Overview

At its simplest, a portfolio, whether in hard copy or digital form, is a collection of artefacts with a coherent structure and a guide to that structure, such as a contents page. As a learning and assessment tool, a portfolio will normally comprise more than just the artefacts themselves and will include a reflective dimension. The learning-tool portfolio is where a learner:

- reflects on what they have learned
- encapsulates key aspects of their learning, based on their successes and failures as evidenced by the artefacts
- proposes their future plans for learning.

A portfolio can be seen as both a product and a process.

- As a *product*, it holds the work records and documents a learner has produced during a course or program, and represents an edited collection of their learning achievements.
- As a *process*-oriented tool, it enables learners to monitor their own learning systematically, reflect on their learning performance, present a coherent account of their achievements and obtain feedback on their learning.

When to use

When they develop a portfolio, students can create their own learning story and begin shaping their emergent professional identities. They can use their portfolios:

- as a dynamic archive of experience
- to support and enable reflective learning
- to demonstrate learning achievement for assessment purposes
- to support an application for a job or further study program, and so on.

Portfolios used to be most commonly employed in art and design education, but many disciplines now use them to support integrative learning.
Benefits

In a conventional 3-hour exam, or an extended writing task, learners often can't demonstrate adequately their achievement of diverse learning outcomes. Assessment in higher education often involves students completing proxy tasks, such as describing how they would perform a task, rather than actually performing it.

By contrast, portfolios allow students to assemble a selection of sustained pieces of academic, professional and personal work. There is inherent validity in asking learners to demonstrate that they have achieved the course learning outcomes.

Other benefits of portfolios as assessment include the following:

- Assessment by portfolio is authentic, enabling you to assess a student's real-world professional capabilities.
- Portfolios allow learners to integrate their learning of a wide range of personal, professional and academic capabilities, both inside and outside the study program, and show that they can apply their knowledge and skills to their practice.
- Portfolios also allow learners to reflect on their learning throughout a whole program of study, seeing structure and context in course activities that might otherwise seem fragmented.
- Preparing a portfolio gives learners practice in professionally documenting and presenting their achievements.
- It also encourage students to develop self-reflection and autonomy, transferring responsibility for learning from the teacher to the learner.
- Using portfolios in assessment encourages course designers to design and assess courses in a more integrated way across a program Klenowski et al., 2006; O'Sullivan et al., n.d.).
- Portfolios can provide progressive and coherent snapshots of a learner's knowledge, performance and development at particular points in a course or program.
- Students may feel that portfolios are fairer than some other assessment methods, because:
  - they require sustained effort over a long period
  - they recognise students' learning and development processes by requiring them to revise and comment on their progress
  - they allow an overall view of the learning in which the student has a demonstrable stake.
- Because portfolios are a personalised form of assessment, they carry very little risk of plagiarism.

Challenges

- It can be difficult to get the balance right between clarifying the requirements for portfolios and allowing students enough scope for creativity.
- You must take care, when defining the scope of the portfolio, to optimise the benefits for learning while minimising the burden of work for students.
- Grading student portfolios can be very time-consuming, especially if they are used to support integrative learning across multiple courses or a whole program of study, and grading must be done collaboratively.
- It can be difficult to grade reliably, since students' portfolios are an individual expression of their own work and achievements. Interpreting them involves a high degree of subjective judgment.
- You must manage the risk of students including items that are not their own work in their portfolios.
Strategies

Make the portfolio a vehicle for assessment as learning:

- In terms of the portfolio's scope, is it best to limit the task to a single course (consider the workload benefits), or should the portfolio compile artefacts from different courses at program level? You might want it to incorporate broader learning experiences such as those developed by Cranney et al. (2005).

- A portfolio can require a significant investment of time for students. If they don't plan properly, or keep good records, they can sabotage their own success in producing a good-quality portfolio. Introduce the portfolio as a learning tool early in the course or program. Also, provide clear guidelines to students about the processes involved in managing their growing collection of portfolio items.

- Make sure that students can see how the objectives of the portfolio are aligned with the course learning outcomes. Distinguish, for example, between a portfolio assessing progressive learning development and one focused on professional skills. Negotiate with the class a portfolio format that reflects discipline-specific characteristics and professional contexts.

- Keeping in mind the effect on student and staff workloads, you might want to encourage students to include evidence of their progressive learning, such as:
  - earlier drafts of completed work
  - review feedback on these drafts, reflections on this feedback, and
  - evidence of how they have acted on feedback to advance their knowledge and understanding.

- Encourage students to consider how they might recycle the content of their portfolio for inclusion in a different type of portfolio, such as one that will support an application for employment. Explore with them how such a portfolio would serve its own distinctive purpose.

- Define the portfolio structure as simply as possible, to allow students scope for creative interpretation. For example, minimum requirements could include:
  - a contents page, and
  - explicit links between evidence of achievement (the artefacts) and claims made about learning. These will help the reader find their way through the portfolio.

- Give examples of the types and formats of evidence to include. Show the students the full diversity of ways in which the evidence can be interpreted and presented (see Baume, 2003).

- Show how the assessors apply assessment criteria, using sample portfolio excerpts - for example, show how a student's own reflective commentary can contextualise a portfolio item, or provide a rationale for and a critique of the collection in relation to the course / program learning outcomes.

Improve reliability
Student assessment portfolios are inherently individual and complex. Because of this, you need to construct assessment criteria carefully so that assessors can apply them consistently.

- An assessment rubric guides students when they design their portfolio and when they self-assess or conduct peer reviews of the work. When developing a rubric, limit the number of different learning outcomes that the portfolio addresses.
- Brief and train assessors in portfolio assessment.
- Where you can incorporate collaborative marking, do so, to promote greater consistency in the interpretation of criteria.

### Manage workload

Plan carefully so that workloads for both students and staff remain manageable.

- Specify the upper size limits for portfolio items (for example, maximum numbers of pages of evidence, and a maximum number of words in the critical reflection).
- Be clear about the format you want students to use in portfolio structure and presentation. Provide either a pro-forma or detailed guidelines for the design of the structure.
- Develop a rubric incorporating criteria and standards for assessing the work. Use it to guide students’ self and peer evaluations, and when you communicate assessment feedback to students.
- Inform all assessors that they do not necessarily need to read every word of a portfolio (particularly of the evidence) to be able to form a confident judgment on the basis of the critical reflection.
- Avoid re-reading any preliminary work submitted, focusing instead on how the feedback has affected the final work. Use the reflections based on self and peer assessment to reduce the need to read all the primary-source contents of the portfolio. Or allow students to include pre-assessed work, so that markers can just review the assessments rather than the primary evidence.

### Ensure fairness

Portfolio assessment may raise diversity issues. For example, students with disabilities, for whom learning and assessment adjustments have been made, may need to submit a modified form of portfolio, or to be supported in the preparation of their portfolio. Responding to individual circumstances is the best way of ensuring that all students have an equal opportunity to demonstrate their learning and achievements.

Work strategically to make the assessment as reliable and invulnerable to plagiarism or inappropriate collaboration as possible. Involve students in negotiating the specific form of the portfolio and in devising the assessment criteria. Students will understand the task better, and be more aware of its relevance.

Portfolios by their nature make plagiarism less likely than other assessment forms. But some students can still collaborate inappropriately and present other sources as their own. Make sure that assessment processes reflect the importance of academic integrity:
• Emphasise the importance of critical reflection, which requires students to make their own sense of the work they have done (Ross, 2009).
• Require students to apply theoretical or other ideas to particular topics of which they have unique knowledge and experience.
• Reward students for including appropriately integrated and referenced sources from published literature.
• Include an oral component in the presentation of the portfolio - for example, a structured interview (Burch & Seggie, 2008).

Use technology

• ePortfolio software such as Mahara and PebblePad has been developed specifically for use in higher education.
• Local applications such as the eMed system developed by the UNSW School of Medicine provide a structured framework for integrating the development and assessment of graduate attributes.

Exploit other universally available applications for portfolio development and presentation (see Barrett, 2010). For example:

• While the Microsoft Office suite of tools is not designed for portfolio development, you and your students can use it to publish content in a variety of formats: Word document, PowerPoint presentation, Excel spreadsheet.
• The Apple iLife suite of tools opens up an even greater variety of publishing options, including video editing and DVD compilation.
• Use freely available tools such as Open Office and Google. Google Docs allows a user to select who has permission to view files. Google Sites provides an easy-to-use web format for publishing online.
• Blogs can be set up online at no charge (for example, using Wordpress, Blogger, Livejournal). The user has control over what is published, can publish web content easily, and can permit or prevent viewers commenting as they wish.

Additional information

External resources

Australian e-Portfolio Project. Outcomes from an ALTC-funded project.

Barrett, D. Creating ePortfolios with Web 2.0 Tools. Examples of e-portfolio creation using diverse applications.

Further readings


Acknowledgments

The contributions of staff who engaged with the preparation of this topic are gratefully acknowledged, in particular Chris Hughes in the School of Public Health and Community Medicine.