Conducting a Thorough Literature Review: Is This the Most Challenging Step in the Educational Research Process?

Firm Faith Nelson and Angela Titi Amayah

Abstract: The research reputation of an institution affects the success of virtually every aspect of the institution: its ability to recruit high quality students, faculty, and financial support (Koropchak, 2003). However, preparing researchers to conduct good research is challenging (Labaree, 2003). In the face of perennial concerns and pressures to reform the quality of education research, the United States education research journals have placed priority on methods of data collection and analyses and other similar issues. In turn, the emerging literature on preparing graduate students has emphasized methodological sophistication as the answer to advance education research. Yet to try to improve education research by focusing on methodological superiority is to put the cart before the horse (Boote & Beile, 2005). To this end, the researcher investigated the challenges that graduate students encounter, particularly in relation to the literature review. The researcher surveyed 17 classes that consisted of primarily graduate students within the College of Education at a Midwestern university. Conclusions resulting from the study indicated that although priority should be given to improving all aspects of the research process, the preparers of educational researchers need to place greater emphasis on the literature review followed by the methods sections of the research.

Introduction

The centrality of the literature review has been overlooked by some faculty in the education research community in preparing graduate students to conduct scholarly literature reviews. This shortcoming is rooted in faculty’s misunderstanding of the role of the literature review in education research, which they perceive as an extensive summary of prior research (Boote & Beile, 2005). As such, manuscripts produced by both current graduate students and alumni in higher education have been criticized by journal editors and review boards for being poorly written and limited in review of the literature (Boote & Beile, 2005; Grant & Graue, 1999; & LeCompte, Kligner, Campbell, & Menk, 2003). Moreover, methodological training cannot occur in a vacuum, and increased training in research methods alone will not lead to better research. Instead, researchers must recognize the centrality of the literature review in graduate research preparation and broaden their understanding of what the literature review entails. Cutting-edge research contributes to what will be in the textbooks of the future (Koropchak, 2003). Involving graduate students in the research process provides an enriched experience that better prepares them for success at the next level, which in turn will enhance the quality of the workforce. Further, scholarly research, which demands a thorough literature review, is important because it provides intellectual stimulation that is vitally linked to the educational process.
This paper highlights the results of two of the major research questions investigated in this study: *What sections of the research process do graduate students find challenging?* and *To what extent are students’ research interests related to their perceived research challenge?*

**Literature Review Preparation**

*Knowing the literature in One’s Field.* Tuckman (1999) posited that every serious research project includes a review of relevant literature. Similarly, Boote and Beile (2005) reported that a researcher cannot perform significant research without first understanding the literature in the field and that not understanding prior research clearly puts a researcher at a disadvantage. Richardson (2003) asserted that anyone earning a doctorate ought to be a steward of the field of education with all the rights and responsibilities. Moreover, to become an effective researcher, teacher, administrator, or leader is to know the literature in one’s field. And the best avenue for acquiring knowledge of the literature (beyond taking courses and comprehensive examinations) is the dissertation literature review. Galvan (2004) noted that students are often frustrated to learn that there are no preset minimum on either the number of research articles to review or on the length of a review chapter. He therefore informed students that the two main goals for a literature review are first to provide a comprehensive and up-to-date review of the topic, and second, to try to demonstrate a thorough command of the researchers’ field of study.

*Literature Review Preparation.* A critical success factor in preparing graduate students to conduct adequate literature reviews is setting criteria for judging the finished product. Some researchers argue that early educational research textbooks placed more emphasis on search techniques, data collection methods, analysis, and interpretation rather than the literature review criteria and process. While both students and faculty could glean the importance of the literature review to high quality research in these earlier texts, authors offered limited guidance on what constituted a well-written literature review (Boote & Beile, 2005; Creswell, 2002; & Galvan, 2004). More recent authors have discussed and provided guidance on the centrality and process of the literature review. Among those authors are Creswell (2002) and Strike and Posner (1983) who suggested that the literature review criteria should include the following: (a) relate present study to current literature in the field, (b) provide a framework for comparing study results with other studies, (c) clarify and resolve problems in a field of study, (e) present a new perspective on the literature and (e) satisfy established criteria for good theory.

The process for conducting the literature review is also very important in meeting set criteria for an adequate review. Granello (2001) applied Bloom's taxonomy in providing a mechanism for enhancing the cognitive complexity of students' literature reviews. In effect, students can advance to each of the six levels of educational objectives, from least to most complex, in writing more comprehensive literature reviews. For example, a student is likely to summarize the main points of an article in his or her own words but not distinguish between the quality and relevance of sources at the second or comprehension level of the taxonomy. However, at the fourth or analysis level, the student is likely to break down the main parts of the article, identify themes and patterns, and draw original conclusions after analyzing the information presented (Granello, 2001). Professors can also use the taxonomy for guiding and grading students’ literature review layout and academic format. At the lowest or knowledge-level, papers are usually formatted according to articles read rather than themes, and display a strong use of quotations. In contrast, at the highest or evaluation level of the taxonomy, papers are organized according themes and present a thorough discussion on the pros and cons for the
topic supported by relevant literature. Conclusions drawn are based on objective evaluations of the research findings (Granello (2001)).

In addition, Creswell (2002) provided a five-step process to assist students with conducting efficient and effective literature reviews that included "identifying terms to typically use in your literature search; locating literature; reading and checking the relevance of the literature; organizing the literature you have selected; and writing a literature review" (p.86).

According to Passmore (1980) when considering the criteria and standard used to evaluate dissertations, we need to keep in mind that most people with doctorates in education do not go on to pursue research careers. However, Boote and Beile (2005) contended that dissertations of any format should demonstrate that the researcher thoroughly understands the literature in their area of specialization. They related the concern which seem to originate from the practice, perhaps common among students, of writing literature reviews as part of dissertation proposals and then using the same literature in the dissertation with little revision. Thus the literature becomes a static artifact rather than a dynamic part of the entire dissertation. The authors recommended that, in contrast, candidates should continually revisit their understanding of the literature throughout the dissertation experience.

Research Design

This quantitative study utilized the descriptive type (classification) of research and was investigative in nature. The target population was a convenience sample of graduate students pursuing master’s or doctoral degrees at a Midwestern university (N=136). These students had at least one research class and or were directly involved in educational research.

The researcher developed and utilized a self reported survey. The survey and the questions were guided by pertinent information from the literature review. The researcher pilot-tested the survey with a sample of graduate students in the College of Education (N=14). Based on the pilot-test and critiques from subject matter experts in the field, the researcher modified the survey and it was approved by the Human Subjects Committee at the aforementioned university.

Findings

The findings of this study were examined to ascertain its congruence with the literature in the higher education research field. Of the 136 respondents that participated in the study, 55 (40%) were male and 80 (59%) were female. One respondent did not indicate his or her gender.

Summary of Research Question One

What sections of the research process do graduate students find challenging?

Overall, in comparing the students’ perception of the level of challenge between the Introduction, Literature Review, Methods, Finding, Conclusions and Recommendation; Table 1 indicate that the Literature Review was perceived as the most challenging section of the research process with a total of 65.4%. Research has shown that the Literature Review process begs more attention from the preparers of educational researchers. Hence, there needs to be a shift in the research preparation paradigm to correct the knowledge gap in order to make the literature review less daunting for the graduate researchers in education.
Table 1. Respondents’ Overall Challenge Rating of the Sections of the Research Process

Research Question Two. To what extent are students’ research interests related to their perceived research challenge?

A Pearson’s correlation was conducted to show the relationship between (a) Research Interest Index \( (M=2.97; SD=.66) \); and (b) Research Challenge Index \( (M=2.33; SD=.61) \).

<table>
<thead>
<tr>
<th>Indexes</th>
<th>Statistic</th>
<th>Research Interest</th>
<th>Challenge Index</th>
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<td>Challenge Index</td>
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Table 14. Correlation between Research Interest and Challenge

The results of the correlation in Table 15 indicated that there was no statistical significant relationship at the .01 and the .05 level of significance between the students’ Research Interest and the challenge they associated with conducting their research \( r (128) = .085, p = .336 \).

Summary of Research Question Two. The non-statistically significant correlation between students’ Research Interest and their Research challenge \( r (128) = .085, p = .336 \) indicated a positive linear relationship. The positive relationship means that the students indicated that as their research challenge increased their research interest tend to increased and
vice versa. The correlation determinant ($r^2 = .007$) is .007%. This means that only .007% of the variability in students’ research interest can be explained by the research challenge index alone.

The result of the statistically insignificant relationship between students’ perceived research interest and their perceived research challenge means that the students indicated that the level of challenge that they associated with their research had no significant relation to their interests in current or future research activities. Admittedly, this result may be surprising for some researchers, however, the review of literature supports the argument that when considering the criteria and standard used to evaluate research, we need to keep in mind that most researchers in education do not go on to pursue research careers and that most teach, administer or lead.

Conclusions and Recommendations

The findings of this study reveal that the most challenging section or chapter (indicated by summing the percentage of respondents’ ratings for ‘most challenging’) was the Literature Review followed by the Research Method, Findings, Conclusion and the Introduction Section. Conversely, the least challenging section (indicated by summing the frequencies of the respondents rating for ‘not at all challenging’) was tied between the Introduction and the Conclusions sections. These sections were followed by the Method and the Literature Review sections respectively. The instructors of educational researchers need to place greater emphasis on the literature review and the methods sections of the research since these two sections were rated by the respondents as the most challenging steps of the research process.

Professors can also use the Bloom's Taxonomy to provide a mechanism for enhancing the cognitive aspects of students' literature reviews. Graduate students should be expected to move through Bloom’s stages of cognitive development, from comprehending to applying, to analyzing, synthesizing and evaluating the literature. Students should be encouraged to pursue various research courses earlier in their program and build their research products more aggressively as they progress through their program. In addition, graduate students need to be more aware of the research resources available to them and be proactive in accessing these resources as they progress through their studies. Also, more research seminars could be made available to graduate students. In relation to future research, this study should be revised and replicated to include other colleges and universities and several other variables could be correlated to test other significant relationships, to present more robust analyses which would reveal more distinguishing factors.

References


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