doors to lifelong and life-wide learning. Will first-time implementation be smooth? Most likely not, but everything new requires getting used to, and ePortfolios can certainly be worth the effort necessary to implement them. I hope that with the information provided here even those with limited technology experience are encouraged to attempt going digital by using this invaluable tool in their teaching.

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## Author Bio

***Juanita Heigham*** *has taught at Sugiyama Jogakuen University in Nagoya for ten years and is the former director of the Communicative English Program there. Her research interests include independent learning, curriculum design, and teacher development. Email: jheigham@sugiyama-u.ac.jp.*