Leonard, Elizabeth and McCaffrey, Erin. *Virtually Embedded: The Librarian in an Online Environment*. Chicago: Association of College and Research Libraries, 2014. 188 pp. ISBN 978-0-8389-8587-8. Softcover, $52.00

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We librarians have become creatively ubiquitous in our interpretations of information literacy. In reviewing the ACRL publication, *Virtually Embedded: The Librarian in an Online Environment*, there is an amusing sound bite in the foreword by David Shumaker upon reading "Another name for 'learning how to learn' is 'information literacy.'" Another recent title, *The New Science of Learning: How to Learn in Harmony with Your Brain,* that considers "learning how to learn" as belonging jointly to neuroscience and the more warm and fuzzy branches of pedagogy. Being that we are all in this education thing together, I am sure we will manage to split the difference. Besides, it is not long before librarians will integrate neuroscience into the world of information literacy, if it hasn't been done already.

What Shumaker notes most effectively in his foreword is that librarians have been forced to morph from reference/research assistance providers to information literacy instructors. Librarians continue to evolve in response to technology placing mountains of information at the fingertips and thumbs of students everywhere. They have responded, rightly so, by teaching their skills of information retrieval and evaluation within context. They are learning to "become embedded in the mainstream instruction work of our institutions, where they can teach information literacy as an integrated element of the academic program."

As the instructor, for the past three years, of a 100% online credit undergraduate research skills course, I understand well the importance of contextual online library

instruction. Although I am beyond the partnership status of being an embedded librarian in someone else's university course, I feel as though my course is silently embedded de facto with every course on campus that requires undergraduate research and papers; it is just a matter of whether or not a student's major requires my course.

With the advent of technological alternatives to traditional education, like MOOCs versus face-to-face classrooms, past educational models are being revisited and re-visioned. Today's academic librarians need to position themselves even more as partners with faculty and administrators to secure their online, virtual roles in educating today's students. Our professional skills are vital to prepare today's learners to become lifelong learners, an ability that will be crucial to their surviving and thriving in the future. Thus, *Virtually Embedded* makes a foray into this brave new educational world by giving librarians a comprehensive look at online embedded librarianship in both scope and environment.

As the editors, Leonard and McCaffrey, note in their introduction, their book is a casebook of twelve chapters that discuss twelve ways in which "academic librarians have embedded themselves virtually in online environments, considering the evolution of the embedded librarian from physical to virtual classrooms and the development and implementation of unique programs both in and out of the classroom as well as how to scale embedded programs." The editors have placed the chapters into four thematic parts.

Part 1 is titled "The Evolution of Embedded Librarianship," containing two chapters that set the stage in both historical and current practice of the subject. Chapter 1 titled "Online Embedded Librarians: A Review and Overview" is an excellent literature

review of various aspects of virtual embedded librarianship such as the background,

current environment, best practices, assessment, and future projections of this burgeoning

service. Chapter 2 "Embedded Librarians: Evolving and Expanding in Higher Education"

is also broad in scope but serves as more of a manual on creating a successful embedded

librarian programs at your institution. A very thorough chapter, it even includes

questions that academic librarians should ask themselves when planning and

implementing an embedded program, as well as a short but relevant checklist to guide

them.

Part 2 of *Virtually Embedded,* titled "Developing Programs in the Online

Embedded Environment," demonstrates how academic librarians in four different

institutions targeted their virtual embedded offerings to specific online student

communities, such as an online doctoral students, a military distance education program,

an online business course, and to distance education students at the Open Polytechnic of

New Zealand, an institution providing distance education for the past fifty years. The

chapter entitled "Sustainable Embedded Librarianship to Foster Research Skills in an

Online Graduate Program" is laudably detailed and useful. The authors note that the

information fluency of doctoral students is greatly overestimated by both the students and

their faculty. To set the stage, they cite Rosemary Green's "Information Illiteracy:

Examining Our Assumptions" from the *Journal of Academic Librarianship* (2010),

which asserts there is often not much difference in the information literacy skills between

undergraduates and new doctoral students. The chapter discusses the design of the

embedded librarians' project in the online doctoral program and contains survey results

obtained at different points in the program; it serves as fundamental reading for academic

librarians interested in embedding with any graduate cohort.

Another chapter, "Embedded Librarians: Evolving and Expanding in Higher Education," has a section that compares both similarities and differences between embedded and reference librarians. One of the main differences is that embedded librarians must adopt proactive approaches that "identify and address anticipated student needs and questions," whereas a reference librarian needs to be reactive to a user's point of need. Thus, Part 3 of *Virtually Embedded* provides two chapters covering how embedded librarians must reach out to faculty to collaborate and "identify institutional allies." One approach to collaborate with faculty, despite systemic roadblocks to integrate information literacy (IL) in the curriculum, is to turn over the reins of IL to non-library faculty by "teaching the teacher" how to provide IL to their students via an e-learning program. "Avoiding Curricular Combat Fatigue: Embedding Librarians in E-Learning to Teach the Teacher" discusses why and how this might be done at an institution. Teaching IL strategies to faculty is more effective than "teaching individual sections of a class in one-shot IL sessions," because it avoids the traditional constraints of "time, space, and manpower that can hinder a successful IL program."

The other approach found in Part 3, regarding advocacy of embedded librarians within the academy, can be found in Chapter 8, "Not Just an Afterthought: Involving Librarians in the Instructional Design Process." Although librarian involvement in course design is still not commonplace, the authors note that it is a needed collaboration due to the fact that librarians "know how to use their resources to provide opportunities for critical thinking, evidence-based practice, and performance-based assessment." The chapter summarizes past investigation of librarians and instructional design (ID),

referencing the work of Bell and Shank, before it segues into the less traveled areas of ID and embedded librarianship. The authors explain, in the last third of the chapter, the efficacy of ACRL's *Standards for Distance Learning Library Services* because its inclusion of IL outcomes makes it "easier to implement the ACRL standards into distance education." Examples of embedding librarians successfully into the design process is shown by noting two different approaches in nursing programs: a library orientation program embedded within the learning management system (LMS) shell of a nursing course, and the fruitful partnership in a separate nursing informatics course between a librarian and a faculty member. In both instances, faculty noticed the value of embedding a librarian in their course design as exemplified by higher quality assignments and more student engagement.

Part 4, "Embedded in the Bigger Picture–Scaling Online Embedded Librarianship," advises academic librarians in four chapters how to thrive once they've established a role in the learning ecology of their university's online environment. Three of these four chapters emphasize how to "expand virtually embedded library services at their institutions without adding greatly to the workload of their already busy librarians." The chapters include the experiences of San Jose State University School of Library and Information Sciences students who were embedded to provide library support in selected courses; a study that explores the value of embedding "low-touch" (reusable, transferrable) library widgets in the LMS at Portland State University; and last how librarians, who were not expert coders, "came up with a script that makes it easy for students to find course- and subject-specific research support," by linking LibGuides to the Blackboard LMS at Texas A&M University-San Antonio.

The final chapter of Part 4, and of the book itself, discusses the phenomenon of massive open online courses (MOOCs). The editors of *Virtually Embedded* authored this chapter noting that "no book on librarianship and embedding into online learning would be complete without a discussion of the massive open online course (MOOC)." Indeed, they acknowledge the dearth of library literature that examines the "connections between academic libraries and MOOCs," and that existing literature is at a stage where it's "'expository rather than analytical.'" Even while this fledgling form of pedagogy is still discovering itself, the chapter provides a literature review, defines MOOCs, and discusses their history. It offers suggestions as to how librarians, at this early crucial juncture, can best fill the needs, navigate the details, and reach out to a nontraditional student population. That's what librarians continue to do best year after year: work hard and work smart as they redefine themselves to address their users' changing informational needs and contribute to their growth as lifelong learners. *Virtually Embedded: The Librarian in an Online Environment* is a sound addition to any academic library's collection on librarianship and education.