Focusing on what you value: A considered approach to assessing ePortfolios

Prof Gavin T L Brown
gt.brown@auckland.ac.nz
Presentation to CETL, Hong Kong University
July 8, 2016
Educational Portfolios

• “Systematic collections of student work selected to provide information about students’ attitudes and motivation, level of development and growth over time.”
  » (Kingore, 1993)

• “A purposeful, chronological collection of student work, designed to reflect student development in one or more areas over time and student outcomes at one or more designated points in time.”
  » (French, 1992)

• “Purposeful collection of student work that exhibits the student’s efforts, progress, and achievements in one or more areas.”
  » (Del Vecchio et.al, 2000)

Purpose, Longitudinal, Collection: this matters to assessment opportunities and demands
What Purpose, Educational Sophistication?

• Types
  – Working (holding tank; necessary precursor)
  – Display (demonstrate the highest level of achievement)
  – Assessment (document achievement of required outcomes)
  – Class (demonstrate group activities & learning)

Danielson & Abrutyn, 1997

• Levels
  – 1: Scrapbook Collection
  – 2: Curriculum Vita (professionally required?)
  – 3: Curriculum collaboration student & faculty,
  – 4: Mentoring by faculty to student mastery,
  – 5: Authentic evidence for assessment, evaluation, and reporting.

Love, McKean, & Gathercoal, 2004
Intended Strengths

• Empowerment - student ownership, motivation, self-efficacy etc.
• Collaboration - student(s) & teacher
• Integration - theory and practice
• Authenticity - links beyond classroom
• Critical thinking & reflection
• Accountability - student & teacher/school
• Feedback - to student & teacher
• Multi-modal ➔ make use of multi-media technologies to incorporate sound, image, objects, not just words
Implemented Difficulties

- Time to evolve → loss of motivation
- Labour intensive – student & teacher
- Difficult to specify expectations
- Difficult to assess (incl. reliability/validity)
- Extensive teacher PD required
- Volume vs quality
- Storage

- Eportfolio Technology can be both a solution and a challenge
Guidelines for effective implementation

• Set out purpose – must be central to curriculum & programme
• Provide clear guidelines for evaluating the intended outcomes – a RUBRIC
• Provide clear guidelines for samples – content, layout, sources of evidence, ...
• Develop scoring quality assurance systems (moderation) if scoring will count
• Detail management requirements – deadlines, access, time, storage, archiving, ...
• Set aside time for work on portfolio
• Be available – encourage, support, advice, ...
Possible Assessed outcomes

Clarify the outcomes you care about to be achieved by the portfolio. This statement defines the operational guidelines for design and evaluation of portfolios.

- Creativity and originality
- Variety
- Understanding of content or concepts
- Completeness
- Depth of reflection
- Perseverance
- Quality of product
- Self-regulation of learning
- Visual appeal
- Cross-curricular connections
- Organization and presentation
- Communication of ideas
- Problem solving
- Demonstration of change, development or improvement
Assessment Issues

• Vague or unclear or ambiguous or unscaffolded ambitious learning outcomes
• Students driven by technical or compliance approach instead of awareness or reflection about their own deep & personal learning
• Students don’t want ‘extra’ work! (Reward ?)
  • Focus is passing papers
  • Don’t see papers being connected
• Demands on student time, finance, other activities etc...
• Difficulty in developing formative feedback relationship over a long time
  • Easy to start with a sizzle but is it feasible with other teacher demands?
• Thinking this will be an easy assessment process
Model Portfolio Scoring: Advanced Placement (AP) Studio Art Portfolio Content

High-stakes end of secondary school, voluntary and paid-for assessment with admission to elite universities or exemption for Stage 1 papers as consequences

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Drawing</th>
<th>2-D Design</th>
<th>3-D Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>5 actual drawings; maximum size is 18&quot; x 24&quot;</td>
<td>5 actual works; maximum size is 18&quot; x 24&quot;</td>
<td>5 works; 2 slides of each are submitted</td>
</tr>
<tr>
<td>Concentration</td>
<td>12 slides; some may be details</td>
<td>12 slides; some may be details</td>
<td>12 slides; some may be second views</td>
</tr>
<tr>
<td>Breadth</td>
<td>12 works; 1 slide of each is submitted</td>
<td>12 works; 1 slide of each is submitted</td>
<td>8 works; 2 slides of each are submitted</td>
</tr>
</tbody>
</table>
Harrison’s AP Drawing Portfolio

- Sample showing concentration in drawing
  - [http://lhs.loswego.k12.or.us/z-mcbrides/AP/Portfolio/breadth07.htm](http://lhs.loswego.k12.or.us/z-mcbrides/AP/Portfolio/breadth07.htm)
High-Stakes Scoring of AP Studio Art

• All portfolios brought to one site; 7-10,000 per year
• 25 readers (all experienced as studio art teachers in the various disciplines) score all portfolios
• Each section is given 2 or 3 ‘readings’ using a holistic rubric
• Readers are monitored statistically and by a chief reader
  – Inconsistent readers are check-marked by chief; if not improve—let go
  – Consistently harsh or lenient readers adjusted statistically
Eportfolio technology

• Using technology instead of paper is seen as the modern solution

• Required components
  – Electronic Storage
  – Personalization
  – Showcasing
  – Reflection and Feedback
  – Assessment/Evaluation

Evaluation of 2 eportfolio systems used at University of Auckland Faculty of Education and Social Work for Graduating Teacher Standards fulfilment by David San Jose (PhD candidate)
<table>
<thead>
<tr>
<th>Essential Technology Features</th>
<th>MyPortfolio (Mahara) System</th>
<th>Google Sites System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic Storage Capacity (Max)</td>
<td>1000 MB</td>
<td>100 MB</td>
</tr>
<tr>
<td>Upload &amp; download directly</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Compatibility</td>
<td>Text, image (jpeg, tif, png, gif), audio (wav, mp3, mp4), PowerPoint (ppt), Word Document (doc), Portable Document Format (pdf), and Excel (xls). Video upload too large and not compatible.</td>
<td>Text, image (jpeg, tif, png, gif), audio (wav, mp3, mp4), PowerPoint (ppt), Word Document (doc), Portable Document Format (pdf), and Excel (xls). Video upload too large and not compatible.</td>
</tr>
<tr>
<td><strong>Personalization &amp; Customization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Layout options</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Several</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Showing</strong></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Privacy</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Direct text and private messaging</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Linkage to external email systems (e.g., school)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Compatible with text, image (jpeg, tif, png, gif), Word Document (doc), and Portable Document Format (pdf) as a form of a message or electronic mail. Messages can be made public or private using a “Wall” feature where peers, mentors, and other users can populate the “Wall” page.</td>
<td>Compatible with text, image (jpeg, tif, png, gif), Word Document (doc), and Portable Document Format (pdf). Available under the comments section and limited characters only.</td>
</tr>
<tr>
<td>Dissemination control</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Assessment and Evaluation</strong></td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Direct evaluation or assessment features</td>
<td>Share e-portfolio web page</td>
<td>Share e-portfolio web page</td>
</tr>
<tr>
<td>Demonstration of Task Completion Evaluation processes</td>
<td>External</td>
<td>External</td>
</tr>
</tbody>
</table>

**Key:** almost identical & NOTHING for assessment
## Student Concerns

<table>
<thead>
<tr>
<th>Negative Features</th>
<th>MyPortfolio (Mahara)</th>
<th>Google Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per file uploading</td>
<td>Max upload 50 megabytes</td>
<td>Max upload 20 megabytes</td>
</tr>
<tr>
<td>Peak time upload speed</td>
<td>Slow</td>
<td>Instant</td>
</tr>
<tr>
<td>Off peak upload speed</td>
<td>Instant</td>
<td>Instant</td>
</tr>
<tr>
<td>Embedding of files</td>
<td>Some HTML understanding required</td>
<td>Some HTML understanding required</td>
</tr>
<tr>
<td>Browser Compatibility</td>
<td>Google Chrome &amp; Firefox</td>
<td>Google Chrome &amp; Firefox</td>
</tr>
<tr>
<td><strong>Personalization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Page customization</td>
<td>Limited design option</td>
<td>Several design options</td>
</tr>
<tr>
<td>Web page deletion</td>
<td>Easy</td>
<td>Difficult</td>
</tr>
<tr>
<td>File deletion</td>
<td>Difficult</td>
<td>Easy</td>
</tr>
<tr>
<td>Organization of pages</td>
<td>Easy</td>
<td>Difficult</td>
</tr>
<tr>
<td>Photo display</td>
<td>Resizing required not automatic</td>
<td>Resizing required not automatic</td>
</tr>
<tr>
<td><strong>Showcasing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash plug-ins</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Page order</td>
<td>Simple</td>
<td>Moderate</td>
</tr>
<tr>
<td>Image &amp; text integration</td>
<td>Difficult</td>
<td>Easy</td>
</tr>
<tr>
<td>Adjustable display</td>
<td>Easy</td>
<td>Difficult</td>
</tr>
<tr>
<td>PDF display</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher feedback</td>
<td>No assessment feedback page</td>
<td>No assessment feedback page</td>
</tr>
</tbody>
</table>

*Again almost identical; weak on assessment processes*
Student perceptions

- Our students considered Mahara moderately more satisfying and usable

<table>
<thead>
<tr>
<th></th>
<th>MyPortfolio (Mahara)</th>
<th>Google Sites</th>
<th>Difference statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>User Information</td>
<td>4.14</td>
<td>1.04</td>
<td>3.62</td>
</tr>
<tr>
<td>Satisfaction (UIS)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usability Evaluation</td>
<td>4.16</td>
<td>1.00</td>
<td>3.55</td>
</tr>
<tr>
<td>Method (UEM)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- But Deneen & Brown (2014) found that this is variable here at HKU—it’s very individual

  – *Perhaps it depends in part on teacher competence with the technology?*
Student Perceptions of technology and assessment functions

• HKU study: Deneen, Brown, & Carless, 2015
  – Positive attitude to eportfolio technology increases formative assessment beliefs and GPA
  – So both student understanding of technology and assessment matter
Conclusion

- A great idea but really hard to assess
- Worth doing esp. if you require students to do reflection and self-monitoring of learning
- Work starts early so students have stuff from which they can choose and justify their choices relative to learning outcomes (curation)
- Marking (if expected) has to be guided by your curriculum goals captured in a systematic rubric and marking preferably by 2+ markers
  - If it counts, otherwise use for dialogue only
- Almost all eportfolio technology is equivalent—allow choice; concentrate on curricular goals
- Assessment has not been solved in eportfolios so consult literature on judgment grading or marking
References