E-Portfolios: Best Practices for Use in Higher Education
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An e-portfolio is most often conceptualized as a multi-media environment that can be used for a number of developmental or assessment purposes within a particular course, program, or discipline. It can be demanding to shift from traditional instruction and assessment approaches to the use of e-portfolios, particularly in the early stages of e-portfolio implementation. However, there are compelling reasons to consider using e-portfolios at both classroom and programmatic levels. Recent research has uncovered several best-practice approaches that anchor the use and innovation of e-portfolio applications.

Purpose, intent, and structure
It is essential to communicate the nature, purpose, structure, and intended learning outcomes of any e-portfolio process with clarity and concision. Students must understand the learning benefits that are associated with compiling e-portfolios in order to ensure their engagement in the process. Instructors also need to be clear about the ways in which e-portfolios benefit their own practice, as portfolios can be more time consuming to monitor and assess than traditional evaluation approaches. Clarity can be ensured by:
- Providing students with structural expectations, sequences, and guidelines early in the process, including an assessment rubric;
- Developing a process for identifying acceptable evidence for inclusion in e-portfolios; and
- Establishing a schedule for follow-up with students about their progress with e-portfolio assignments.

Elements of an e-portfolio
Higher education researchers recommend the inclusion of four broad steps when creating e-portfolios:
1. *Collect* – collecting, saving, and organizing artifacts from programs of study, courses, and individual learning experiences;
2. *Select* – using a critical framework to choose the artifacts that best serve as evidence of learning and development;
3. *Reflect* – reflecting, in a structured way, on how the evidence that has been selected demonstrates an evolution in learning; and
4. *Connect* – identifying points of connection across the artifacts and reflections for the purpose of creating a polished summary.

Reflection is widely considered the most important aspect of e-portfolios, and the materials included within any portfolio should be substantiated by structured reflections about why they constitute important evidence. Since reflection is a new and difficult developmental skill for many students, instructors may consider providing some kind of framework for reflective writing that can be used as a guide for this.

Evidence in e-portfolios
It is important to determine, in advance, what kinds of evidence are appropriate to include in an e-portfolio, given the context, stage of student development, and academic discipline. An artifact is a text-based work or

multimedia product that constitutes evidence of learning.   Some examples of artifacts that could be included in an e-portfolio are:

- Blogs, v-logs, or wikis
- Videos of presentations
- Audio recordings
- Writing assignments
- Artifacts of group projects
- Powerpoints
- Exams or quizzes
- Photographs

- Discussion group postings
- Translations
- Journal entries
- Websites and/or links to web content
- Schedules, timelines, and/or goals
- Illustrations or concept maps
- Formative evaluations or assessments
- Feedback from instructors or peers

It is important to allow students the opportunity to generate or collect meaningful evidence, which means that the artifacts that each individual selects may be unique. However, students must also be able to explain the artifacts and substantiate their claims that learning has occurred.

Creating e-portfolios

There are some common, widely used elements within e-portfolio approaches:

- The compiler of the portfolio chooses what to include. It is important that the learner have the opportunity to choose what to integrate within their portfolio, and to make claims about why that evidence is important.
- Reflection is evident. The reflection may be formal or informal, structured or unstructured. However, some form of reflection should tie the elements of the portfolio together into a coherent whole.
- It can be easily adapted or modified to suit particular audiences. In order for students to see the long-term utility of an e-portfolio it must be easily adaptable. Ideally, the e-portfolio should also continue to be accessible to learners beyond their time at an academic institution.

Although the portfolio is constructed with artifacts, the process of creating the portfolio should be emphasized over the final product if it is to be used as an effective learning tool.

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