

Conclusion

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Implementing eportfolios in higher education echoes the need to take into consideration a constantly changing learning environment with new technological tools, the university's tasks to (better) equip students with skills and not only knowledge, community's expectations in terms of academic knowledge and training, and last but not least, students with new demands, needs and expectations. The chapters included in this volume have looked at the affordances and constraints of e-portfolio implementation in higher education from different perspectives and against the backdrop of the research on eportfolios over the last ten years, which pointed out that eportfolios could lead to flexible assessment methods, training of higher level skills such as reflection and evaluation and generally allow learners to take ownership of their learning. At the same time the authors were also aware of the constraints of using eportfolios as assessment methods at the course level. The research already pointed out that eportfolios when taking a top-down institutional approach could easily lead to loss of purpose. Very often students are not aware of why the eportfolio is necessary and how it could help them. In this case the eportfolio is just another assignment and is not able to exploit its full potential.

While the authors in this volume generally confirm both the affordances that eportfolios as assessment bring into their courses and the constraints that go along with implementing them at the classroom level, a more granular picture emerges from these individual and multidisciplinary perspectives. Authors observe that eportfolios in general education courses "reveal students' transformational learning process, their various learning experiences as well as their progress across courses" (Hodgson). They also observe that eportfolios in language and area studies courses "helped students develop their intercultural and reflexive competence in diverse situations, and foster (...) life-long learning" (Chui and Dias). In a business communications course eportfolios were observed to have "enhanced collaboration and interaction between students and between students and the teacher" (Linger). This observation was echoed also in a numeracy course where "eportfolios as a platform for students' constant reflections throughout the course acted as a foundation for further interaction among students" (To). Last but not least eportfolios which were "highly structured and closely integrated with in-class activities were found to be

most successful” as attested to by observations in a history course (Ladds). Generally the themes “enhanced interaction” and the “need for more structure based on in-class activities” seem to be the most frequently occurring observations throughout the chapters in this volume. From the perspective of higher education and teaching design, authors do seem to agree that eportfolios instil a “sense of empowerment in students and enable them to learn about learning” (e.g. Sivan in this volume). They can also lead to “increased self-confidence and motivation, sense of initiative and anticipation among students” (Cabau).

On the other hand, recurrent themes that emerge are also that students and teachers working with eportfolios for the first time require ready and available support both in terms of technology use as well as the use of pedagogical models in order to see the outcomes set for eportfolios being achieved. Though eportfolios can “facilitate the development of collaborative and participatory pedagogies” (Ellis in this volume) which are essential for the relevance and value of higher education, they must address “key issues such as engaging students and staff and integrating technology at the same time” (Pegrum and Oakley in this volume). Authors point out that though eportfolios ultimately lead to enhanced technology skills in students, more support is required as “lecturers, students and even potential recruiters express reservations that eportfolios can be time consuming” (Cheung et al. in this volume). The resistance to e-portfolios is also identified as being “based in a combination of regional, institutional and entrenched disciplinary cultures but which can be broken through a dramatic cultural shift brought about by the collaborative efforts of the department, the instructor and the institution” (Ladds).

This last point of bringing around a “dramatic cultural shift” through collaboration actually defines the whole purpose of this book. Though based on individual case studies, the picture that emerges through these studies is one of successful collaborative efforts which brought together various stakeholders within the institution based on some common goals relating to eportfolios and assessment which were interpreted individually and then implemented through collaborative effort. First, it was the collaboration between teachers and students which was evident in the discussions and interactions with students on how exactly a portfolio should look like in terms of their profile, content and orientation in order to be effective and support various skills. Supporting various skills also involves collaboration between various units within the same institution. An example of this second level of collaboration to implement eportfolios was the participation of among others experts on information literacy from the library who not only worked with teachers but also with students to make them aware of how using a eportfolio not only enhances technology skills but also information literacy skills which are essential to survive in a technology-driven knowledge-based society. Workshops and mentoring sessions provided by the teaching and learning centre towards the use of the technology itself contributed to a better understanding of technology and in turn to a better rate of acceptance and use in the classroom.

Finally, it was the exchange of ideas and the collaborative search for solutions across the table of the Community of Practice which enabled the implementation of eportfolios across a variety of disciplines but more importantly it enabled the

dialogue between academic and non-academic parts of the institution. It is ultimately this dialogue which could lead to the shift in culture which is described in different words by the authors of different disciplines of this volume. The key words that emerge from this volume and should be highlighted in conclusion are therefore *interaction*, *collaboration*, *partnership* and *dialogue* to enable students to grasp and assimilate the concept of life-long learning.

Appendix A

Implementing Student E-Portfolios on the course level. A Resource of CoP REFLECT: A Community of Practice on Student Eportfolios Online: <http://copreflect.weebly.com/resources.html>

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Would you like to introduce e-portfolios to your course? This might help!

What experts have to say about e-portfolios!

What is a student (e)portfolio?

- A portfolio is a purposeful collection of student work that exhibits the student's efforts, progress, and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for selection, the criteria for judging merit, and evidence of student self-reflection.¹
- (An e-portfolio) is a digitized collection of artifacts including demonstrations, resources and accomplishment that present a student. This collection can be comprised of text-based, graphic or multimedia elements archived on a website or other electronic media. Eportfolio encourage personal reflection and often involve the exchange of ideas and feedback.²
- In an academic context, these artifacts might include a student's essays, posters, photographs, videos, artwork, and other course-related assignments. Additionally, the artifacts might also pertain to others aspects of a student's life, such as volunteer experiences, employment history, extracurricular activities, and so on. However, while these digital artifacts are important, they are static products. They are simply things that the student has produced or done or experienced, and a good eportfolio ought to be more than just a collection of products. It should also be a process—specifically, the process of generating

¹Paulson, F. Leon, Paulson, P.R., & Meyer, C.A. (1991). What makes a portfolio a portfolio? *Educational Leadership*. 60-63. Retrieved from <http://web.stanford.edu/dept/SUSE/projects/ireport/articles/eportfolio/what%20makes%20a%20portfolio%20a%20portfolio.pdf>.

²Loernzo, G., & Littelson, J.(2005). An overview of e-portfolio. *Educause learning initiative*. Retrieved from <https://net.educause.edu/ir/library/pdf/eli3001.pdf>.

new or deeper learning by reflecting on one's existing learning. It's important, then, to think of an eportfolio as both a product (a digital collection of artifacts) and as a process (of reflecting on those artifacts and what they represent).³

Why would you like to start a student eportfolio?

In the context of a knowledge society, where being information literate is critical,

- The eportfolio can provide an opportunity to support one's ability to collect, organize, interpret and reflect on his/her learning and practice.
- It is also a tool for continuing professional development, encouraging individuals to take responsibility for and demonstrate the results of their own learning.
- Furthermore, a portfolio can serve as a tool for knowledge management, and is used as such by some institutions.
- The eportfolio provides a link between individual and organizational learning. (European Institute for E-Learning)⁴

To start developing an e-portfolio for your course, ask yourself the following questions!

Be sure to take a look at the *glossary* at the end.

I. What are the outcomes for your portfolio?

Complete the following two sentences:

- a. The portfolio should be able to help the student to...
- b. The portfolio should be able to help me (the teacher) to assess the following GA(s): _____
 - Citizenship
 - Knowledge
 - Learning
 - Skills
 - Creativity
 - Communication
 - Teamwork

II. How would you like to assess the outcomes of the portfolio?

You can

- a. choose to assess each artifact*/each category/the portfolio using a rubric*.

³Centre for Teaching Excellence, University of Waterloo. *Eportfolio explained*. Retrieved from <https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/educational-technologies/all/eportfolios>.

⁴European Institute for E-Learning. *Why do we need an ePortfolio?* Retrieved from <http://www.eife-l.org/publications/eportfolio>.

- b. decide what assessment criteria are important for you:
 - i. reflection (on choice of artifact/on alignment of artifact to graduate attribute)
 - ii. language
 - iii. creativity (in presentation/thinking/problem-solving)
 - iv. discipline-specific skill/core competency
- c. give different weights to b (i-iv) or even to different outcomes.
- d. assess the portfolio once or twice in the course of a semester.

III. What should the portfolio look like?

- a. Nature of artifacts

[Note: artifacts, documentations and evidences can be assignments (but not limited to) to be included in a portfolio]

 - i. Text (e.g. reflective text (journal/blog, creative text) and/or
 - ii. Multimedia/artistic expressions

Append the table:

Outcome	Examples
Critical inquiry (assignment: small scale research task)	Journal entries, (video) blogs, bibliography, evidences of critical use of the internet
Creativity (assignment: solve a problem)	Case studies, assignments, creating an original piece of work such as a literary text or a multimedia artefact
Citizenship (assignment: discipline-oriented community service)	Multimedia and or reflective essay type evidence of extra-curricular engagement (political/social/creative)
Information literacy	Research log, research assignments, bibliography, use of the internet

- b. Number of artifacts
 - i. Specify the number of artifacts that should be included under a category at the time of each assessment. Is the expectation realistic?

For example:
 How many reflective journals should the student submit in the course of the semester? Or
 How many evidences of extra-curricular engagement, out of class learning, etc. should be included in the portfolio?
 - ii. Expect artifacts on a regular basis.
 Weekly, Bi-weekly, Monthly

c. Organization and Design

- i. Provide a template* to which students have to stick to. (*reduces workload, helps students to organize their learning*)
- ii. Let students be creative and make portfolio's organization part of the assessment.
- iii. Show examples of well-designed portfolios and explain why they are good.
- iv. Is group work also possible? If so, how would you like to assess it?

d. Highlighting GA(s) where you think is appropriate

Tag* artifacts (to GAs/Core competencies)

In order to facilitate tagging, ask your students to include key words into their artifacts. The key words could be GAs, e.g., Creativity or discipline related words or both.

IV. What scaffolding*(support) would the students need?

a. Technical

- i. introductory session
- ii. technical helpline
- iii. student workshops
- iv. online support
- v. exemplars as practical examples

b. Academic

- vi. guideline of what is expected in order to receive high grade
- vii. show examples of grading by a rubric
- viii. show example of alignment of artifact to expected outcome
- ix. mentoring

V. How would you like to give feedback on the portfolios?

You can provide

- a. an interactive communication platform to accommodate the feedback system of the portfolio (e.g. forum)
- b. built-in mechanisms for feedback ("Place feedback" in Mahara/class time) (*Note: Personal feedback better than feedback platform*)
- c. opportunity to peer-review
- d. feedback before or after submission

VI. How would you ensure buy-in for the portfolio?

- a. By embedding portfolios into the curriculum
 - i. Embed the use of portfolio system as part of the curriculum and grade it
 - ii. Explain the added value to their learning/future career
(See resources for examples)
- b. By adjusting your assessment scheme to facilitate the use of portfolios by replacing an examination/term paper with the portfolio.
- c. By making it part of classroom/curriculum activity.

VII. What platform would you like to use?

- a. **Mahara** (*dedicated portfolio software*)
- b. **My portfolio** on Blackboard (*Assignments on blackboard can be linked to the portfolio, no separate log-in required*)
- c. **Social Networking** sites (*easy to use but not customizable, also too public?*)
- d. **Google docs/sites** (*enable ownership & or collaboration*)
- e. **WordPress/Weebly** (*same as Google but more private*)

VIII. How would you survey students and collect data to revise the design?

- a. Post-portfolio questionnaire
- b. Focus group interviews

Appendix B

Rubric for Student E-Portfolios on the course level. A Resource of: CoP REFLECT: A Community of Practice on Student Eportfolios Online: <http://copreflect.weebly.com/resources.html>

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CoP-REFLECT Rubrics for Student E-portfolio*

	Criteria	Indicators	The highest performance level (Max points = 5)
1	Presentation	A. Organization	Collection of evidence is clearly organized according to the portfolio assignment
		B. Page structure	Pages within the portfolio have an attractive and reader-friendly layout which uses elements like headings and subheadings, headers and footers where appropriate. Page is clearly divided into presentation of evidence and reflection
		C. Navigation	Navigation is logical and easy to use. Content is organized under relevant pages. Relevant Graduate Attributes have been added as Tags/Keywords
		D. Use of visual effects and multimedia	E-portfolio contains purposive design and organisational elements (e.g. font, colour, size), media enhances the purpose (e.g. pictures, videos)
		E. Quality of writing and proofreading	E-portfolio is free of spelling and grammatical errors and uses appropriate language for the target audience
2	Reflection	A. Development of knowledge and skills	The student demonstrates that he or she has developed or is in the process of developing his or her knowledge and skills
		B. The connectedness of learning	The student makes connections between classroom learning, learning/research outside of the classroom and the 'real world' experiences

(continued)

(continued)

	Criteria	Indicators	The highest performance level (Max points = 5)
		C. Continuous critical reflection	The student engages in critical reflection on his or her development as a learner. He or she clearly articulates his or her achievements and future learning goals, thus demonstrating growth over time
		D. Articulation of viewpoints and interpretations	The student can provide his or her own viewpoints and interpretations which are insightful and well supported from evidence and argument. Clear, detailed examples are provided, as applicable
		E. Application of theories and concepts	The student can demonstrate an in-depth reflection on, and personalization of the theories, concepts, and/or strategies learned in the course
3	Information literacy	A. Appropriateness of using information tools	Identifies appropriate information tools, investigates the scope and content of different information search engines (e.g. the Library's OneSearch platform, Google Scholar) and selects the appropriate tool based on their information need
		B. Comprehensive evaluation of information sources	Provides evidence of comprehensive evaluation of their information sources and examines and compares information from various sources in order to evaluate currency, accuracy, authority, and point of view/bias. If they largely/exclusively use sources from the free Internet instead of scholarly resources, provides justification for doing so
		C. Appropriateness of documentation style	Consistently applies an appropriate documentation style without significant errors to acknowledge and cite information sources used
		D. Effectiveness of using information	Synthesizes, integrates, and communicates information effectively to accomplish a specific purpose
		E. Ethics of using information	Accesses and uses information ethically and legally, e.g. The copyright of the sources
4	Critical thinking	A. Quality of analysis	The student demonstrates a sophisticated command of analytical skills (e.g. synthesis, problem-solving, evaluation)
		B. Use of evidence	The student draws inferences or conclusions that are supported by abundant, wide-ranging, and appropriate evidence

(continued)

(continued)

	Criteria	Indicators	The highest performance level (Max points = 5)
		C. Use of methodologies	The student uses innovative methodologies to make logical connections across ideas or disciplines
		D. Consideration of multiple perspectives	The student can compare, evaluate and weight the importance of different views or perspectives
		E. Quality of argument	The student engages in creative expression and/or convincingly articulates original arguments

Total Marks: 100

*The rubric includes resources from the Internet, adapted to suit the purpose of assessing student E-portfolios at the HKBU

Note The above rubric is for guidance purposes only. Please adapt it to suit the outcomes of your portfolio and as per the conventions of your discipline

*Glossary

Artifact Artifacts used in ePortfolios are digital evidence of progress, experience, achievements, and goals over time. In other words, artifacts are examples of your work. This might include electronic documents, video, audio, and images. In ePortfolios, digital artifacts are organized by combining various media types into cohesive units that communicate your narrative.

(*Eportfolio Resource Center*. Retrieved from <https://sites.google.com/site/resourcecentereportfolio/artifacts>)

Rubric A rubric is a scoring tool that lists the criteria for a piece of work, or “what counts” (for example, purpose, organization, details, voice, and mechanics are often what count in a piece of writing); it also articulates gradations of quality for each criterion, from excellent to poor.

(Andrade, G.H. (1997). *Understanding Rubrics*. *Educational leadership*. Retrieved from <https://learnweb.harvard.edu/alps/thinking/docs/rubricar.htm>)

Eportfolio template Eportfolio templates enable the immediate customization and creation of ePortfolios. Most of these templates are easily customized in a few clicks. Here are some suggestions on eportfolio templates: Blackboard, Mahara, Google Sites, Weebly, Wix, Wordpress, etc.

(*Eportfolio gallery*. City University of Hong Kong. Retrieved from <https://sites.google.com/site/eportfoliogallery/>)

GAs (Graduate Attributes) HKBU aims to educate our students into Whole Persons. This is operationalized into Graduate Attributes that you should attain by the time you graduate from HKBU. An education at HKBU aims at developing all aspects of the whole person. In particular, it aims to foster the following attributes among its graduates: Citizenship, Knowledge, Learning, Skills, Creativity, Communication and Teamwork.

(*HKBU Graduate Attributes*. Hong Kong Baptist University. Retrieved from <http://chtl.hkbu.edu.hk/main/hkbu-ga/>)

Scaffolding In education, scaffolding refers to a variety of instructional techniques used to move students progressively toward stronger understanding and, ultimately, greater independence in the learning process. The term itself offers the

relevant descriptive metaphor: teachers provide successive levels of temporary support that help students reach higher levels of comprehension and skill acquisition that they would not be able to achieve without assistance.

(*The glossary of education reform*. Retrieved from <http://edglossary.org/scaffolding/>)