

Chapter 13

Library Support for Student E-Portfolios: A Case Study

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Abstract This chapter explores how librarians can contribute to the use of student e-portfolios. It describes how a faculty member collaborated with a librarian on an e-portfolio exercise for a general education history course. This support consisted of a one-shot information literacy instruction session intended to provide students with the research skills necessary to successfully complete the e-portfolio exercise. In addition, the librarian prepared an online course guide, and was available to students for later consultation. Student work was evaluated by the librarian, and it was found that many students struggled in spite of the intervention. A further interesting finding was that students also sought technical advice from the librarian. Based on this experience, the potential for librarians to provide both academic and technical support for e-portfolios in their role as information professionals is explored and discussed through the theoretical lens of embedded librarianship.

Keywords E-portfolios · Embedded librarianship · Faculty-librarian collaboration · Information literacy

Introduction

E-portfolios are worthwhile additions to the pedagogical toolbox in higher education contexts, however the fostering of an e-portfolio culture at an institution presents a significant challenge (JISC 2008, p. 22). This was recognized by the e-portfolio community of practice (CoP) at HKBU, and the principal coordinator was keen to include nonacademic support colleagues in the group. This included inviting one of the librarians at the University to join the CoP, to which the librarian responded positively. Such involvement is seen by the University Library as an excellent opportunity to better understand the emerging needs of the faculty. By engaging with faculty at the earliest stage possible, librarians can explore what support they

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can provide to help faculty achieve their teaching and learning objectives. Another major motivation for the Library was to advance the cause of information literacy (IL) in discussions of how student e-portfolios could be used at the University. Membership of the CoP allowed the librarian to engage in conversations about IL with faculty. From this involvement, an opportunity arose to provide support for one faculty member's e-portfolio assignment. This chapter will analyze the results of this case from the perspective of the librarian, with a focus on the concepts of IL and embedded librarianship.

Literature Review

Many useful outcomes are associated with the use of student e-portfolios, such as supporting learning and assessment, and providing rich evidence of student achievement that can be used to support transitions to employment or further study (JISC 2008). These benefits are discussed at length elsewhere in this volume, so these points will not be rehashed in this review. Instead, it will focus on two areas of particular relevance to this case study. First, the specific use of e-portfolios to enhance IL abilities will be examined. Second, the support of e-portfolio practice will be connected to the concept of embedded librarianship, which has been popularized for some time in the library science literature, but may be less familiar to academics outside the discipline. This will provide an additional perspective from which to analyze the experience and results of the case study under review.

Information Literacy and Academic Librarianship

For decades, IL has been an integral concept to the theory and practice of librarianship. Despite this fact, IL has been notoriously difficult to define precisely, with differing emphases on behavioural and sociocultural interpretations of the concept. The most recent definition adopted by the Association of College and Research Libraries (2015) does well in combining the two approaches

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.

No matter how it is defined, it is widely accepted that IL is essential to success in the modern knowledge society. Library and information professionals working in higher educational contexts are constantly searching for effective methods to nurture these abilities in their students, especially in collaboration with faculty members (Mounce 2010).

IL support by librarians has traditionally taken the form of "one-shot" sessions or workshops, however these have fallen out of favour in recent years

(Mery et al. 2012). Such sessions are standalone workshops, typically lasting fifty minutes. Although relatively easy to organize and plan for, by their nature they cannot provide more than a basic overview of library and research skills. More involved approaches, such as the teaching of credit courses, are preferred, and the “gold standard” is a situation in which both librarians and faculty work together as equals in developing the IL components of courses (Sullivan and Porter 2016, p. 34). Working with faculty on the use of e-portfolios to support IL certainly falls into this category.

Supporting Information Literacy Learning with E-Portfolios

The use of portfolios to document and assess IL abilities is not a new phenomenon. As far back as the late 1990s, Fourie and van Niekirk (1999) described a collaboration between the Department of Information Science and the Library Services of the University of South Africa to use portfolios to assess student achievement in a research information skills course. Advantages cited included an emphasis on the learning and growth process and authentic assessment. Authenticity was also cited as a key reason for the use of research portfolios to assess the IL goals of a credit-bearing course offered to students at Penn State University to prepare them for their honours thesis (Snaveley and Wright 2003). At the time of reporting, a ‘hard copy’ portfolio was used, although the authors indicated they were exploring the possible use of e-portfolios. Physical portfolios also appear to have been used by Sonley et al. (2007) in assessing an IL module delivered at the University of Teesside in 2004. They too saw portfolios as a form of authentic assessment, and their application of portfolios illustrates their suitability in the assessment of IL. Students were required to produce a bibliography, but also had to present evidence to demonstrate the process that led to the bibliography. This included search strategy, identification of potential sources, and source evaluation, all of which are fundamental IL abilities.

Somewhat less plentiful are studies that look at the use of e-portfolios in the assessment of IL support. However, it could be argued that from a pedagogical perspective the benefits are essentially the same, with e-portfolios providing essentially administrative and logistical advantages. Buzzetto-More has written extensively on how e-portfolios can be used to build IL skills. She notes that e-portfolio creation requires students to strategically acquire and evaluate information artifacts, reflect on the process, and then synthesize information in the development and presentation of the portfolio (Buzzetto-More 2010). A concrete example of this is given by Florea (2008) in her description of a librarian-designed component of an e-portfolio assignment for nursing students at the University of Rhode Island. Students needed to locate a scholarly article relevant to the research topic they were studying, and include a reflective piece on the content of the article as well as the search strategies they used to obtain it. An important benefit of the

project was the enhancement of faculty/librarian collaboration (Florea 2008, p. 426).

The University of Rhode Island case is particularly instructive to the discussion here, as it provides an example of integrating an IL component into a faculty-led e-portfolio initiative, as opposed to a standalone portfolio for research skills. This is closer to the model used by the present case study, and can also be described as an example of embedded librarianship. A brief review of this concept follows.

Embedded Librarianship

The concept of embedded librarianship has been in vogue for several years. The phrase itself is derived from “embedded journalists,” a term popularized during the Iraq War to describe journalists that accompanied US combat units during the invasion of Iraq in 2003. Applied to information work, it places the librarian in the midst of where the user is, allowing the on-demand teaching of IL skills as the need arises (Shumaker 2009, p. 239). It has been described as a “distinctive innovation that moves the librarians out of libraries and creates a new model of library and information work” (Shumaker 2012, p. 4). As noted by Carlson and Kneale (2011, p. 167), this model promises to overcome the shortcomings of the traditional “one-shot” library instruction classes that make up the bulk of many IL programmes, by encouraging stronger connections with students and facilitating more frequent and deeper interactions between faculty and librarians.

How librarians actually go about embedding themselves into courses is an area where practitioners need to apply what Carlson and Kneale (2011, p. 168) refer to as an “entrepreneurial mindset.” Opportunities need to be proactively sought out, and librarians need to be able to effectively communicate to faculty what they contribute. An early example of this in the context of embedded librarianship is again provided by the University of Rhode Island, where librarians in 2005 had to sell the concept of embedding librarians in their course management system to distance learning faculty (Ramsay and Kinnie 2006). This type of outreach is challenging, and to be successful librarians need to draw on existing faculty contacts and create new contacts by getting involved in campus committee work and social events (Knapp et al. 2013). Stemming from their belief that much can be gained from engaging in the practice of embedded librarianship, Kesselman and Watstein (2009, p. 398) have called on practitioners to explore new embedded roles. One such role could be the support of student e-portfolio initiatives by faculty.

Two points arise from the discussion above. First, while the use of portfolios to enhance IL learning has been fairly well-covered in the literature, additional case studies (especially ones dealing with e-portfolios), would provide valuable additional depth. Second, the use of e-portfolios in IL instruction could be described as an example of embedded librarianship. A description and analysis of a case study using the framework of embedded librarianship could provide unique insights. The remainder of this chapter attempts to address both of these points.

Library Support for a Course-Based Student E-Portfolio Exercise

During a conversation arising from the regular meetings of the CoP, a faculty member expressed interest in incorporating support from the Library into her upcoming general education history course (GCHC 1006—Modern China and World History). In a follow-up meeting, the faculty member met with the librarian to discuss the course content, how the student e-portfolio would be used, and where students could benefit from enhanced IL support. One of the e-portfolio exercises would involve students locating visual primary sources (including an historical photograph and a political cartoon) that they would embed in their e-portfolio along with critical commentary on the source. This was identified as an opportunity for the librarian to provide guidance on locating primary sources using Library-subscribed resources. Undergraduate students are often unfamiliar with the digitized archival sources now available to academic libraries, and such resources would be particularly useful to students on GCHC 1006 looking to enrich their e-portfolios. Useful and reliable free Internet resources would also be covered. Additionally, guidance would be given to students on how to provide proper citations for the primary sources that they discover. This would support their ethical use of sources, which is an important aspect of IL.

The librarian provided this support through two major channels

- **A course-integrated instruction session** where students were guided through hands-on practice with relevant databases. The fundamentals of citing primary sources in APA style were also covered.
- **An online course guide** bringing together all of the material covered in the instruction session for the easy reference of students.

Apart from these primary means of support, the librarian was also included on the Blackboard course site in a teaching assistant role. This allowed him to add a link to the course guide, and provided a means for students to get in touch for help and assistance.

Assessment of Library Support

To gauge the effectiveness of the Library's support, student e-portfolio submissions were assessed against a simple rubric designed to address the following learning outcomes:

- **Make effective use of appropriate search tools** in order to find relevant primary sources for the e-portfolio exercise
- **Construct correct citations for primary sources in APA style** so that they can provide appropriate references in their e-portfolios

The rubric and the results of the assessment are reproduced below (Tables 13.1 and 13.2).

At the conclusion of the course, the faculty member provided the librarian with the relevant parts of the student e-portfolios for assessment. In total, 39 submissions were received, and the results of the assessment were as follows:

Outcome 1—Effective Use of Appropriate Search Tools

The results here were somewhat mixed. Although only a handful of students did not provide any evidence at all of their search, a large proportion only achieved level 1, indicating a reliance on commercial search engines and Wikipedia. Despite being introduced to appropriate free and Library-subscribed sources for their e-portfolio assignment, only about half of the students actually used them to find their historical photograph. An even smaller number (about 40%) used them to find their political cartoon. Nevertheless, to this author even this level of use is anecdotally much higher than would be expected if no instruction at all had been provided. Of course, in the absence of a control group it is impossible to make such a claim definitively.

Outcome 2—Citation Accuracy

For those students who did provide a citation, most achieved quite highly. However, a dishearteningly large number of students (approximately 30% of the class) either did not provide a citation at all or thought it was acceptable to merely provide the URL to an online citation. These results demonstrate the importance of providing guidance on this basic academic practice in lower level undergraduate courses.

As they represent the outcomes of just one course at a single institution, the above results are fit mainly to inform improvements to this specific intervention, should it be repeated in the future. No generalizable conclusions are claimed, however it is hoped that the detailed description of the process and the discussion of the results that follows below will be informative to practitioners.

Discussion

This case study confirmed that portfolios are an effective means to assess student IL skills. The evidence is recorded and accessible. This is in contrast to many other librarian-led IL instruction sessions/programmes, where evidence of student

Table 13.1 Library assessment rubric for GCHC 1006

	No evidence	Level 1	Level 2	Level 3
Make effective use of appropriate search tools to find relevant primary sources	Did not provide a cartoon/photograph OR no indication of where it came from	Retrieved their cartoon/photograph from a non-scholarly source (e.g. Wikipedia, commercial website)	Retrieved their cartoon/photograph from an appropriate free scholarly source (e.g., academic/government website, etc.)	Retrieved their cartoon/photograph from an appropriate paid scholarly source (e.g. Library-subscribed database)
Cite primary sources accurately in APA style	Did not include a citation OR only provided a URL	Citations are missing key elements (e.g. author, title, date, etc.). Citation formatting includes many errors	Citations include most key elements (missing only one). Citation formatting includes many errors	Citations include all key elements. Citation formatting includes some errors

Table 13.2 Library assessment results for GCHC 1006

	No evidence	Level 1	Level 2	Level 3	Total
<i>Assessment piece 1: Historical photograph</i>					
Effective use of appropriate search tools	7 (18%)	12 (31%)	15 (38%)	5 (13%)	39 (100%)
Citation accuracy	12 (31%)	2 (5%)	9 (23%)	16 (41%)	39 (100%)
<i>Assessment piece 2: Political cartoon</i>					
Effective use of appropriate search tools	5 (13%)	18 (46%)	6 (15%)	10 (26%)	39 (100%)
Citation accuracy	11 (28%)	3 (8%)	15 (38%)	10 (26%)	39 (100%)

learning may go unrecorded. The portfolio assessment experience was also of higher quality relative to other approaches. As suggested by Sonley et al. (2007), the portfolio assessment was much more authentic compared to those with which the librarian had prior experience. Instead of artificially assessing IL learning in isolation, these skills were assessed in terms of how well they were applied by students in the completion of the e-portfolio exercise. Analysis of these results will inform potential improvements to the way that librarians support student e-portfolios.

Apart from the quality of the assessment, one must admit that the support provided by the librarian for the course (i.e. a one-shot instruction session plus an online course guide) was nothing out of the ordinary. However, the case study did provide a glimpse of a potential expanded role for librarians in supporting e-portfolios. As with all library sessions, students were encouraged to contact the librarian with questions. One of them did so, coming to see the librarian in person to seek some clarification on how to cite the primary source she had chosen. Later, however, she also sought advice from the librarian on how to embed an online video into her portfolio. The librarian was able to quickly offer assistance and resolve the student's problem. As faculty often highlight dealing with technical problems as a major hindrance in their adoption of e-portfolios, the expansion of the librarian's role into this type of basic technical assistance could help spur uptake of e-portfolios. It could be further speculated that having librarians rather than technical support staff take up this role would deliver certain advantages. For example, librarians have a better knowledge of pedagogy and are also more likely to be familiar with and invested in the course content. Expertise in information use and research combined with technical skills could allow librarians to deliver effective support for student e-portfolios. It should also be noted that librarians, as information professionals, should be able to handle the types of basic technical questions such as the one encountered in the case study.

Potential Improvements

Based on the results, and after reflecting on the overall experience, the following suggestions are made for improving and further developing the library's IL support for course-based student e-portfolios:

- **Encourage students to make more use of the Library support made available for the course.** Only three students returned to the librarian with questions after the face-to-face session. This is a relatively low number, given that around forty students in total were enrolled in the course. The results show that many students performed poorly on the assessed parts of their portfolios, and would have benefited from further help and advice from the librarian. More interactions could be encouraged by the librarian making greater use of the tools available to an embedded librarian. For example, an area of the course site's discussion forum could be used to inform students of common problems students are having with citations.
- **Truly embed the librarian into the assignment by providing them with direct access to student e-portfolios.** This would have made a practical improvement to the support provided by the librarian, as the faculty would not have needed to spend time extracting student work to send to the librarian for assessment. More importantly, this type of access could improve the quality of the feedback given to the students by providing the librarian with a more holistic overview of the content of the e-portfolios.

It should be noted that this suggestion is dependent on the e-portfolio platform supporting this type of access. The faculty in charge was prepared to offer such access to the librarian, but the e-portfolio platform used (Blackboard) did not allow for it.

- **Improve the quality of assessment used.** There is room for improvement in the way student IL abilities were assessed in this case study. The assessment of the second outcome (construction of correct APA-style citations for primary sources) was relatively robust as it was possible to unambiguously judge the quality of the citation presented. However, the approach used for the first outcome (make effective use of search tools) is less convincing. Essentially, the quality of the tool from which they found their primary source was used to infer student ability to search effectively. This was the best that could be done given the limited information available in the student's e-portfolio. However, a student who retrieved his/her source using a lower quality tool may have had good reasons for doing so. Perhaps it was the best tool available for their topic, and they evaluated the source for reliability before deciding to use it. In other words, they may have applied their IL skills in selecting the source. Unfortunately, there was no way to tell what the students were thinking when they selected sources for their e-portfolios.

One enhancement would be to ask students to write up a brief research log where they make explicit their reasons for using particular search tools and for

selecting their primary sources. This type of IL assessment can be an effective means for librarians to examine the student research process (Nutefall 2004).

Conclusion

This chapter has presented a detailed description and analysis of a librarian's support for an e-portfolio assignment, which arose from membership of the e-portfolios CoP. Drawing upon the library science literature, this discussion was informed by past work on the use of portfolios to enhance the teaching of IL skills, and also by the concept of embedded librarianship. The experience was certainly instructive for both the librarian and faculty member involved, and as the reflections above make clear, it is hoped that this approach can be further iterated and improved upon in future. The unique support for e-portfolios that librarians bring to the table as information professionals is particularly worth exploring further. By providing both IL skills expertise and technical support, the academic librarian is arguably an ideal partner for faculty members interested in adopting e-portfolios into their teaching. If this proves accurate, and assuming e-portfolios are widely adopted at an institution, another line of investigation will be determining how librarians can provide this level of support to a large number of courses in a sustainable manner.

References

- Association of College & Research Libraries. (2015). *Framework for information literacy for higher education*. <http://www.ala.org/acrl/standards/ilframework>. Accessed July 1, 2015
- Buzzetto-More, N. (2010). Assessing the efficacy and effectiveness of an e-portfolio used for summative assessment. *Interdiscip J E-Learning Learn Objects*, 6, 61–85. Retrieved from: <http://www.editlib.org/p/44774/>
- Carlson, J., & Kneale, R. (2011). Embedded librarianship in the research context: Navigating New Waters. *College & Research Libraries News*, 72, 167–170.
- Florea, M. (2008). Using WebCT, Wiki spaces, and E-portfolios for teaching and building information literacy skills. *Journal of Library Administration*, 48, 411–430. doi:10.1080/01930820802289466
- Fourie, I., & Van Niekerk, D. (1999). Using portfolio assessment in a module in research information skills. *Education for Information*, 17, 333–352.
- JISC. (2008). *Effective practice with E-Portfolios*. <http://www.jisc.ac.uk/media/documents/publications/effectivepracticeportfolios.pdf>. Accessed March 3, 2016.
- Kesselman, M. A., Watstein, S. B. (2009). Creating opportunities: Embedded librarians. *Journal of Library Administration*, 49, 383–400. doi:10.1080/01930820902832538
- Knapp, J. A., Rowland, N. J., & Charles, E. P. (2013). Retaining students by embedding librarians in undergraduate research experiences. *Reference Services Review*, 42, 129–147.
- Mery, Y., Newby, J., & Peng, K. (2012). Why one-shot information literacy sessions are not the future of instruction: A case for online credit courses. *College & Research Libraries*, 73, 366–378.

- Mounce, M. (2010). Working together: Academic librarians and faculty collaborating to improve students' information literacy skills: A literature review 2000–2009. *The Reference Librarian*, 51, 300–320. doi:[10.1080/02763877.2010.501420](https://doi.org/10.1080/02763877.2010.501420)
- Nutefall, J. (2004). Paper trail: One method of information literacy assessment. *Research Strategies*, 20, 89–98. doi:[10.1016/j.resstr.2005.07.004](https://doi.org/10.1016/j.resstr.2005.07.004)
- Ramsay, K. M., & Kinnie, J. (2006). The embedded librarian. *Library Journal*, 131, 34.
- Shumaker, D. (2009). Who let the librarians out? Embedded librarianship and the library manager. *Reference and User Services Quarterly*, 48, 239–257.
- Shumaker, D. (2012). Embedded librarians in higher education. *Embedded librarian: Innovative strategies for taking knowledge where it's needed* (pp. 43–64). Medford, NJ: Information Today Inc.
- Snavely, L. L., & Wright, C. A. (2003). Research portfolio use in undergraduate honors education: Assessment tool and model for future work. *The Journal of Academic Librarianship*, 29, 298–303. doi:[10.1016/S0099-1333\(03\)00069-7](https://doi.org/10.1016/S0099-1333(03)00069-7)
- Sonley, V., Turner, D., Myer, S., & Cotton, Y. (2007). Information literacy assessment by portfolio: a case study. *Reference Services Review*, 35, 41–70. doi:[10.1108/00907320710729355](https://doi.org/10.1108/00907320710729355)
- Sullivan, B. T., & Porter, K. L. (2016). From one-shot sessions to embedded librarian. *College & Research Libraries*, 77, 34–37.