Pedagogical Issues in Electronic Portfolio Implementation
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An online portfolio system needs to support a culture of EVIDENCE:

Evidence = Artifacts + Learner Reflections + Validation or Feedback

Below are some of the requirements for creating an online portfolio based on the pedagogical requirement of a PORTFOLIO system (whether paper-based or electronic).

**Storage Space:**
- To store digital artifacts (with meta-tags)
- To store learner self-reflection and self-assessment on each artifact
- To store feedback on each artifact from assessor(s) (independent validation)
- To store details of the assignment with criteria for assessment (rubrics)

**Security:**
- Ability to restrict access, setting permissions to view:
  - Artifact only
  - Artifact with reflection
  - Artifact with reflection and feedback
- Ability to set permissions separately for faculty to view portfolio and provide feedback on work.

**Linking and Grouping:**
- Ability to organize portfolio in a variety of ways (flexibility in organization)
  - By standards or learning outcomes
  - By course
  - By date (entered, last updated, etc.)
  - By status of work (Work in progress, ready for assessment, ready for publication)
- Ability to include:
  - Goals for portfolio, Contents of portfolio
  - Learning Goals or Standards
  - Resume

**Reflection:**
- Ability to reflect on a specific grouping of artifacts to make a particular case (i.e., how this collections demonstrates achievement of a standard or learning goal)
- Ability to set learning goals and future direction

**Publishing**
- Ability to create a variety of portfolios, depending on audience and purpose:
  - **Learning** portfolio (a reflective journal with artifacts; primary audience is the learner)
  - **Assessment** portfolio (a highly-structured portfolio demonstrating achievement of learning goals or standards, with independent validation and feedback on artifacts/reflections from faculty)
  - **Employment** or **Marketing** Portfolio (a semi-structured portfolio, developed for the purpose of making the case for suitability for a particular position)
  - **Showcase** Portfolio (a collection of artifacts, with reflections, that demonstrate growth over time, highlighting specific achievements)
- Ability to individualize the portfolio, to allow creativity of expression in the presentation (to avoid the “cookie cutter” effect or identical “look and feel” of a data-base or template-based portfolio)
Portability
Ability to archive work in a portable format such as:
  o CD-ROM
  o HTML or PDF Archive
  o DVD
Learners can take their portfolio to another institution or maintain it on their own.

Types of Evidence in Portfolios
Barton & Collins (1997) have identified four types of evidence that can be placed in a portfolio:
  Artifacts: documents produced during normal academic work
  Reproductions: documents of student work outside the classroom
  Attestations: documentation generated about student’s academic progress
  Productions: documents prepared just for the portfolios. These productions include:
    o Goal Statements: Student’s personal interpretations of each specific purpose for the portfolios
    o Reflective Statements: Students write as they review and organize the evidence in their portfolios
    o Captions: Statement attached to each piece of portfolio evidence, articulating what it is, why it is evidence, and of what it is evidence.

Levels of Portfolio Implementation
0. A collection of artifacts
1. A collection of artifacts with reflective statements
2. A collection of artifacts with reflective statements & self-assessment
   A learning portfolio (journal entries with associated artifacts)
   A showcase or marketing portfolio (a celebration of learning or an employment portfolio)
3. A collection of artifacts with reflective statements & self-assessment, linked to course outcomes, program outcomes, or standards
   A non-validated assessment portfolio
4. A course-centered portfolio: A collection of artifacts with reflective comments & self assessment, linked to course outcomes, including validation & feedback from faculty, used for course assessment
5. A program-centered portfolio: A collection of artifacts with reflective comments & self-assessment, linked to program outcomes including validation & feedback from faculty, used for program assessment
6. A standards (or goals)-centered portfolio: A collection of artifacts with reflective comments & self-assessment, linked to standards including validation & feedback from faculty, used for individual learning support and program assessment
7. A learner-centered portfolio: A collection of artifacts with reflective comments & self-assessment, linked to learner goals or outcomes including validation & feedback from faculty, used to support individual learning, growth, professional development.