2-4-2018

A Comprehensive Review of Seven Steps to a Comprehensive Literature Review

Jan Kirksey Williams 8272621

Lone Star College, williams.jank@gmail.com

A Comprehensive Review of Seven Steps to a Comprehensive Literature Review

Abstract

Onwuegbuzie and Frels (2015) provide the framework for evaluating current research and present seven steps for developing a Comprehensive Literature Review. Today a significant dilemma of research involves the sparse number of rigorous, empirical research studies to guide development of best practices of writing. The authors describe the purpose of their book as "a tool and guide for master's-level students, doctoral-level students, and new and experienced researchers" to approach writing a CLR in a through and investigative way. The thrust and challenge is for researchers to concentrate on improving their methods and practices when reviewing topics with strong potential for shaping long-term educational policies.

A Comprehensive Review of
Seven Steps to a Comprehensive Literature Review

Jan K. Williams
Lone Star College, Houston, Texas, USA

Onwuegbuzie and Frels (2015) provide the framework for evaluating current research and present seven steps for developing a Comprehensive Literature Review. Today a significant dilemma of research involves the sparse number of rigorous, empirical research studies to guide development of best practices of writing. The authors describe the purpose of their book as "a tool and guide for master's-level students, doctoral-level students, and new and experienced researchers" to approach writing a CLR in a through and investigative way. The thrust and challenge is for researchers to concentrate on improving their methods and practices when reviewing topics with strong potential for shaping long-term educational policies. Keywords: Comprehensive Literature Review, Literature Reviews, Geographic Information Systems

I had no idea what I was agreeing to do when I signed up to review Anthony Onwuegbuzie and Rebecca Frels' landmark book, *Seven Steps to a Comprehensive Literature Review*, written to instruct researchers to write more rigorous Literature Reviews. I received the book and started reading it with the hope of writing a review and moving on to other projects. The opposite occurred which surprised me and left me with a dilemma. I realized the book being 424 pages of instruction, guidance, and thoughtful explanation on the process of writing a Comprehensive Literature Review (CLR) which has been associated with many myths misleading researchers in the past. It was not possible to just describe the helpful parts of the book and synthesis the importance and hope that my readers would understand the deep meanings of the process and product that Onwuegbuzie and Frels wrote about. I felt compelled to perform a research study and actually use the process that they discussed and produce a product. I immersed myself into learning the seven steps outlined by the authors and began the task of writing a literature review to update the earlier work of Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw, and Liu (2006). I decided early on that I must put my preconceived biases away and passionately perform my CLR as purely as possible in order to truly write a review that would showcase the importance of this comprehension book. As a developing researcher, I realized that writing a literature review was a daunting experience. In the past, I felt overwhelmed by the mountains of information that was difficult to organize. I was rather hoping that this book would help me do a better job of writing in the future.

In 2006, Tallent-Runnels et al. published an exhaustive review of literature spanning almost twenty years to chronicle the phenomenal new growth of teaching courses online. Their article was a seminal account of the important aspects that the research showed in relation to the topic. The article was, and has continued to be, a frequently cited source for researchers as more has been done to document the work they started. They cited empirical literature (40 qualitative, 20 quantitative and 16 mix-method studies) related to the comparison of face-to-face and online classes but did not include program descriptions or conceptual articles. At the end of the article, Tallent-Runnels and her group (2006) summarized their findings.

> Clearly, more well-designed research is needed on online courses. . . . Our first concern is that many of the studies that we reviewed did not follow rigorous designs . . . with the influx of online courses and the prospect that these courses

will increase in number, it is imperative that researchers continue to inquire into
this area of study and in doing so, use sound scientific methods. (p. 117)

The significance of the observation and recommendation points to a situation where a lack of
rigorous, empirical research to guide development of best practices gaps in literature goes
unseen. Theoretical papers address questions justifying online learning, identifying processes
for implementing various platforms, engaging students, or adapting instruction. Less available
are papers assessing practices using reliable research data. The need for a rigorous, updated
review of literature relevant to online education was not the original focus of my research
project, but it became evident that the topic presented a major gap in the research as educators
engaged in determining effective research-based practice. Extending the earlier work of
Tallent-Runnels et al. (2006) presented appropriate content to apply the process of a rigorous
7-step literature review in a meaningful study. My study would achieve two goals: first, it
would evaluate the practical application of the method suggested by Onwuegbuzie and Frels
(2015); second, it would extend the research of a seminal study of online instruction and
contribute to the field of education. Combining the two broadened the scope of the original
intent of writing a book review of Onwuegbuzie and Frels' (2015) comprehensive literature
review (CLR).

Such a review presented challenges because of the comprehensive nature of the process
Onwuegbuzie and Frels (2015) suggested researchers follow in writing a CLR. The authors
described the purpose of their book as "a tool and guide for master's-level students, doctoral-
level students, and new and experienced researchers" (p. xiii). As an emergent scholar at the
doctoral level, I embraced the book as an important tool to produce a noteworthy CLR that
contributed to the body of research concerning online education. Further, I intended to produce
a manuscript of significance to the online educational community, one that filled some of the
gaps in research.

Significant research often fills a gap, yet Onwuegbuzie and Frels (2015) recognized
that some researchers are not willing to venture into a new topic that seemed to have little
corroborating research. They proposed that the seemingly scant number of available works may
point to an under-researched area or the important gap in the research that can strongly impact
a field. Such a gap became evident as I began the process of selecting and deselecting articles
in step 4 of their process and finding that only 48% of published articles since 2006 provided
strong empirical research on the topic. In order for the review to address the research gap, the
CLR needed to be "defensible, evaluative, systematic, and transparent" (Onwuegbuzie & Frels,
2015, p. 16). So, where the current paper reports the available literature since 2006 on the topic
of online education, the thrust and challenge is for researchers to concentrate on improving
their methods and practices when reviewing topics with strong potential for shaping long-term
educational policies. The inclusion of many non-traditional but relevant sources of information
in the literature review raised questions about the higher education community's acceptance of
the additional sources. Will they see it as opening and enriching CLR, or will they dismiss it
for a lack of validity and rigor?

When considering the collecting, evaluating, and publishing of current research for a
literature review or review of research, Onwuegbuzie and Frels (2015) noted that few authors
tackled rapidly growing Web 2.0 digital technologies. However, by doing so they would "take
the literature review to a new level" (p. xii). Rigor would be increased by using their seven-
step process to determine the merit of the recent research since 2006 and many sources would
be included that otherwise might have been overlooked.

Onwuegbuzie and Frels (2015) organized their book around three phases. The first 5
steps of the process are described as the Exploration Phase. The Interpretative Phase comprised
of one step was followed by the Communicative Phase that included one step. The following

paragraphs describe the researcher's engagement in each of these seven steps in the process of following Onwuegbuzie and Frels' (2015) method.

The Exploratory Phase

Exploring Beliefs and Topics

Establishing a question or topic of research comes from a dilemma or lack of knowing something about a subject. Identifying a topic of interest begins broadly and becomes more focused as the literature review proceeds. Onwuegbuzie and Frels (2015) explain a worldview is the lens through which a person sees and interprets, and becomes certain that what he/she knows is real—simply put, a worldview represents the entirety of the individual.

Initiating the Search

The purpose of this step is to find the most suitable information sources for the topic. Onwuegbuzie and Frels (2015) explain that research ethics and rigor can be obtained by following an organized and systematic way of finding and documenting literature that fits into the review. They explain that the process should not be hasty but in small steps.

Storing and Organizing Information

Onwuegbuzie and Frels (2015) note the importance of storing and organizing information. They suggest that this process can range from very basic (using note cards) to more complex (technology-based strategies). The researcher may choose the storing and organizing strategy that best fits their project, but it is most important that it be systematic and mindful of rewriting summaries to avoid plagiarism.

Selecting and Deselecting Information

The final CLR should be based on a sound argument, compiled from trusted and credible sources, and written with well-thought-out consequences and implications (Onwuegbuzie and Frels, 2015). Ultimately, this step involves establishing a set of criteria for choosing to use a source or not and building the CLR on unreliable sources. To be trusted and transparent, the researcher must use rigorous research practices that adheres to the standards.

Expanding the Search Using MODES

A traditional review of literature will rarely be comprehensive or up-to-date because of missing information that should be gathered to complete the CLR. Onwuegbuzie and Frels (2015) review the addition of media, observations, documents, experts, and secondary data (MODES) as the vehicle to take the traditional literature review to the next level.

When collecting MODES for the CLR, care should be taken in several ways. First, when considering the addition of audio or video, the identity of the person who has been given credit for it should be clearly apparent. The author's picture and background information should be documented. Second, the researcher should use Ground-truthing when using Map Window or other mapping apps to "visit" the location where the Geographic Information Systems (GIS) data was collected to obtain a visual image of the data in person (Frels, Frels, & Onwuegbuzie, 2011). Third, Twitter and Google Scholar are excellent sources to locate experts that have a significant expertise in the subject. Using Web 2.0 tools benefits the

researcher as many experts have accounts and communicate regularly using this type technology.

Interpretive Phase: Analyzing and Synthesizing Information

The second phase of the process of writing a comprehensive literature review is described as the Interpretive Phase. Step 6: Analyzing and Synthesizing Information is the only step in this phase. Every CLR is a mixed research study and qualitative and quantitative research approaches should be used to synthesize both methods (Onwuegbuzie & Frels, 2015). They suggested the choice of data analysis type be chosen by the researcher's expertise level.

Communication Phase

The third and final phase of the seven-step process requires the researcher to present the Comprehensive Literature Review to an audience. The final step in completing this CLR is deciding how to convey the information, analysis, and the conclusions and implications (Onwuegbuzie & Frels, 2015). They suggest four ways to present the CLR using the AVOW method: acting (using poetry, music, or dance), visualizing (using paintings, drawings, or photography), oral (oral presentation), and writing (producing a written account).

Applying the 7-Step Process to My Literature Review

With the seven steps in hand, I began the task of writing a literature review to update the earlier work of Tallent-Runnels et al. (2006). Identifying sources of data, the actual literature relevant to the study, was the first stage. My study addressed issues of teaching online courses as found in research articles published after 2006. A rigorous review of 108 research articles on teaching classes online resulted in only 52 studies that met the strict criteria set by Onwuegnuzie and Frels (2015). The articles were divided among the research methods of qualitative, quantitative, and mixed methods. Many conceptual papers were found to address the topic in a significant way but could not be reported as they did not report research. Non-traditional sources such as visual media, observations, documents found on the Internet yielded many current works, online blogs, experts in the field, and secondary data. This data added another dimension to the CLR in that the information expressed the current writings of experts in the field. Writing a review using the most current data is possible because of the advances of the Internet and technology. While the higher educational community is challenged to produce high quality research-based studies, there is also the consideration of where non-traditional resources fit into research. It remains to be seen how the addition of non-traditional sources will be adopted by the higher education community in the future.

Why Write a CLR Using the "Method"?

As I used these steps to write a CLR several benefits become apparent. First, they gave credibility to my research. As information is evaluated in a very rigorous way, future readers are assured the CLR has been prepared in an ethical and culturally progressive way. The researcher joins a "new generation of culturally progressive literature reviewers who recognize that the literature review is a holistic and cultural process where a person experiences a range of emotions, increased awareness, and innovative conceptualizations" (Onwuegbuzie & Frels, 2015, p. 37). Secondly, it established an audit trail by using the process to provide a path for other researchers to understand how the results were obtained. Finally, using the steps to write

the CLR identified and filled gaps in research by recognizing that a few number of published articles of interest may signal a new important area to study.

Conclusion

Onwuegbuzie and Frels' (2015) book, *Seven Steps to a Comprehensive Literature Review* is a comprehensive text book written to instruct master's-level students, doctoral-level students, and new and experienced researchers in the process of writing a comprehensive literature review. While the book provides a process of seven steps leading to writing the review, it also discusses how the review should be presented. One of the most important aspects of the book is the addition of how to search, evaluate and record resources from the Internet and Web 2.0 digital technologies. Hopefully, this book will become an important text used by instructors as they guide college students into the writing of the literature review.

References

Frels, J. G., Frels, R. K., & Onwuegbuzie, A. J. (2011). Geographic information systems: A mixed methods spatial approach in business and management research and beyond. *International Journal of Multiple Research Approaches, 5*, 367-386. doi:10.5172/mra.2011.5.3.367

Onwuegbuzie, A. J., & Frels, R. (2015). *Seven steps to a comprehensive literature review.* Los Angeles, CA: Sage.

Tallent-Runnels, M. K., Thomas, J. A., Lan, W. Y., Cooper, S., Ahern, T. C., Shaw, S. M., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research, 76*(1), 93-135.

Author Note

Jan Williams, PhD, completed her doctorate in Curriculum & Instruction after a career in special education, assessments, and administration. She maintains her interests in educational leadership and blending her equine expertise with therapeutic riding. She is currently an instructor at Lone Star College and a consultant expanding her professional presentations and publications. Correspondence regarding this article can be addressed directly to: williams.jank@gmail.com.

Article Citation