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Source: *Educational Researcher*, Vol. 35, No. 9 (Dec., 2006), pp. 28-31

Published by: [American Educational Research Association](#)

Stable URL: <http://www.jstor.org/stable/4124800>

Accessed: 10/04/2013 10:38

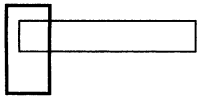
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Literature Reviews of, and for, Educational Research: A Commentary on Boote and Beile's "Scholars Before Researchers"

by Joseph A. Maxwell

In their article "Scholars Before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation" (*Educational Researcher*, August/September 2005), David N. Boote and Penny Beile argue that the literature review is the fundamental task of dissertation and research preparation. They claim that doctoral students receive minimal formal training, and little guidance from faculty or published sources, in how to analyze and synthesize research literature (p. 5). As a result, they argue, most dissertation literature reviews are poorly conceptualized and written (p. 4), and "Doctoral students may not be learning what it means to make and justify educational claims" (p. 9). They conclude that "Literature reviewing should be a central focus of predissertation coursework, integrated throughout the program" (p. 12).

Many of Boote and Beile's claims are consistent with my experience in teaching and advising doctoral students, and the authors perform a valuable service in raising important, and often neglected, issues that bear on conducting a literature review for a doctoral dissertation in education. I agree with their assessment of the majority of dissertation literature reviews, and with their emphasis on the importance of learning to identify, analyze, and integrate research literature competently.

In my view, however, the authors' conception of a proper dissertation literature review undercuts the value of their insights. They repeatedly use the terms "thorough" and "comprehensive" to describe the type of dissertation literature review they recommend, and although they criticize the idea, held by many doctoral students, that such reviews should be "exhaustive" (p. 7), the authors' overall message is clearly that dissertation reviews should be a broad and comprehensive review of the literature dealing with a particular field or topic. "Comprehensiveness" and "breadth" are two of their criteria for assessing "coverage," the first of their standards for evaluating dissertation literature reviews and the one to which they devote the most discussion.

In taking this position, Boote and Beile confound literature review articles for publication (reviews *of* research) with dissertation literature reviews, which are primarily reviews *for*, rather than *of*, research. They cite with approval Cooper's (1985) discussion of "coverage" as the key feature of a literature review, and add that

Although it is worth noting that Cooper is referring here to literature reviewing as a distinct form of scholarship, we believe that the

same expectation should be applied to a literature review that is a precursor to research. (p. 7)

In equating literature reviews for publication, which are intended to summarize and synthesize a specific field of research for a wider audience, with dissertation literature reviews, which are intended to *inform* a planned study—to create a focus, conceptual framework, design, and justification for the study—the authors miss the centrality of *relevance* as the key issue in conducting and assessing the latter type of review. Although they employ the adjective "relevant" in characterizing the sort of literature review they advocate, they never discuss what relevance involves or how to identify and evaluate this, and do not include relevance in their criteria for assessing dissertation literature reviews. (The term "relevance" appears only twice in their article—once in listing another author's components of coverage, and once in a quote from an author whose views they are criticizing.) I argue that this neglect of relevance leads them to misrepresent the essential characteristics of a good dissertation literature review, and to propose inappropriate standards for evaluating such reviews.

I am not denigrating or dismissing the value, for research generally or for a doctoral dissertation in particular, of an accurate and sophisticated understanding of the relevant theoretical and research literature. However, I emphasize two points about this understanding. First, the key word is "relevant"; relevant works are those that have important implications for the design, conduct, or interpretation of the study, not simply those that deal with the topic, or in the defined field or substantive area, of the research. Locke, Spirduso, and Silverman (1999) argue that "the writer's task is to employ the research literature artfully to support and explain the choices made *for this study*, not to educate the reader concerning the state of science in the problem area" (p. 69, emphasis in original). I claim that relevance in this sense, and not comprehensiveness or thoroughness, is the most essential characteristic of a good dissertation literature review.

Second, all of the results of demarcating, critically analyzing, and synthesizing this literature need not, and should not, be presented in the dissertation itself. Rudestam and Newton state that

A good literature review needs to be selective, and it is taken for granted that the majority of source material you have read will not make it directly into the literature review. . . . One of our colleagues likens the process to a courtroom trial, where all admissible testimony by the witnesses must be relevant to the case and question at hand. Consistently ask yourself "Why am I including this study or reference?" (2001, p. 59)

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My disagreement with Boote and Beile on the centrality of relevance reflects a division within the educational research community as a whole over the proper form and goal of literature reviews that are part of dissertations and dissertation proposals¹ (Krathwohl & Smith, 2005, pp. 197–198). This division is between faculty who expect a thorough review of the research literature in the area of the dissertation (the traditional view), and those who want a selective review of the literature that relates directly to what the student plans to do, showing these works' implications for the proposed study. Krathwohl and Smith (2005, p. 50) taking the latter position, describe the essential tasks of a literature review for a dissertation proposal as follows:

- survey a select group of studies that provide a foundation for the proposed project,
- discuss these studies in detail sufficient to provide an understanding of their relevance,
- describe how they contribute to the study,
- indicate how the study moves beyond them.

Locke, Spirduso, and Silverman (1999, p. 68) similarly state, "A research proposal [in which they prominently include dissertation proposals] is not the place to review the body of literature that bears on a problematic area, or even the place to examine all the research that relates to the specific question."

Boote and Beile have stepped unknowingly into the middle of an ongoing (though mostly implicit) debate about the proper form and function of a dissertation literature review, and their failure to recognize and address the differences between these two views undermines the value of their recommendations for improving dissertation literature reviews. A relevant research report contributes an important concept, finding, or method to the study's conceptual framework or design, provides a necessary piece of the argument that explains and justifies this study, or both (Locke, Spirduso, & Silverman, 1999, p. 69). A study is relevant if failing to discuss it would create a significant gap in this explanation or justification, leave unanswered an important question that a reader of the dissertation might raise, or miss a potentially valuable contribution to the research.

The centrality of relevance as a criterion for dissertation literature reviews also applies to literature reviews for funding proposals, research reports, and other forms of scholarly writing in which the primary purpose is not to summarize and synthesize some body of literature, but to use this literature to inform and support some decision or argument external to the review itself. Krathwohl and Smith (2005, p. 198) describe the traditional literature review format as "something of an anachronism" that is employed only in a review journal or annual review volume, and even then must be "more targeted and more critical of flaws and weaknesses." Similarly, the American Psychological Association's Publication Manual (2001, p. 328, cf. p. 28) states, "Be selective in the references that are reported in the literature review," and repeatedly uses the term "relevant" to characterize what should be discussed in a review. Relevance, rather than thoroughness or comprehensiveness, is the essential characteristic of literature reviews in most scholarly work; self-contained literature reviews for publication are the exception, rather than the norm.²

This fact undermines Boote and Beile's argument (p. 4) that the 19th century conception of the doctorate as a teaching degree, requiring a thorough grasp of the literature in the chosen field (a

conception which was supplanted in the 20th century by the German emphasis on research training), provides the proper model for contemporary doctoral training and dissertations. This model downplays the importance of relevance to the specific study for which the literature is being reviewed, and is thus less appropriate for research preparation than is a model focused on relevance.

Relevance is also important for goals other than research preparation. Most doctoral students in education will pursue careers other than teaching the subject area of their dissertation, and it is less important for them to attain a thorough, comprehensive understanding of a particular topic or field than it is to learn how to identify and assess relevant research findings and to apply these in evaluating and supporting some claim or action. This is particularly true for students who will continue their careers as educational practitioners rather than researchers. Aside from specialists in a particular field such as reading, teachers and administrators are generalists, needing to understand and use research findings from a wide range of topic areas rather than being experts on a particular area.

Finally, Boote and Beile repeatedly state that the literature review should be focused on the dissertation's field of study (e.g., p. 11); their only exception is for a topic "about which very little has been written," for which a student "may need to broaden the search to examine analogous research in other fields or topics" (p. 7). They do not acknowledge that even for a study of a well-researched topic, there may be extremely relevant theories, findings, or methods in other fields or disciplines.

In particular, conducting a review limited to a particular field or topic increases the danger that the student will become a prisoner of the theoretical or methodological perspective that dominates this literature, and fail to see alternative ways of conceptualizing or studying the issue or problem. Becker (1986, pp. 146–149) provides an example of how his own research on marijuana use was distorted by the prevalent perspective in this field. Alternative perspectives can come from other fields or theoretical approaches (Marshall & Rossman, 1995, pp. 28–35), or from the student's observations and personal experiences (Grady & Wallston, 1988, pp. 40–42).

Some of the problems created by Boote and Beile's conception of a literature review as a comprehensive summary and synthesis of a defined "field of study" are manifested in two parts of their paper: the literature review for their article, and their criteria for assessing reviews.

Literature Review

Boote and Beile's lack of attention to the relevance of the works they discuss leads to a review (pp. 4–6) in which much of their discussion is unconnected to the argument of their article. For example, their entire presentation of one work they report on is as follows:

Barger and Duncan (1986) raise difficult questions about the assumption that doctoral candidates should do creative scholarly work, and outline what they feel are the psychological, theoretical-methodological, and institutional contexts required for creative work. (p. 4)

They do not indicate what Barger and Duncan actually said about these issues, or discuss how this work relates to their own argument or conclusions. This description of Barger and Duncan's article could be appropriate in a published review of literature on

preparation for doctoral work, but it serves no purpose in Boote and Beile's article.

In addition, the authors' claim that "doctoral students seeking advice on how to improve their literature reviews will find little published guidance worth heeding" (p. 5) is based on a review of research methods texts and handbooks, which are one important possible source for such advice. This topic-based focus on methods texts leads them to overlook relevant works outside of this area. Valuable, and often detailed, guidance on using literature in a doctoral dissertation or other research can be found in books on reading research literature (Locke, Silverman, & Spirduso, 2004), designing research (Light, Singer, & Willett, 1990; Maxwell, 2005), preparing a dissertation proposal (Krathwohl & Smith, 2005; Locke, Spirduso, & Silverman, 1999), completing a doctoral dissertation (Rudestam & Newton, 2001), and doing scholarly work in general (Becker, 1986; Booth, Colomb, & Williams, 1995; Mills, 1959), as well as in works on qualitative research methods (Delamont, 1992; Glesne, 2006; Schram, 2003; Strauss, 1987; Strauss & Corbin, 1990). These works provide the kind of advice that Boote and Beile failed to locate; in addition, most of these authors place considerably more importance on selectivity and relevance in locating and using research literature than do Boote and Beile.

Criteria

Boote and Beile describe their criteria for evaluating dissertation literature reviews as establishing "ambitious expectations" for such reviews, and state that "a literature review that meets high standards on these criteria indicates that the doctoral candidate has a thorough, sophisticated understanding of a field of study—a precondition for substantial, useful research" (p. 9). However, as noted above, the concept of relevance is entirely missing from these criteria. Their criterion for assessing "coverage," the one standard for which relevance is mentioned earlier in their article, does not address relevance at all, only whether the review "justified [the] criteria for inclusion and exclusion of literature" (p. 8). Thus, a review could score highly on their formal criteria and still be almost completely lacking in direct relevance to, or important implications for, the dissertation research. In addition, as indicated earlier, some faculty do not want all of the results of selecting and analyzing literature to be presented in the dissertation itself. This makes their criteria, which can be used only to analyze the latter document, a problematic indicator of the student's understanding of this literature as a whole.

Foundationalism

One possible source of the difficulties with Boote and Beile's conception of the dissertation literature review is the central metaphor that informs their article, the metaphor of "foundation." The authors clearly hold a foundationalist conception of the place and function of literature reviews in research. They repeatedly refer to the literature review as the "foundation" or "precondition" of research, and to its "centrality" in the research process, and assert that the ability to analyze and synthesize research "should be the focal, integrative activity of predissertation doctoral education" (p. 3). This foundational metaphor may be part of the motivation for their view of the dissertation literature review as necessarily broad, thorough, and topic-focused.

An alternative, non-foundationalist view is of a literature review (or more broadly, a conceptual framework, which can draw

on sources other than published literature) as one of several major components of research design (Grady & Wallston, 1988; Martin, 1982; Maxwell, 2005), rather than as the basis and starting point of the research. Other components of the design include perceived problems, goals, research questions, research methods, and validity threats. None of these components is a "foundation" for the others; instead, they form an interacting system in which "each influences the others and each is a major factor in the outcome of the research" (Grady & Wallston, 1988, p. 12). This model draws attention to the relevance of the different components of the design for one another.

Krathwohl and Smith (2005, p.49), although they sometimes use the term "foundation," invoke more explicitly the metaphor of the literature review as an "anchor," which is not prior to the structure it anchors, but connects and steadies it. Another appropriate metaphor for a literature review is a tool rather than a foundation, similar to a hammer and power drill for a carpenter. A literature review is an essential tool, and any researcher must learn to use it competently and appropriately, but it is no more the foundation of research than a hammer, or even an entire toolbox, is the foundation of carpentry.

Implications for Doctoral Training

As stated earlier, I agree with Boote and Beile that learning to understand and apply published research and scholarship is a key goal of doctoral training, and one that is often neglected or taught inadequately. In my experience, relevance is the most difficult concept for doctoral students to grasp in learning to use the literature effectively, and lack of relevance is the most common problem with dissertation literature reviews. A major reason for this is the traditional concept of the "review of the literature," which Locke, Spirduso, and Silverman (1999, p. 68) consider a "misleading if not completely inappropriate title" for this section of a dissertation proposal. As argued above, the dissertation writer's goal in reading and using published research is quite different from that of the traditional literature review, and most doctoral students receive little help in grasping this difference.

I use several strategies for helping students to identify relevance and use this effectively:

1. I emphasize the idea of a "conceptual framework" for a study, rather than a "literature review." Examining, assessing, and connecting published research is an important source for this conceptual framework, but the goal is an integrated set of theoretical concepts and empirical findings, a model of the phenomena they are studying that informs and supports the research, rather than a review of a body of literature. As Boote and Beile note, "Researchers cannot appropriate sophisticated research methods if their understanding of the phenomena they are investigating is rudimentary and unsystematic" (p. 11).
2. I present a model of research design (Maxwell, 2005) that highlights the ongoing interaction of their conceptual framework with other components of their research design (goals, research questions, methods, and validity concerns), and how these components should inform and influence one another. Boote and Beile likewise emphasize that the dissertation literature review should be a "dynamic, integral part of the research process" (p. 11), rather than a static artifact, but do not discuss how this can be accomplished.

3. I encourage students, rather than simply analyzing, summarizing, and critiquing the literature they read, to look constantly for things that they can *use* from this literature. Locke, Silverman, and Spirduso (2004, pp. 9–21) provide an extensive discussion of the kinds of useful information that can be found in research reports, encompassing much more than research findings. Becker (1986, pp. 141–146) also discusses effective ways to use the literature in research, emphasizing the concept of “modules” that can be borrowed and employed in constructing an argument or conceptual framework.
4. I teach the technique of concept mapping (Miles & Huberman, 1994; Novak & Gowin, 1984) as a way to integrate both the conceptual framework itself, and the research design as a whole. Concept mapping is a powerful tool for seeing and developing connections, particularly for students who are primarily visual learners, because it visually displays the relevance relationships that they are establishing.
5. Complementary to concept mapping, I promote the strategy of outlining the *argument* of a proposal, dissertation, or paper (Maxwell, 2005, pp. 128–136). Such an outline is quite different from a traditional outline, which lists the *topics* that are to be covered. An argument outline summarizes the actual argument of a work, explicitly stating the points that are being made and the links between them. It thus forces students to identify how these points are relevant to one another.

In summary, I am arguing for a different conception of a dissertation literature review from Boote and Beile’s, one focused on relevance rather than comprehensiveness, and one that sees this review as an essential component of research rather than the foundation for research. I believe that such a conception can better address the problems with dissertation literature reviews that the authors identify, and can better inform and support the training of doctoral students as competent scholars, researchers, and practitioners.

NOTES

¹Several of the works I cite in this paper deal with dissertation proposals, rather than dissertation literature reviews per se. This is not a problem for my argument, for two reasons. First, the proposal literature review is normally the basis for the dissertation review; indeed, a widespread (though, in my view, inappropriate) model of the dissertation proposal is that it consists of the first three chapters of the dissertation. Second, it is the proposal review, rather than the final dissertation review, that constitutes the *preparation* for conducting the research, which is precisely what is at issue here.

²Even for literature reviews for publication, relevance is an important criterion. The guidelines for reviewers of manuscripts for the *Review Of Educational Research* include in their “coverage” criteria not only “Is the process for selecting studies for review clearly described?” but also “Are the criteria used for selection broad enough to include all relevant literature?”

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Manuscript received January 17, 2006

Accepted July 5, 2006