intended audience for the book, *The Student's Survival Guide to Research* has the potential to supplement the librarian's knowledge about the broader expectations facing new college students or first-time researchers.

Monty L. McAdoo's beginner's research manual is a step-by-step journey from receiving a first writing assignment to composing a paper. While it follows the general outline of other research handbooks, the book reflects McAdoo's background as a research and instruction librarian in its nuanced consideration of library-related issues. *The Student's Survival Guide to Research* offers tips for students, definitions, and helpful models for thinking about research as a process, while its ability to convey these ideas in a concise and memorable way varies from chapter to chapter. The book's blending of library skills and broader lessons about academic preparedness works well and reads easily.—*Michael R. Mitchell, Bethel University*

Theresa Willingham and Jeroen De Boer. *Makerspaces in Libraries*. Library Technology Essentials; 4. Ellyssa Kroski, ed. Lanham: Rowman & Littlefield, 2015. 142p. Paper, $45.00 (ISBN 978-1-4422-5300-1). OCLC: 906121721.

Makerspaces in Libraries is not the first, nor will it be the last, book on this complex subject; however, it is a *good* book: substantial, thorough though not exhaustive, approachable, and concise. This blend of professional essay, descriptive narrative, and how-to is recommended reading for anyone whose ideas and opinions on this subject are still forming and goes some way toward filling a gap in the published literature for those whose institutions are preparing to establish a makerspace in their building or on their campus.

The authors begin the book with a chapter giving a brief history of makerspaces, foregrounding the natural affinity between the makerspace concept and the library mission. The next two chapters cover many of the most pressing practical considerations. Subsequent chapters focus on case studies, project ideas, tips and tricks, and future trends. The book is structured to be read beginning to end in a linear manner, although once read it is usable as a reference and planning tool. While the index coverage is limited, after one read-through of the text it is a small matter to locate each major topic again. Chapter endnotes provide the reader with additional information as well as source citations, and there is a concentrated list of "further reading" following the book's conclusion. Those sources include books and articles, as well as websites providing more library-specific background on makerspace, in addition to sites relevant to the entrepreneurial "maker."

Chapter 2, "Getting Started with Makerspaces," is one of the book's stronger chapters. It provides, among other things, a solid analysis of considerations necessary to the process of planning a makerspace. What makes it especially useful, and rare in the makerspace literature to date, is that it addresses directly the minimum physical space required for a functional makerspace and supplies sample groundplans from two real-world makerspace builds. While some of the information given is specific to fixed-space planning, pop-up or mobile programming will also require estimation of space needed, so it is useful for that as well. This section of the chapter also accounts for the intersecting requirements of comfort and safety, spelling out the square footage needed for engagement in table-based maker activities, safe operation of equipment, and emergency aisles. With very little effort, significant details from this chapter could be abstracted into a rubric or checklist to inform productive consultation with members of the library's community as well as for organization-internal implementation planning.

The library examples and case studies presented in chapter 4 are intended "to glean best practices and recommendations from librarians experienced in makerspace […]

development and operation." (xiii) These examples and case studies make explicit the real implications to a library of committing to engaging its community via a makerspace or maker programming. Only one of the case studies included is specific to the university library setting, and that example includes no specific discussion of how alignments with curriculum might be crafted to gain and retain an informed commitment from an institution's administration. However, despite this relative lack of specificity to current reality in U.S. academia, all of the examples included are worth reading for what they may have in common with the reader's institution, and perhaps most especially for what they have in common with each other (hint: nearly all say, "Start small.")

Each of the book's authors brings a unique perspective to the makerspace discussion. Theresa Willingham is a U.S.-based writer/creative space designer, and Jeroen De Boer is a new media specialist and chairman of the FabLab Benelux Foundation. Their treatment of the subject is practical in the extreme; and while their work deals largely with the United States, it also serves to extend the scope of our thinking to the state of the shared makerspace concept in the Benelux countries, the United Kingdom, and Scandinavia.

One minor criticism of the book is that it does not include even rudimentary analyses to assist either with planning makerspace hours of function or operation or of staffing levels and types. Optimization of hours and staffing are strikingly critical to the short-term success, as well as to the sustainability, of a makerspace program. Quotations from some of the institutions included in chapter 4, "Library Examples and Case Studies," remark on this superficially, and the need to communicate with the library's user base is emphasized throughout; but some explicit basis for thinking about these questions, analogous to the chapter 2 discussion of physical space, would have made a successful book even stronger with only minimal addition to the overall page count.

It is cliché, yet nonetheless true, to state that "change" in the librarianship profession may in the end be the one thing that may be counted on. Willingham and De Boer themselves invoke Ranganathan's 5th law: "The library is a growing organism." Like the library itself, the library makerspace is also certain to change in its substance over time. Even contemporaneously, it adheres to no single formula. It will remain conceptually complex and retain many moving parts, has yet to reach full maturity, and in the academic library world the saturation point is only the tiniest speck on the distant horizon, if it is on the horizon at all. Interest will continue to grow, and the number of different forms these spaces take will continue to increase. Given the nature of this book's content, it will have a shelf life and the *best* time to read it may be now; but the advice it gives is resilient. *Makerspaces in Libraries* promises to remain interesting and useful for some time to come.—*Mary E. O'Dea, St. Cloud State University*