

An Introduction to Electronic Portfolios in the Language Classroom

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Paper-based portfolio development gained popularity around 1986 and with the escalating use of computers in language learning and teaching, these evolved into electronic portfolios. Electronic portfolios are collections of students' work that may be posted online (called 'webfolios') or saved onto a CD-ROM. They help students in sharing their work with a larger audience by giving them a wider audience outside the classroom; offer authentic assessment tools; motivate students; and contribute to their language development. This paper first gives an introduction to portfolios before offering ideas on how to use electronic portfolios in language classrooms; the steps of developing electronic portfolios and the technological requirements for developing such portfolios.

What Are Portfolios?

According to the McGraw-Hill Higher Education webpage, portfolios are:

Collections of student artifacts; can be thought of as both objects and methods of assessment. As objects, they are a place for holding materials such as papers, photographs, or drawings that are representative of students' work and progress. As methods of assessment, portfolios provide ways for teachers to continuously collect and assess student work.

On most traditional tests students are asked to work within a set time frame. This offers little or no opportunity to the test-taker to think, reflect upon and judge their work. In most contemporary courses students are urged to revise and resubmit their assignments after peer assessment. These assignments reach the teacher after several careful drafts. The portfolio approach is developed from this concept of reflective practice. A portfolio is not a collection or folder of all of the students' handouts or material. The essential consideration for the teacher and her/his students is what exactly they want to include in the portfolios. Portfolios give students the opportunity to reflect on their learning so that they may evaluate their progress in a course or programme.

Types of Portfolios

There are basically two types of portfolios as described by Cooper & Love (2001): The focus of a formative portfolio is the process of learning of a particular student. An example of a formative portfolio may be when it is used as a report to parents or guardians. It contains samples of a student's work collected throughout the term to 'demonstrate changes over a period of time'. The summative portfolio has learning outcomes as its focus and not the process of learning. These portfolios contain proof of a student's skills while also exhibiting their range and depth. Assessment of such portfolios (and hence the student's skills and knowledge) would be summative. Cooper & Love (2001) suggest three distinct forms of summative portfolio-based assessment:

- The *competency-based or outcomes-based portfolio*. It may show samples of a student's work collected as evidence of his/her skills and knowledge, which is relative to the curriculum or syllabi.
- The *negotiated learning portfolio* in which the outcomes of the negotiated learning processes are assessed through a portfolio.
- The *biographic portfolio*, which is a record of achievement. This type of portfolio may have a collection of work experience of a student which is collected over a period of time and arranged chronologically.

What Are Electronic Portfolios?

The electronic portfolio is a result of technology being readily used in most classrooms today. They are highly motivating for the students who are encouraged by exhibiting their work.

Barrett (2000) describes electronic portfolios as

‘(those that make) use of electronic technologies that allow the portfolio developer to collect and organize artifacts in many formats (audio, video, graphics, and text). A standards-based electronic portfolio uses hypertext links to organize the material to connect artifacts to appropriate goals or standards... An electronic portfolio is not a haphazard collection of artifacts (i.e., a digital scrapbook or multimedia presentation) but rather a reflective tool that demonstrates growth over time’.

Web based electronic portfolios are favoured by many authors and especially by Barrett (1999), however Galloway (2001) is not in favour of restricting electronic portfolios to online webpages. He feels that well formatted and linked (where needed) Microsoft Office (Word, Excel, PowerPoint) documents would be just as effective as web pages while also maintaining the originality of the portfolio. An electronic portfolio may be produced with a combination of any of these tools and so imposing a standard ‘template’ for electronic portfolios may inhibit learners’ creativity and prove counter-productive.

Reasons for Using Electronic Portfolios

Boyle in Banta (undated) explains the booming interest in portfolios in the following manner.

The portfolio, as an element of authentic assessment, has captured the interest of many instructors who want a more comprehensive way to assess their students’ knowledge and skills, to have students actively participate in the evaluation process, and to simultaneously develop students’ skills of reflective thinking. These latter features make portfolios an attractive alternative to traditional summative testing.

Most important benefit of electronic portfolios is that they are more accessible than paper-based portfolios. They provide easy access to the stakeholders either over the Web or through other technological media like the video, or CD-ROMS etc. Students do not have to invest in bulky storage systems and can access their portfolios from anywhere while their teachers from other disciplines can also access the portfolios and check on the students’ learning processes. Students can also show their electronic portfolios to prospective employers when interviewing for jobs. Furthermore, electronic portfolios can store multiple media. Students' writing as well as samples of oral reading, a three dimensional model, artwork, a sketch, or an animation may be easily collected and stored on the computer. This is interesting because, for example, a student of architecture studying ESP can incorporate a three dimensional model into his/her e-portfolio while writing a process essay. Also, electronic portfolios are easy to upgrade. The content of electronic portfolios may be updated from time to time as the student progresses through the term. Finally, electronic portfolios allow cross-referencing of student work through hyperlinks. An example would be if a science project also contained samples of math problems. By using electronic portfolios, it is possible to create links between all the different kinds of work that is to be presented.

General Guidelines for Implementing Electronic Portfolios

Some general guidelines for implementing electronic portfolios in a programme are offered by Bergman (undated). He suggests that one must start slowly and seek linkages for stakeholders. Students and teachers should be realistic with the design of portfolios and their own expectations from the portfolios. They should also make use of available models that have relevance to portfolio development and gain acceptance from the head of the institution before they begin. Teachers must encourage students to ‘own’ their portfolios, and should clearly communicate implementation steps and timelines. On the other hand, students must be selective in their design and strategy, and must allow for continuous improvement and growth as their portfolios evolve. Teachers and students should together incorporate assessment from stakeholders (parents, prospective, employers, department heads etc) in all phases and components of portfolio development.

Steps for Electronic Portfolio Development Process

Following are the nine steps in developing electronic portfolios

1. **Define aim of the portfolio.** The first step is to decide whether the portfolio will be used for formative evaluation or

summative evaluation. The content and organization of the portfolio will depend on its aim. Needs analysis should be carried out before beginning the portfolio development process.

2. **Take into account the type and extent of technology available to your students.** Do not expect your students to develop an electronic portfolio if they do not have access to the required hardware and software. Again, needs analysis would help in identifying students' technological needs and availability.
3. **Take students' consent for portfolio development.** If portfolio development is not part of the curriculum and you want to initiate it into your own individual teaching methodology, you will have to first take students' consent. It should be remembered that it is essentially learner centered and the students have to be 'involved' right from the planning to the assessment. You will also need to take permission from parents to use their child's work, name, and perhaps a photo.
4. **Define an audience for the portfolio.** This would motivate and boost students to work harder on their portfolios. Audience may range from parents, teachers, and administrators to relatives and other students. In case of webfolios the students have to be very cautious with their work since it can be accessed by anyone.
5. **Empower students.** The main aim of portfolio development is to get students to work on their Math, Science, English composition, or art etc. Students should select work that best shows their achievement of the curriculum goals. They should include the first draft and the final draft to show progress or they may choose to include multiple drafts.
6. **Involve students in peer correction or review.** It is amazing how much students can learn through their peers' comments on their work and through their own comments on some one else's work. Peer review on students' portfolio work should become an essential part of the process of portfolio development.
7. **Incorporate feedback mechanism into student portfolios.** About midway through the portfolio development process brief feedback must be given to the students so that they know if they are going in the right direction. Feedback could also be posted onto the electronic portfolios if students do not mind and find it encouraging.
8. **Encourage reflective practice.** An essential inclusion in the portfolios is the reflective notes. Documentation of thoughts makes the portfolios more personal and provides a view into the student's performance and abilities. They exhibit the thought processes and critical thinking capabilities of the students, which may not be evident from a mere collection of their work. Reflective notes tell us how the learners feel about the learning process (Ali, 2002).
9. **Evaluate the presented portfolio.** The main aim of assessment may be to evaluate the work included in the portfolio and to see if there has been significant progress from the first draft. However, it must also be noticed if all the required contents are included; that there are no typing/mechanical errors; and that the portfolio is well organized and presentable for WWW publication or saving onto a CD-ROM. A marking scheme – '[Rubric for Assessing Electronic Portfolios](#)' by Morris (undated) could be used as model.

What to Include in Electronic Portfolios

The following table sums up what a simple student electronic portfolio should include.

Title. The title card consists of the student's and teacher's names and the academic year. It may include a picture or video of the student.

Table of Contents. This is a summary of the portfolio. Links may be added to guide the viewer.

Samples of work. Include the first draft and the final draft to show progress. You may choose to include multiple drafts.
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Short resume. This acts as a window into the student's life and makes the portfolio more personal.

Student's reflective notes.

Letter to viewers.

Viewer comments box.

Creating Electronic Portfolios

This section outlines the equipment, and planning required for creating and saving an electronic portfolio.

Equipment

According to Barrett (2000), to begin with, students would require at least the following equipment:

- Computer – IBM or Macintosh. It should have audio and video display hardware.
- Scanner and/or a Digital Camera.
- Multimedia Software Program. The most popular software used for electronic portfolio development are Microsoft Word and PowerPoint, Adobe Acrobat, digital and analog video, and WWW pages created with HTML editors like Netscape Composer, Microsoft FrontPage, or Adobe PageMill. The choice of software can either restrict or enhance the development process and the quality of the final product. Different software packages each have unique characteristics, which can limit or expand the electronic portfolio options.

Barrett (ibid) suggests six levels of electronic portfolio software.

Level I	No digital artifacts. Some video tape artifacts
Level II	Word processing or other commonly used files stored in electronic folders on a hard drive, floppy diskette or LAN server
Level III	Databases, hypermedia or slide shows (e.g., PowerPoint), stored on a hard drive, Zip, floppy diskette or LAN server
Level IV	Portable Document Format (Adobe Acrobat PDF files), stored on a hard drive, Zip, CD-R/W, or LAN server
Level V	HTML-based web pages created with a web authoring program and posted to a WWW server
Level VI	Multimedia authoring program, such as Macromedia Author ware or Director, pressed to CD-R/W or posted to WWW

Planning

Worcester (undated) suggests creating a flowchart on paper to plan what to put in each link of the portfolio. Students should choose the appearance of the portfolio webpage and links. This is also the stage when the students should decide and work on the content of the portfolio. If the portfolio is to be hosted on the WWW then a free or cheap web hosting site should be contacted at this point.

Creating and Saving the Portfolio

Design a portfolio by including graphics, photos, clip art, scanned images, videos, and sound etc. Add text to it and buttons to create links. This stage is the most technical and would require some help from the teacher unless the students have a technological edge over the language instructor which is not uncommon these days! Finally students should store and present their portfolio. They could choose to save it on computer hard drive, videotape, a WWW or LAN server, flash disk, Zip disk or onto a CD-ROM.

Conclusion

The electronic portfolios can be presented in various forms of electronic multimedia like audio, video, graphics, art clips etc. However, the wide range of media through which electronic portfolios can be developed adds to their sophistication and consequently the effort involved in their development and maintenance. Therefore, teachers would be advised to restrict their involvement in technical issues. Information security is also an area of concern since portfolios accessible through the internet are open to the general public. Some teachers look at an electronic portfolio as just another student webpage. Unless it has clearly defined aims and goals, an electronic portfolio can easily become a student webpage instead of a powerful learning and assessment tool.

Sample Student Webfolios:

- <http://www.eportfolio.lagcc.cuny.edu/esamples/fiorelloport/index.htm>
- <http://www.geocities.com/kmuhairi/index.html>

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The Internet TESL Journal, Vol. XI, No. 8, August 2005

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