

FM Scholarship in the University Community: Building on Boyer and Schön

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Abstract

Facility management (FM) is a relatively new profession. Although many of the activities associated with FM have been performed for centuries, the professionalization of those activities began in earnest in the 1960s. Shortly thereafter, academic programs centered on FM were created, many of which were later accredited. The FM Accreditation Commission (FMAC) currently lists 30 accredited FM programs, 10 of which offer graduate-level work.

Given the relative newness of the FM profession, now is an excellent time to question the position of FM scholarship in the university community. This paper starts with a historical examination of Ernest L. Boyer's seminal report *Scholarship Reconsidered: Priorities of the Professorate*, in which Boyer calls for an expanded concept of legitimate university scholarship. Next, this paper examines Donald Schön's *The Reflective Practitioner*, in which Schön argues that the "technical rationality" of much university scholarship is not the best way to understand the work of a professional, whose work is better explained by the messier and more fluid concepts of "knowing-in-action" and "reflection-in-action." Building on Boyer and Schön, this paper looks at two case studies of outliers in the modern research university—architecture and business management—and examines the place of their scholarship in the university community. Finally, this paper argues that a discipline-appropriate epistemology—or framework of knowledge—would best serve FM faculty and professionals, but FM faculty will have to fight for recognition of their epistemology because it is not currently the dominant mode of thought in academe.

Keywords: Boyer, facility management, reflective practice, Schön, scholarship

Problem

Scholarship Reconsidered

An exposition of the history of scholarship is beyond the scope of this paper. However, for the purpose of transparency, this paper argues that technical rationality was the dominant and most respected mode of research during the course of the 20th century. Grounded in objectivist philosophy and often identified with the scientific method, technical rationality holds that "[a]ll meaningful disagreements are resolvable, at least in principle, by reference to the facts" (Schön 1987, 36). This runs counter to the experience of the practitioner, whose viewpoint is often informed by constructivist philosophy, which holds that multiple correct solutions may exist depending on how the problem is framed (Schön 1987, 36).

Not every 20th century scholar was satisfied with the hegemony of technical rationality, however. One of the most important and influential critics of the state of university research was Ernest L. Boyer.

A life-long educator, Boyer held numerous positions in academe. He served as the chancellor of the State University of New York system, was appointed the United States Commissioner of Education by President Jimmy Carter in 1977, and was president of the Carnegie Foundation for the Advancement of Teaching from 1979 until his death in 1995. Boyer published several key reports, including *The Undergraduate Experience in America*, *Scholarship Reconsidered: Priorities of the Professoriate*, and *Building Community: A New Future for Architecture Education and Practice*, and his influence is still felt today, 21 years after his untimely death.

Examining the state of university education in 1990, Ernest L. Boyer wrote, “Several years ago...it became increasingly clear that one of the most crucial issues—the one that goes to the core of academic life—relates to the meaning of scholarship itself” (Boyer 1990, 1). Boyer found the narrow definition of scholarship to be stifling and contrary to the idea of a university as a place of learning. Proposing a broader concept of scholarship, Boyer wrote:

Surely, scholarship means engaging in original research. But the work of the scholar also means stepping back from one’s investigation, looking for connections, building bridges between theory and practice, and communicating one’s knowledge effectively to students. (Boyer 1990, 16)

Boyer’s taxonomy

In *Scholarship Reconsidered*, Boyer started with traditional research, which he labeled the scholarship of discovery. This category of scholarship “comes closest to what is meant when academics speak of ‘research’” (Boyer 1990, 17). The scholarship of discovery involves the expansion of human knowledge. Examples of this type of research include an astrophysicist searching for the origin of the universe, a historian translating a recently-discovered ancient text, or a microbiologist investigating disease vectors.

In addition to tradition research, Boyer envisioned three additional categories of scholarship, which are the scholarship of integration, the scholarship of application, and the scholarship of teaching.

The scholarship of integration gives “meaning to isolated facts, putting them in perspective” (Boyer 1990, 18). The scholarship of integration recognizes that much of the work represented by basic research—the scholarship of discovery—is performed by ever more specialized experts. In one of examples of basic research listed above, a microbiologist investigating disease vectors may focus on a virus and its insect carriers. It is quite likely, however, that such specialized research would omit critical aspects of a related epidemic, including sociological and economic factors. Thus, another researcher could bring together disparate elements of basic research to create of more holistic view of the outbreak. Such a project would represent the scholarship of integration.

The scholarship of application involves a scholar who asks “How can knowledge be responsibly applied to consequential problems?” and “Can social problems *themselves* define an agenda for scholarly investigation?” (Boyer 1990, 21). Boyer is careful to say that the scholarship of application is not simply “service,” as that term is used to describe a wide range of activities, many of which lack a scholarly component (Boyer 1990, 22). However, opportunities do exist that allow a scholar to solve problems *and* generate knowledge. Boyer identified “creating an architectural design” as one possible example of the scholarship of application (Boyer 1990, 23); by extension, one could easily argue that the space planning activities of a facility manager provide another example.

The scholarship of teaching is based on the idea that the “work of the professor becomes consequential only as it is understood by others” (Boyer 1990, 23). Later rebranded the scholarship of teaching and learning (SOTL), the scholarship of teaching is perhaps the most widely accepted of Boyer’s three new categories of scholarship, supported by an academic society, the International Society for the Scholarship of Teaching & Learning (ISSOTL), founded in 2004, and a journal, the *Journal of the Scholarship of Teaching and Learning* (JoSoTL), founded in 2001. As conceived by Boyer, the scholarship of teaching requires more than the routine preparation that all teachers perform—rather, the scholarship of teaching requires the thoughtful examination and dissemination of teaching methods, models, and projects.

Naturally, an expansion of the idea of what constitutes scholarship met with resistance, including critiques from those who feared the “high schoolization of scholarship” (Diamond and Adam 1995, 5). Answering that kind of critique by examining the common threads of a diverse range of scholarship, Glassick et al. found that legitimate scholarship has the following six components:

1. Clear goals
2. Adequate preparation
3. Appropriate methods
4. Significant results
5. Effective presentation
6. Reflective critique (Glassick, Huber and Maeroff, 23-25)

The work of Glassick et al. argues that the concept of scholarship can be expanded without the quality of scholarship being diminished.

Response to Boyer

Scholarship Reconsidered is one of the most referenced scholarly works of its type—particularly in the decade following its publication (Braxton, Luckey and Helland 2002, 19).

The response to Boyer can be placed in several broad categories. Many scholars look at *Scholarship Reconsidered* as a seminal work and attempt to expand and refine it; important works in this mode include *The Disciplines Speak: Rewarding the Scholarly, Professional, and Creative Work of Faculty*, published in 1995, and *Scholarship Assessed: Evaluation of the Professoriate*, published in 1997. Other scholars examined difficulties with implementing

Boyer's ideas, which typically focused on entrenched university power structures (Chandler and Davis 1998). Looking at the unique needs of art and architecture schools and finding other opportunities for an even wider view of scholarship, this author proposed an expansion of Boyer's categories of scholarship from four to seven (Cospers 2015).

One of the most intriguing responses to *Scholarship Reconsidered* is Donald Schön's 1995 article "The new scholarship requires a new epistemology" published in the journal *Change*. A professor of Urban Studies and Education at the Massachusetts Institute of Technology, Schön worked as a teacher, researcher, and consultant, examining the ways that professionals learn and perform their tasks.

Schön saw promise in Boyer's taxonomy of scholarship, but he also saw structural challenges embedded in the modern research university. About these challenges Schön wrote:

If we intend to pursue the "new forms of scholarship" that Ernest Boyer presents in his *Scholarship Reconsidered*, we cannot avoid questions of epistemology, since the new forms of scholarship he describes challenge the epistemology built into the modern research university. (Schön 1995, 27)

According to Schön, the addition of professional schools to the traditional university, with its liberal arts and hard science focus, led to a "radical separation between research and practice" because research in the traditional university courses was isolated from the messiness inherent in professional practice (Schön 1995, 29). Looking at the idea of addressing problems that are either A) narrow, focused, but manageable or B) broad, realistic, but uncontrollable, Schön wrote:

The dilemma depends, I believe, upon a particular epistemology built into the modern research university, and, along with this, on our discovery of the increasing salience of certain "indeterminate zones" of practice—uncertainty, complexity, uniqueness, conflict—which fall outside the categories of that epistemology. (Schön 1995, 28)

The messiness—the "uncertainty, complexity, uniqueness, conflict"—of practice stands in stark contrast to the precision of what Schön calls "technical rationality," a kind of practice that is "instrumental, consisting in adjusting technical means to ends that are clear, fixed, and internally consistent" (Schön 1995, 29).

Schön argues that technical rationality works in clean, laboratory conditions but has limited value in messy, complex, real-world scenarios. For example, civil engineers can use the technical rationality of their education to figure out *how* to build, but they are less well-equipped to argue with absolute certainty about *why* or even *if* something should be built (Schön 1987, 4). The latter two questions involve "a complex and ill-defined mélange of topographical, financial, economic, environmental, and political factors" that technical rationality is poorly situated to address (Schön 1987, 4).

This is not to say that technical rationality does not have its place. Schön argues that technical rationality "becomes professional when it is based on the science or systematic knowledge

produced by the schools of higher learning” (Schön 1995, 29). Many in the architecture and facility management fields argue that more, not less, technical rationality is needed—specifically new knowledge in the field known broadly as “building science.” As concerns about global climate change mount and client expectations of performance increase, architects and facility managers will face an increasing number of measurable markers of performance. Likewise, the emergence of big data—the ability to see formerly invisible trends with the use of massive data sets—promises to change the design and management of future facilities.

Despite the ascension of technical rationality in the forms of building science and big data, this author believes (and has argued before) that an expert is needed to make certain critical judgments (Cosper 2016). In Schön’s terms, this expert is the reflective practitioner.

Case Studies

Architecture

In the university community, architecture is facility management’s older cousin. Both disciplines address the built environment, and both disciplines require practitioners to address difficult, multivariate problems. Although architecture is identified as the more artistically and aesthetically oriented of the two programs, facility management provides plenty of opportunities for creativity, particularly for those facility managers who work on space planning problems.

Although university programs in architecture are nearly 150 years old—the department of architecture at MIT was founded in 1868—architectural scholarship is not generally well-respected in the university community. As Donald Schön observed, “The greater one’s proximity to basic science, as a rule, the higher one’s academic status” (Schön 1987, 9). Architecture, as a discipline, is not terribly close to basic science, save the aforementioned field of building science. Summarizing architecture’s position, Schön wrote:

Architecture is an established professional charged with important social functions, but it is also a fine art; and the arts tend to sit uneasily in the contemporary research university. Although some schools of architecture are free-standing institutions, most exist within a university, where they tend to be marginal, isolated, and of dubious status. (Schön 1987, 18)

Schön is not alone in his observations of the lowly reputation of architecture research. In their 1996 report on the overall state of architectural education, Ernest Boyer and Lee Mitgang write the following:

As W. Cecil Steward, dean of the University of Nebraska’s College of Architecture, has noted, many university administrators, especially those on research-driven campuses, tend to see the architecture field as splintered and disputatious, and the design orientation of architecture faculty places architecture among “the ‘soft,’ ‘fuzzy,’ and undervalued disciplines in a comprehensive university.” (Boyer and Mitgang 1996, 9)

Henry N. Cobb, chairman of Harvard’s Department of Architecture from 1980-85, said that architecture is “a kind of ‘Pig-Pen’ character in the university family—that is to say disreputable and more or less useless, but to be tolerated with appropriate condescension and frequent

expressions of dismay” (Boyer and Mitgang 1996, 9-10). As far back as a 1932, a report by the Association of Collegiate Schools of Architecture (ACSA) noted the lack of “real research” in architecture programs (Boyer and Mitgang 1996, 20).

Despite the less-than-sterling reputation of architectural scholarship, architectural education is often considered first rate. In *Educating the Reflective Practitioner*, Donald Schön argued that architectural education is the paragon of professional education and is well-suited for teaching students about the messiness of professional practice.

To understand Schön’s concept of the reflective practitioner, one must understand key terms including “knowing-in-action,” “reflection-in-action,” and “reflecting on reflection-in-action.”

Knowing-in-action is the “spontaneous, skillful execution of [a] performance” where “the knowing is *in* the action” (Schön 1987, 25). A bicyclist who makes countless instantaneous adjustments to keep the bicycle upright is demonstrating knowing-in-action (Schön 1987, 25). Likewise, an architect who assembles a series of spaces on a floor plan—rotating, stretching, and re-assembling them so they work together—is demonstrating knowing-in-action.

Reflection-in-action occurs when the “familiar routine” of knowing-in-action is interrupted by a “surprise” moment—whether that surprise is good, ill, or neutral (Schön 1987, 26). For example, a bicyclist hits a pothole—a new experience—and either stays on course or crashes the bicycle. Either way, the bicyclist has an opportunity for reflection-in-action to determine what was done correctly (or incorrectly) and, more importantly, what needs to happen the next time a pothole is encountered. Similarly, an architect working on a floor plan may discover that a single-loaded corridor provides an opportunity to provide daylight and fresh air to the corridor. This “surprise” enables the architect to consider space planning in a new way.

Reflecting on reflection-in-action is Schön’s term for meta-thinking, or thinking about one’s thinking. The bicyclist who is surprised by the pothole might consider other potential road hazards and how they could be addressed even before they are encountered. The architect who “discovers” the single-loaded corridor may want to revise his or her design process so other obvious (after the fact) opportunities are not missed on future projects.

The challenge of reflecting on reflection-in-action is one of language—how best to describe what just happened, for oneself and for others. The kind of intelligence used in knowing-in-action is “tacit and spontaneous” (Schön 1987, 25) and does not necessarily lend itself to verbalization. Schön wrote:

Clearly, it is one thing to be able to reflect-in-action and quite another to be able to reflect on our reflection-in-action so as to produce a good verbal description of it; and it is still another thing to be able to reflect on the resulting description. (Schön 1987, 31)

If this language barrier can be removed, the type of learning one sees in architecture schools—problem-focused and studio-based—has the potential to be extremely effective in fields as diverse as counseling and music education (Schön 1987).

Business (Management)

As the word “management” in facility management suggests, the supervision of others is an important component of the FM discipline. Thus, regarding facility management programs, it is instructive to look at the position of business management programs in the modern research university.

Although business management is well-established in the university community when compared to facility management, business management is still something of a young whipper-snapper in academe. In 1918, Thorsten Veblen published *The Higher Learning in America*, arguing that practical education—specifically business education—had no place in a university of higher learning. Veblen, of course, lost the argument; business schools are now prominent features on many university campuses, and business administration and business management, if considered together, represent the most popular college major (Stockwell 2014).

Considering that business schools went from upstarts in the early 20th century to engrained parts of their universities by the late 20th century, it is not surprising that schools of business would react cautiously to proposed changes in the concept of scholarship. In 1987, three years before *Scholarship Reconsidered*, the American Assembly of Collegiate Schools of Business (AACSB) took the very conservative position that authentic research “must be written, be subject to scrutiny and criticism by one’s peers and extend the boundaries of current knowledge” (Laidlaw, Jr. 1995, 124).

Apparently, however, everything was not A-OK in the B-Schools. A 1995 report on the state of scholarly work in management schools revealed concern with the faculty reward system but concluded that the source of the problem was not well understood. This report also suggested that the “AACSB’s role should not be to prescribe a certain formula, but rather to suggest alternative ways in which schools of business may address the issue” (Laidlaw, Jr. 1995, 126).

One of Donald Schön’s examples of educating the reflective practitioner concerns a business school. This particular school had “a tradition of case teaching and practice-oriented research” (Schön 1987, 317), so it should have been well situated for reflective learning. However, this particular school’s tenure policy required young faculty to publish in specific peer-reviewed journals that privileged technical rationality over case studies or other forms practice-oriented research (Schön 1987, 318-319).

Such a misalignment between a school’s mission, history, and pedagogy and its faculty reward system is just the kind of thing that facility management programs should work to avoid.

Conclusion

As an academic discipline, facility management is a relative newcomer in the university community. Thus, certain aspects of FM programs are just now being codified.

Should FM research be framed by technical rationality, with its alleged precision but limited scope, or should FM research also address the messier aspects of practice, the kind of work performed by a reflective practitioner? Concerning the relationship between a program based on reflective practice and that program’s research agenda, Schön argued:

Creation of a reflective practicum calls for kinds of research new to most professional schools: research on the reflection-in-action characteristic of competent practitioners, especially in the indeterminate zones of practice...and on learning by doing. (Schön 1987, 171)

A discipline-appropriate epistemology—one based on Boyer's expanded taxonomy of scholarship and Schön's concept of the reflective practitioner—would best serve FM faculty and professionals. However, FM faculty will have to fight for recognition of this epistemology because it is not currently the dominant mode of thought in the modern research university

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