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Collecting to the Core-Educational Technology

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Collecting to the Core — Educational Technology

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Column Editor's Note: The "Collecting to the Core" column highlights monographic works that are essential to the academic library within a particular discipline, inspired by the *Resources for College Libraries* bibliography (online at <http://www.rclweb.net>). In each essay, subject specialists introduce and explain the classic titles and topics that continue to remain relevant to the undergraduate curriculum and library collection. Disciplinary trends may shift, but some classics never go out of style. — AD

Anyone charged with building a library collection in educational technology is naturally interested in keeping abreast of new technologies and current best practices in distance education and e-learning. Indeed, the idea of focusing on a core collection in the field is not immediately compelling. Innovative concepts and new tools are both exciting and vitally important for bibliographers as well as for the instructors who rely on library holdings. Rapidly developing areas often produce a disproportionate number of new publications that may overwhelm a selector. Some topics that were revolutionary only a few years ago become outdated and unnecessary. The need to avoid dispensing misinformation or overrepresenting discredited practices and obsolete technologies makes frequent weeding a necessary chore. However, weeding is difficult in large part because it demands that the selector know precisely what to retain among a wide range of older titles. For this reason, awareness of the core titles is an invaluable asset. In my role as coeditor for the education section of *Resources for College Libraries*, I judiciously add and thoughtfully subtract from the educational technology selections on an ongoing basis, and am constantly reevaluating and assessing core titles. For this essay I identify some of the central titles that continue to be valuable in educational technology — the core of the core, so to speak — and illustrate why these titles aid in day-to-day selection decisions, as well as constitute a solid subject collection in a constantly evolving subfield.

Books that remain vital long past the original publication date delineate the basis of a discipline. **L. Paul Saettler's** *The Evolution of American Educational Technology* is one such title.¹ Published in 1990, it is generally acknowledged to have superseded **Saettler's** earlier *A History of Instructional Technology*.² Weighing in at over 500 pages (the table of contents alone is thirteen pages long), *The Evolution of American Educational Technology* comprehensively addresses what **Saettler** calls "the process of educational technology."³ The reader grasps the breadth of that statement as **Saettler** stresses that "distinction must always be made between the process of developing a

technology of education and the use of certain products or media within a particular technology of instruction....Over the centuries, each significant shift in educational values, goals or objectives has led to diverse technologies of instruction."⁴ This broad agenda does not mean that the work centers on educational theory, but that **Saettler** includes theories of learning, behavior, and communications alongside the evolution of technologies incorporated into classroom instruction. **Saettler's** discussion of **Maria Montessori** is a good example: he devotes attention to her educational theories and their American adoption, then moves on to show (the book is rich in illustration) some of the technologies she developed and discusses how newer technologies might complement or supplant them in a modern classroom.⁵ **Saettler's** historical investigation starts with the **Sophists**, then proceeds quickly to the 1880s where it slows to detail more recent theorists like **Pestalozzi**, **Froebel**, **Thorndike**, **Dewey**, and many more, always centering on the technology that connected theory with practice. While parts of *The Evolution of American Educational Technology* are outdated, like the appendix of doctoral programs or the final chapters on "state of the art" 1990s-era technologies, the work remains important because it provides a historical overview that is still useful and ties theory intimately to practice.

Another scholar concerned with the intersection of educational theory and classroom technologies is **Larry Cuban**, emeritus professor of education at **Stanford**. Unlike **Saettler**, who examines theory and technology together, **Cuban** details their disconnect. Few of the technologies that have impacted education, from the printing press to the tablet computer, were developed solely as educational tools; devices are often introduced to students prior to demonstrated educational value. In his 1986 work, *Teachers and Machines: The Classroom Use of Technology since 1920*, **Cuban** focuses on machinery and software used in educational settings before they were proven effective.⁶ The book is much shorter than **Saettler's** and is punctuated with quotes and anecdotes forecasting the demise of the latest electronic device — be it moving picture, television, or computer — and its failure to transform teaching. **Cuban** is thorough and persuasive in discussing some of the impediments to implementation: the gap between original product launch and fully developed tools suitable for the classroom, training needs, and financial considerations, as well as institutional cultures that may resist changes to instructional practices in the average school district. He also explores the

potential disadvantages of using computers for instruction: weakening of interpersonal bonds, decreased time for socialization, and an emphasis on rote learning for standardized tests. In 2001 **Cuban** followed this treatise with *Oversold and Underused: Computers in the Classroom*.⁷ Here he gives a brief account of American schooling and the many innovations that have changed classroom practice over the years. **Cuban** does not see the tools of instruction as "technologies" the way that **Saettler** does; his views are more traditional, emphasizing how changing needs and historical contexts impact views on academic learning.

Cuban argues that American society has shifted from expecting schools to prepare students for "social, civic, economic, and individualistic" roles to building "human capital" for a competitive world, and he makes a case for the enduring importance of civic and social educational foundations.⁸

Another highly regarded book that brings a more international focus to the topic is *The Use of Instructional Technology in Schools: Lessons to Be Learned*.⁹ Authors **Mal Lee** and **Arthur Winzenried** strongly advocate technology in schools and provide a history that highlights national initiatives while acknowledging the role of tech marketing and sales, especially in some of the failed efforts. Based in Australia, the authors provide a few global examples, but the focus is on the English-speaking world. Like **Cuban**, they see instructional technology as a way to "enhance national productivity in knowledge-based economies" but do not share his concern that doing so will weaken the traditionally civic aims of schooling.¹⁰ One important tool they depict is the interactive white board, which could be integrated easily into existing classroom practice and could serve as a tipping point around the utility of electronics in the classroom for many educators.

Moving beyond the basic question of *why* technology is used in the classroom, there are a handful of well-regarded texts dealing with *how* it is used. Practical or how-to books get a bit of a bad rap since explaining how to accomplish a task, even the most trivial, can be an involved process. (Consider how seemingly-simple things like assembly instructions are almost universally criticized.) Additionally, the fact that many how-to manuals are not founded in reliable expertise but mostly on personal experience leads some to disparage such "cookbook" formulae. But a well-grounded, practical book can be a real help to the novice instructor, providing insightful examples and

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validation. Unlike the texts discussed above, it is important that practical titles be updated regularly to maintain their utility.

Now in its fourth edition, **Ruth Clark** and **Richard E. Mayer's** *E-Learning and the Science of Instruction* is one such title.¹¹ Focused broadly on instruction and not aimed exclusively at school settings, this work is especially useful because it is aimed at non-specialists and offers a solid, basic introduction to demonstrated electronic instructional techniques. **Clark** and **Mayer** begin by discussing the strength of evidence-based practices, then devote the bulk of the book to an in-depth investigation of successful techniques. These include instructions for using graphics with words, whether written or spoken; being sure that graphic elements align with verbal and written content; refraining from redundancy, such as a presenter reading text as it appears on the screen; and avoiding verbosity or lessons cluttered with extraneous materials. The book expands to address the structure of the learning environment, such as how much control learners need for success and the use of collaborative learning and games.

Collectors will also want to have some titles specific to school and classroom use. For teachers looking to introduce technology into a traditional classroom, **Karen Ivers's** *A Teacher's Guide to Using Technology in the Classroom* is a good choice.¹² For those developing an online course, **Susan Ko** and **Steve Rossen's** *Teaching Online: A Practical Guide* is helpful and available this year in a new edition.¹³ Both are organized in a logical,

task-by-task manner and have been updated by the authors with substantive new editions as needed. **Ivers** starts with the basics, encouraging teachers to use the internet for their own professional development and as a way to become comfortable with both computer resources and hardware. In every chapter she provides numerous resource suggestions — programs, websites, and school personnel — that can help with implementation. She contextualizes recommendations by employing scenarios demonstrating effective technology use and supplements everything with supporting activities and references. The book covers special needs learners as well as other student populations and additionally offers suggestions for classroom management and assessment. **Ko** and **Rossen** focus on the development of online and blended courses in higher education, although some of the content would no doubt be useful in other educational settings. Like **Ivers**, **Ko** and **Rossen** often begin their discussions with a specific scenario to help illustrate the ensuing points. The book is not merely about instruction techniques; it covers institutional resources, classroom management, student problems specific to online courses, copyright concerns, testing, and assessment. This book has fewer resource suggestions than **Ivers's** work, a natural consequence of the fact that it is addressed to subject specialists teaching at the college level.

A good educational technology collection will have many books about the latest and greatest innovations being developed for or implemented in classrooms. Churn in the collection is unavoidable as the nature of electronic development means published materials go out of date quickly. With a basis in research and a solid historical context, these seven titles have

had staying power and should prove essential to any academic collection. 🌿

Endnotes

1. **Saettler, L. Paul.** *The Evolution of American Educational Technology.* Englewood, CO: Libraries Unlimited, 1990.*
 2. **Saettler, L. Paul.** *A History of Instructional Technology.* New York: McGraw-Hill, 1968.
 3. *The Evolution of American Educational Technology,* xxvii.
 4. *Ibid.*, 4.
 5. *Ibid.*, 61–4.
 6. **Cuban, Larry.** *Teachers and Machines: The Classroom Use of Technology since 1920.* New York: Teachers College Press, 1986.*
 7. **Cuban, Larry.** *Oversold and Underused: Computers in the Classroom.* Cambridge, MA: Harvard University Press, 2001.*
 8. *Ibid.*, 9–10.
 9. **Lee, Mal,** and **Arthur Winzenried.** *The Use of Instructional Technology in Schools: Lessons to Be Learned.* Camberwell, Vic.: ACER Press, 2009.*
 10. *Ibid.*, 5.
 11. **Clark, Ruth,** and **Richard E. Mayer.** *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning,* 4th ed. Hoboken, NJ: Wiley, 2016.*
 12. **Ivers, Karen S.** *A Teacher's Guide to Using Technology in the Classroom,* 2nd ed. Westport, CT: Libraries Unlimited, 2009.*
 13. **Ko, Susan,** and **Steve Rossen.** *Teaching Online: A Practical Guide,* 4th ed. London: Routledge, 2017.*
- *Editor's note: An asterisk (*) denotes a title selected for *Resources for College Libraries*.

Oregon Trails — Muir and Muir About Book-Collecting

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There are many useful books about book-collecting, some better than others, but all worth reading or at least skimming if you are a book-collector or think that you might want to become one. I have a small but representative collection of books about books and bibliography (two shelves and growing) to share with you, *ad seriatim* in my column in hope that I will inspire some reader(s) to dip into one or two to see what they are all about. If on the fence, you may be inspired or persuaded that book-collecting, even on a modest scale, might be fun. To decide what to collect and how to go about it is what **Percy Muir's** books are all about.

Percy H. Muir (1894-1979) is a name that features prominently in the literature of book-collecting. He served as the president of the **Antiquarian Booksellers' Association** and was named a **Life President of Honor**. He was also president of the **International League of Antiquar-**



ian Booksellers and was both a book-seller and a collector, despite having declared in writing, "Make up your mind whether you intend to be a book-collector or a book-dealer; you cannot be both." Of course, you can but what he is writing about is book-collecting as an investment. Also in that context, he wrote, "Well, to quote a fashionable precedent, it depends what you mean by book-collecting and what you mean by investment." While admitting that over time a collection may gain in value beyond the combined purchase price, that is not why you should be collecting, you should be collecting books for the sheer pleasure of building that collection, book by book. He seems on the fence about all collections gaining in value. He assumes that the as yet ungathered collection will fall within certain categories that he was familiar with during the time in which he lived.

Here is what he wrote in *Book-Collecting as a Hobby in a Series of Letters to Every-*

man (Gramol Publications Ltd., London and Chesham, [1944]). "Reckon the value of your collection rather in terms of the pleasure you will derive from it than in terms of its rising cash value. Do not be always thinking what your collection would be worth if you turned it into cash to-morrow. That way lies trouble. Do not misunderstand me. The collective value of our library will always increase beyond the sum of the individual prices you have paid for the books in it, and the proportion of increase will rise steeply as the collection grows in size and importance." (p.8). The use of always in this context makes me nervous as I look at my author collections. I don't intend to part with them but part we must one day and when my books come to be sold, they will be sold at a wholesale price, not retail, and I doubt very much that the sum they bring will be anything near the collective sum that I have paid. But don't use me as an example, read **Muir** and decide for yourself.

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