Literature Reviews, Meta-Analyses, and Meta-Ethnographies

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ABSTRACT

This paper looks at three important types of literature review: the traditional literature review, the meta-analysis, and the meta-ethnography. Especially among graduate students, but frequently among researchers, there is a misunderstanding about the differences and the uses of each method. The traditional literature review, often glazed over by novice researchers, provides a basic foundation upon which further study can be developed and conducted. The meta-analysis is a qualitative technique to bring together the findings from several quantitative studies to provide an overarching understanding of the work. Meta-ethnographies provide a similar process for studies of a qualitative nature.

The purpose of this paper is to provide a greater understanding of these three techniques and provide a comparative description for the purpose of clarity. Through this understanding, it is the hope that researchers, instructors, and graduate students will make better use of these techniques and practices offered through these methods.

Introduction

In the area of public policy, the use of research is an important aspect of providing the impetus for reform and policymaking. Majone (1989) describes the process of policymaking as incorporating three separate components—evidence, argument, and persuasion—to provide the necessary stimulus to evoke change in policy. At the federal level, Congress often relies on new research and policy analyses conducted by the General Accounting Office (GAO) and other agencies that incorporate findings from past research studies to serve as evidence for a stated policy. Given appropriate evidence, policymakers can then frame their arguments for or against a particular policy. Policymakers are particularly attune to the need for descriptive knowledge regarding public policies that can be generalized across wide populations and settings (Cook et al., 1992). Thus, the significance and accuracy of the evidence is vital to the evolution of effective public policy.

The literature review is often an important part of the research project, regardless of whether it be an original project or a summary of existing research. Three types of literature review in particular, the traditional, meta-analyses, and meta-ethnographic approaches, provide the most empirical methods that social scientists employ today in the evaluation of existing research literature. While the traditional literature review is the most recognized, having evolved from the academics and social sciences over the years, meta-analyses and meta-ethnographies are considered relatively new. Briefly stated, meta-analysis is used for the review and evaluation of quantitative research studies while meta-ethnography for qualitative research studies. This paper provides information regarding the description, purpose, and procedures associated with each method. A dis-

cussion section follows, allowing for a comparative analysis between the each of the review methods.

Literature Review

Description

The review of literature is an important component of the research process. One may define the literature review as a synthesis of pertinent literature, especially research, which supports and addresses specific information to the study at hand. While graduate students and researchers alike may regard the literature review as an endurance test, it is undeniably a pivotal component of the research process.

Light and Pillemer (1984) suggest that the literature review is a fairly "routine step along the way to presenting a new study or laying the groundwork for an innovation" (p. 3). Unfortunately, the authors also note that because researchers often consider the literature review as "routine," it is one of those research tasks that is not seen as overly importance or approached with a concentrated effort. Noblit and Hare (1988) found specifically that positivists and interpretivists regard literature reviews to be of little value and are more ritualistic than practical. Both Noblit and Hare concur with Light and Pillemer in suggesting that the traditional literature review has been unsystematic in their collection and assessment of information.

LeCompte and Preissle (1993) describe the literature review as an "argument" between an investigator and his* audience, in which the investigator makes assertions that promote the interest of the subject area and support the worth of further investigation or research in that area. Not unlike our initial suggestion by Majone (1989) that evidence supports the argumentative phase of policymaking, it is evident that within the research process itself there is a hierarchical need for evidence, argument, and persuasion. Often, the argument is shaped by the knowledge level within a particular policy area. Schumacher and McMillan (1993) suggest that this is one of the key attributes of the literature review—to find and critique the "status of knowledge" within a certain subject area. This "status" eventually reflects not only upon the knowledge within the research or policy area, but also upon the researcher himself.

Purpose

The purpose of the literature review is not singular, but rather it serves several purposes in the research process. Primarily speaking, the review allows the researcher to explain the theoretical underpinnings of the study as well as to establish the context and significance of the problem (LeCompte and Preissle; Tuckman, 1988). The identification of previous study and synthesis across variables establishes the essence of the present study. The support or discouragement of further research is often the result of this identification process.

Schumacher and McMillan (1993) list five purposes of the literature review. First, the review provides the researcher with information to define and limit the problem. That is, the researcher uses this information to "frame" the problem and establish the parameters by which the study will be conducted.

* For purposes of clarity, the discussion of individuals will be referred to as "he" or "his" during the remainder of this paper. There is no intention on the part of the writer to infer gender-bias toward the subject area.

Second, the review will place the study in a historical and associational perspective. By reviewing previous study, the researcher will be able to make generalizations and link findings across studies, thus establishing a historical foundation that provides validity to the study.

The third purpose of the review is to avoid unintentional and unnecessary replication. While many original research topics may immediately sound worthy, there is a possibility that certain topics have already been thoroughly researched. By reviewing available literature, the researcher may avoid unnecessary replication and identify key methodological and outcome information to support his research.

This leads into the fourth purpose suggested by Schumacher and McMillan, the selection of promising methods and measures. By reviewing previous studies, the search for a methodological framework may be simplified by attaining knowledge of how previous studies were conducted. A researcher may find it advantageous to use the same data collection instrumentation or process as in other studies in order to correlate the findings more directly or modify the instrument to incorporate new hypotheses which build upon previous findings.

Finally, the review of literature allows researchers to relate their findings to previous knowledge and suggest further research.

LeCompte and Preissle (1993), building upon their assessment of the literature review as an argument, suggest that the use of previous research, both supporting and non-supporting, can be used as evidence. When constructed effectively, these arguments can convince others of the relevance of the study, anticipate and justify the results, and support the interpretation of data and development of conclusions. When the readers finish with the literature review, they should be convinced that the present study is worthwhile.

Perhaps the most important aspect of the literature review is its ability to help develop a "focus" of the study (Patton, 1990). During the formative stages of a research process, the onslaught of ideas and information can make the development of the methodological approach difficult. By reviewing pertinent literature, the researcher may begin to develop a focus on particular components of the study, including the development of research questions and hypotheses (Creswell, 1994). When conducted systematically, this process is efficient and productive.

Procedure

One of the preeminent questions revolving around literature review discussion is when to conduct the review. The conventional practice of reviews suggests that they should be conducted at the outset of a research study (LeCompte and Preissle, 1993). However, the evolution of social research, and in particular the practice of literature reviews, has offered different perspectives on when the review should be conducted. While most quantitative research requires full-scale reviews of previous research prior to the application of new research, preliminary review can be a disadvantage to certain forms of qualitative research. For instance, the use of known research regarding a particular culture can bias an anthropologist before entry into the research site. In such cases, the researcher must use literature inductively so that the study will not be directed by the researcher's prior knowledge, but rather supported by it (Creswell, 1994). In ethnographic studies, it may be necessary to conduct the review during each stage of the research study. A researcher may find that it is more helpful to search for information based on a particular finding in the field, thus resulting in an ongoing investigation. In some cases, the entire review may have to take place after the conclusion of the data collection due to geographical and technological limitations on site.

Many researchers have developed theories of practice regarding the contents of a literature review. LeCompte and Preissle (1993) suggest that there are three basic components of a literature review: a substantive review, which summarizes the results of previous research; a methodological review, which reviews the particulars of the methodological practices incorporated in previous research; and a theoretical review, which looks at the interpretations, theoretical frameworks, and implications that have been drawn upon previous research. The development of each of these three areas will provide a solid foundation upon which further study may continue.

Light and Pillemer (1984) propose their content theory by identifying five questions important to the development of a literature review:

1. **What specific question is the review trying to answer?** Because of the sheer enormity of some research areas, the researcher must focus clearly on the research at hand and develop specific questions to be answered through the literature review process.

2. **Is the review exploratory in nature or is it based upon testable hypothesis?** Empirical studies are often based on testable hypothesis formed by prior research, while other types of research, like the ethnographic studies as previously suggested, may be entirely exploratory and have no prerequisite instrumentation with which to work. This determines what type of information the researcher needs to look for in the search process. Identification of this area can further direct the researcher.

3. **What studies should be included?** Are there particular studies that, if not included, would jeopardize the validity of the study? This is an area where contact with experts in the particular area of research is important to help identify benchmark studies.

4. **To what population can the main findings of particular studies be generalized?** While certain benchmark studies may have impressive impacts on the study population, is it clear that the findings from these studies can be generalized to a larger, different population? This is a key question the researcher must address during the review process, and one that is equally important to policymakers.

5. **Are there important differences in the ways that the studies were done?** If the research methodology of previous study is an important factor in how the researcher collects and analyzes data, the researcher must make that information known in the methodology portion of the study.

When conducting a literature review, perhaps the most difficult decision regards the selection of literature. In all cases, it is important that the researcher incorporate the studies that are most meaningful to his particular research project. In doing so, the researcher should try to represent a wide range of populations across different times and locations, incorporate various research methodologies, and look at a variety of variables in cause-and-effect research (Cook et al., 1992). In order to successfully conduct this search, the researcher must also ensure that he has identified the most appropriate resources from which to access this information. Studies that are not found or nor identified cannot assist in the study.

Cook (1992) also mentions the importance of recognizing possible biases in the studies reviewed. The influence of bias from individual studies can alter the combined effect of the aggregate collection of studies, resulting in a review that is inaccurate. Care must also be taken in the summarization of information from individual studies. The creation of an aggregate population potentially results in the loss of important information particular to individual studies. While the aggrega-

tion may cover-up the mistake of allowing bias into the study, it also can mask the idiosyncrasies which make selected studies more valuable. In addition, the use of evaluation techniques, such as "vote counts," to weigh different studies may also be unsound when conducted subjectively, resulting in the possible elimination of benchmark studies and the inclusion of uneventful studies.

Meta-Analysis

Description

Meta-analysis is a relatively modern approach to reviewing research, with an emphasis on the quantification of aggregate outcomes. Meta-analyses use statistical techniques to summarize the results of independent studies to provide generalizations across the literature (Schumacher and McMillan, 1993). The terms "rigorous research review" and "integrative research review" are terms that are identified with meta-analysis. Simply put, meta-analysis is the analysis of analyses (Glass, 1976).

The term "meta-analysis" was first coined in the mid-1970s by Smith and Glass (1977) and brought significant attention to the process of analyzing previous research, although numerous examples of meta-analysis may be found in past social science studies. Pearson (1904), Birge (1932), and Beecher (1953) are considered pioneers in the use of meta-analysis techniques in the social sciences. Feldman (1971) suggested that the study of analyzing research studies is perhaps a science to be studied in itself as it employs a series of research techniques and methods specific to meta-analysis. Past research, conducted by the likes of Smith and Glass (1977), Rosenthal (1984), and Hedges and Olkin (1985), opened the door for social scientists to practice a legitimate alternative to the traditional literature review (Cook et al., 1992).

Purpose

The main concept behind the use of meta-analytical techniques is that the process may lead to conclusions more valid than less vigorous approaches to literature reviews (Rossi & Freeman, 1993). While many studies examined individually may not have significant or impressive findings, the combination of the aggregate collection of research may illuminate statistically significant findings when appropriate methods of analysis are administered. Shumacher and McMillan (1993) attribute this type of information analysis as a notion of patterning. That is, the identification of patterns across several studies may become apparent through meta-analysis while single study analysis may not illuminate the presence of such patterns.

The outcome of a meta-analysis is generally the reporting of average effects across several studies—the conclusion that a certain cause-and-effect relationship is statistically significant across known studies (Rubin, 1992). However, the superior or preferred meta-analyses often explore and identify the relationships among other key variables, including population, study setting, and treatments (Cook et al., 1992).

Procedure

Cook (1992) suggests the following regarding meta-analysis:

> *"Meta-analysis offers a set of quantitative techniques that permit synthesizing results of many types of research, including opinion surveys, correlation studies, experimental and quasi-experimental studies, and regression analyses*

> *probing causal models. In meta-analysis the investigator gathers together all the studies relevant to an issue and then constructs at least one indicator of the relationship under investigation from each of the studies. These study-level indicators are then used to compute means, standard deviations, and more complex statistics" (p. 4-5).*

The main difference between the traditional literature review and meta-analysis lies in the administration of statistical methods to identify trends, causal factors, and generalizable outcomes of a particular set of studies. As Glass (1977) suggested, the meta-analysis is a process of analyzing a series of analyses. While literature reviews may be more general, meta-analysis are designed to be statistically rigorous and sound. The components identified earlier with regard to the application of a literature review (LeCompte and Preissle, 1993; Light and Pillemer, 1984) are also applicable to the basic foundation of a meta-analysis. The main difference occurs during the evaluation portion of the analysis.

Tuckman (1988) suggests that the meta-analysis consists of three key steps: (1) a complete literature search; (2) the coding and description of findings and characteristics; and (3) the use of statistical techniques to combine and evaluate the findings. The literature search locates and evaluates the literature regarding inclusion or expulsion, while the second and third steps focus on the evaluation and generalization of the research findings. Tuckman's use of terms such as "coding" immediately suggests the differences between traditional literature reviews and the meta-analysis.

Schumacher and McMillan (1993) and Cook (1992) identify five components of the meta-analysis: Problem formulation, data collection, data evaluation, data analysis, and public presentation. Problem formulation consists of defining the questions or hypothesis that should be addressed through the literature. As in the procedures identified in our discussion of literature reviews, this is an integral part of the study as it defines how the study will be conducted. The question of how data is to be collected is also vital to the meta-analysis. While the researcher hopes to include all previous research in his analysis, this cannot be done without the development of a proper collection plan and a complete identification of resources. Unidentified studies will not be part of the analyses, so the identification phase is critical to make the search as robust as possible while balancing time and effort. Compounding this issue is the evaluation component of previous research, for not all research may be worthy of inclusion. The researcher must make specifications of what will be regarded as worthy and what should be eliminated for inclusion in the meta-analysis. Decisions must also be made during this period as to the use and development of a weighting system.

The fourth component, data analysis, is considered to be one of the more subjective areas of meta-analysis. Choosing appropriate statistical methods for use on data is dependent upon the researcher's comfortability with and knowledge of available methodologies. It is commonly agreed that most researchers tend to use methods that they have become accustomed to and comfortable with, rather than experimenting and utilizing a broad spectrum of techniques that may be more appropriate to the type of study at hand.

Finally, the researcher must make key decisions regarding what information to include in the final report. The meta-analysis process, like the literature review, usually identifies an enormous bank of information. Realistically, not all information will make it into the final product, so the researcher must evaluate the findings of the meta-analysis to decide which information is most pertinent to the study.

Actual statistical methods have been discussed in great detail by a number of researchers, including the entire Winter 1992 *Journal of Educational Statistics*, which focuses on meta-analytical practices, and includes articles by Hedges, Harwell, Rubinstein, Hayes, Olds, Becker, and Rubin. Due to the complexity and enormity of the methodological issues in meta-analyses, this paper avoids specific analytical discussion.

Meta-Ethnography

Description

Several researchers, in their description of the meta-ethnographic process, use the Latin roots of the term to offer an understanding of what the term meta-ethnography truly represents (LeCompte and Preissle, 1993; Noblit and Hare, 1988). Ethnography is derived from the Latin terms Ethnos, meaning race, people, or cultural group, and graphia, the writing or representation of a specified field. Loosely defined, ethnography is the written study of people and culture. Spradley and McCurdy (1972) define ethnography as the analytic description or reconstruction of intact cultural scenes and groups (cited in LeCompte and Preissle, 1993). Ethnography is also defined as the process of studying human life, while the ethnographer works at deriving the meanings of events (Schumacher and McMillan, 1993).

The Latin term meta refers to our intent to synthesize information—the translation of a number of accounts into one another. The emphasis on the meta-ethnography is to reduce single accounts of particular studies into one generalized account, while also preserving the individuality of the included studies (Noblit and Hare, 1988). The translation of these accounts into a summation or assimilation forms the meta-ethnographic process. Because ethnographers believe that reality is socially constructed, and thus translate studies through their own world views, the meta-ethnography is considered to be particular to the researcher conducting the study (Noblit and Hare, 1988; Schumacher and McMillan, 1993). It has been said that a meta-ethnography reveals as much about the researcher as the study itself (Noblit and Hare, 1988).

Meta-ethnographies, compared to meta-analyses, are based in the interpretive paradigm rather than the positivist paradigm (Noblit and Hare, 1988). Ethnographic, interactive, qualitative, naturalistic, hermeneutic, and phenomenological research practices form the interpretive paradigm, and it is through these types of studies that form the basis of the meta-ethnography. As Noblit and Hare suggest, "any similarity [between meta-ethnography and meta-analysis] lies only in a shared interest in synthesizing empirical studies" (p. 10).

Purpose

In synthesizing interpretive research, the researcher attempts to preserve the uniqueness that is characteristic of individual qualitative studies, while also allowing a synthesis of information to provide some overall picture of the area of research (Noblit and Hare, 1988). The emphasis in a meta-ethnography is on the development, or as Noblit and Hare describe, the "desire" to construct adequate interpretive explanations and interpretations rather than simply analyze the information. While the goal of meta-ethnographers is to "pull together" all of the available research in the form of a generalization, the overarching goal is to provide an interpretive explanation by which these reviews are conducted.

In their paper Meta-Ethnography, Noblit and Hare (1988) identify five purposes of meta-ethnographies, which allow for:

- more interpretive literature reviews;
- critical examination of multiple accounts of an event, situation, and so forth;
- systematic comparison of case studies to draw cross-case conclusions;
- a way of talking about our work and comparing it to the works of others; and
- synthesis of ethnographic studies. (p. 12-13)

While the basic format of the meta-ethnography is similar to that of both the meta-analysis and the traditional literature review, the individualism of the accounts is kept at the forefront of the research. Meta-analytical techniques are more prone to create aggregate results and lose sight of particular details regarding sample size, situations, and other variables that are more vested in the qualitative research approaches. While there has been documentation on previous meta-ethnographies which have followed this lead by meta-analysts (Rubin, 1992), meta-ethnographers have concluded that the generalization of a set of studies can be as harmful as helpful in their study. As Noblit and Hare (1988) describe, the meta-ethnography "refers not to developing over-arching generalizations but, rather, translations of qualitative studies into one another" (p. 25).

Procedure

Noblit and Hare (1988) defined seven phases to the meta-ethnographic approach. These steps, as with meta-analysis and traditional literature reviews, provide a logical framework from which individual studies can be identified and synthesized.

Phase 1: Getting started. The main ingredient in getting started on a particular study is to identify an area of interest to the researcher. Patton (1980) states that there is no value in a synthesis that is of little interest to the author (cited in Noblit and Hare, 1988). Other researchers (Light and Pillemer, 1984) concur with this notion, stating that once a study begins, the researcher is obligated to stay with it for the duration of the study. Hence, an area of interest to the researcher will provide much more incentive to research the topic.

Phase 2: Deciding what is relevant to the initial interest. Because of the vastness of most areas of research literature, Noblit and Hare suggest that the researcher must identify what areas of the literature are relevant to the study and to the particular audience that the study is being prepared for. They suggest that generalizations developed from an exhaustive literature search yield trite conclusions while more specific searches produce useful generalizations and comments. Conversely, they also note that in determining the scope of the search, it is difficult to know when the search is exhaustive due to the large pool of unpublished literature.

Phase 3: Reading the studies. This is perhaps the most difficult component of the meta-ethnography because of the dynamic synthesizing process unique to qualitative study. While most methods provide for the quick reading and analysis, the Noblit and Hare approach suggests that the studies must be reviewed throughout the research study in order to digest and comprehend the complex social conditions and factors of each study.

Phase 4: Determining how the studies are related. The identification of key metaphors, phrases, ideas, and/or concepts used in each study is important in determining the relationship(s) between the various studies. This phase "pulls together" the pool of studies.

Phase 5: Translating the studies into one another. While most reviews compare studies through the development of analogies, that is, by suggesting a particular study is "like" another, translating studies into one another is unique in that it protects the individuality while also maintaining the central metaphors of each account.

Phase 6: Synthesizing translations. The synthesis of translations acts almost as a second stage of translation, building upon Phase 5. The identification of "threads" or "patterns" across the pool of studies builds upon the knowledge of the whole.

Phase 7: Expressing the synthesis. The authors suggest that because every audience has a particular language in which it needs to be addressed, the researcher must take special effort in disseminating the information so that the appropriate audiences may benefit from such knowledge. While most reports are written with an academic perspective, policymakers and other constituents must also be able to understand the study.

Discussion

The discussion of literature reviews, meta-analyses, and meta-ethnographies covers considerable philosophical and methodological ground. Although this paper provides a brief documentation of the procedures associated with each method, it is important to develop a clear understanding of the similarities and differences between them.

Initially, it is incumbent to state that all three methods can be classified as literature reviews, for they all incorporate a review of literature as a pivotal component of the study. When we incorporate the prefix "meta" into our social science terminology, it is safe to presume that what follows is a literature review that varies by degree. The purpose of each of these three methods is to expose previous research and draw generalizations from that research. If we are to classify each method, we could say that the literature review is the most general type of review available to the social scientist. Simply speaking, meta-analyses and meta-ethnographies are more systematic and exacting than traditional literature reviews.

In brief, the traditional literature review is, as suggested by Light and Pillemer (1984) and Noblit and Hare (1988), a routine process of collecting and synthesizing literature. It is so routine, in fact, that very little time is spent at the graduate-student level even discussing the content of the literature review. One would almost think that the knowledge of how a literature review is conducted and what it represents is tacitly passed on from generation to generation. Noblit and Hare describe how researchers of both the positivist and interpretivist paradigms regard the traditional literature review as of "little value" due to the relatively unsystematic process by which it is carried out. As well, simplistic forms of analytical assessment conducted upon study findings also account for this perception (e.g., vote counts). It is apparent that some researchers "cherry pick" their studies to meet pre-considered biases.

Well-designed literature reviews provide researchers with an appropriate method from which to define and refine research questions, establish parameters with regard to data collection and population, and establish an historical background from previous research. As in all research studies, the effectiveness and accuracy of the literature review is dependent upon the researcher's clarity of the review process and the diligence in which it is carried out. Again, the literature review is more interested in providing general knowledge regarding a research area than providing a statistical or analytical outcome for the entire research pool.

Meta-analyses and meta-ethnographies were developed to make the literature review more empirical. Building upon Noblit and Hare's (1988) statement about the positivist and interpretivist perception regarding literature reviews, the development of alternative methods of reviewing research came from the following belief: "The study-by-study presentation of questions, methods, limitations, findings, and conclusions lack some way to make sense of what the collection of studies is saying. As a result, literature reviews in practice are more rituals than substantive accomplishments" (Noblit and Hare, 1988, p. 14). Thus, the processes of meta-analysis and meta-ethnographies were born out of the need to generalize and identify large groups of research in an empirical fashion. The alternatives tell us which direction the studies point us, in either a quantifiable or qualifiable way.

When we compare the three review methods, we find that each process follows a similar path. Although the procedure sections under each method illustrate different methods of conducting the review process, the same key and critical components are identifiable in each review. First, all three reviews initially must frame the problem by setting up parameters and clarifying research questions. It is imperative that the researcher clearly document the procedure and expected outcomes of the review process, regardless of which type he employs. The foundational preparation for any literature synthesis is paramount to the effectiveness of the remainder of the study. Second, each of the three methods must incorporate a detailed data collection strategy at the outset of the study. The researcher must identify the most promising resources for literature to ensure that benchmark studies and other significant studies will be correctly identified. Third, each of our three review methods must employ a data evaluation strategy from which the most appropriate and significant studies from the literature pool can be identified. Particularly in areas which have an abundance of prior research literature, the researcher must be able to empirically identify which studies to include and which ones to dispose with. This process demands systematic control in order to effectively carry out this need across volumes of research and was a primary consideration of the authors concerned by the unsystematic process associated with the traditional literature review. Both meta-analysis and meta-ethnographic techniques have made this area more empirical than the traditional literature review. A fourth area which crosses the boundaries between our three review methods is the publication and dissemination practices of the research processes. Regardless of the method employed, it is essential that the researcher use the most efficient method of presenting the review findings so that audiences may be aware of the results.

The area that is auspiciously missing in the above discussion is that of analysis and interpretation. The analytical portion of the literature review, meta-analysis, and meta-ethnography is where we see most variance. From this point on, meta-analyses and meta-ethnographies carry the empirical process of data analysis further than the traditional literature review. While the literature review may incorporate a vote count or Groeller Scorecard (Patton and Sawicki, 1993) as a method of weighting the importance of a particular set of studies, meta-analyses and meta-ethnographies are much more stringent and rigorous in their approach to research analysis. It is not uncommon for these methods to incorporate a complex set of procedures and formulas to compute generalizations, especially in the quantitative studies.

The analytical stage is also the point where meta-analysis begins to differ greatly from the meta-ethnography. Whereas previous stages played mostly upon the development of the research process and the collection of data, the distinction between qualitative and quantitative research wasn't quite as important, with obvious exclusion for the need of each method to find studies related to their particular methodology. During the analytical portion of the review process, however, these two methods represent the methodological antitheses of each other. The quantitative component of the meta-analysis requires that strict statistical methods be incorporated in the process to ensure that findings derived from the study will be accurate. Because the variables across

the studies are numerous and divergent, statistical measures may be very complex to address these issues and correct for variances in data (e.g. sample sizes) and the absence of specific data (e.g. standard deviation, degrees of freedom, etc...). Discussion of this issue within the literature is most emphatic in declaring that dealing with missing data is a critical issue. This is one reason that meta-analytical techniques are often discussed with terms such as rigorous, integrative, and systematic (Schumacher and McMillan, 1993). Conversely, the meta-ethnographic review must follow the needs of qualitative research methods in the evaluation of data from the research pool. The ongoing process of review that is required during meta-ethnographic study is necessary to produce knowledge within the researcher that supports the identification process associated with the description of patterns and threads. This information also allows the researcher to make generalizations regarding the study without losing sight of the uniqueness of the cultural aspects of the accounts. As suggested previously, the only similarity between meta-analyses and meta-ethnographies is in their synthesis of empirical studies. As can be seen, the application of analytical and interpretive techniques is quite different.

One issue is worth further clarification. During this discussion section, the paper outlines what may seem to be a paradoxical situation by claiming that all three review methods may be considered literature reviews, while also stating that the two meta-evaluation processes incorporate literature reviews within their practice. How is it possible to be a review while also being one? Is this possible to have both? In fact, it is. While the meta-evaluation techniques are literature reviews, they use the more traditional components of a literature review during their formative stages. The framing of the problem and establishment of data collection and data evaluation criteria are all basic components of a literature review. As described, the evaluation and interpretation of data is where most differences occur. Thus, if we look at the traditional literature review as our benchmark, it is possible to envision the other two methods being able to incorporate that component within their structure.

One final difference between techniques is the actual timing of the review process. Traditional literature reviews and meta-analyses conduct the review of literature mostly at the beginning of the review process and concentrate more on the evaluation and discussion of the review in that latter half of the process. Meta-ethnographies, conversely, review literature throughout the entire evaluation process in order to fully absorb the qualitative information for accurate synthesis. Thus, the meta-ethnographic process is an evolving one, rather than the more systematic process involved in meta-analyses and the ritualistic process of traditional literature reviews.

Conclusion

This paper presents a discussion of literature reviews, meta-analyses, and meta-ethnographies in order to distinguish between the three. It is not to determine if one is better than another. As described, each method has distinct qualities and attributes associated with practice. There would be little value in a comparative evaluation of these three methods. In fact, the only realistic outcome of such a discussion would be the resurgence of the historical argument between qualitative vs. quantitative research—fruitless at best. Simply put, the three methods are different tools for different purposes.

This paper reviews these methods as three distinct types of service to the social scientist. The traditional literature review provides a basic (although not to be construed as less significant) type of review, useful for most dissertation work, policy analysis, and other noteworthy needs. The literature review is important as it clarifies the study by identifying previous research literature as well as providing meaning and reason for further study. The meta-analysis provides the appropriate

statistical techniques and analytical practices to formally synthesize the findings of numerous quantitative studies at one time. The evolution of meta-analysis during recent years has been dramatic. The third and most recent type, the meta-ethnography, provides appropriate methodologies to synthesize information across many qualitative studies at one time. The technical ability to comprehend the numerous variables present in many ethnographies is improving with time, and the validity of these types of study is increasing as well. Thus, each of the three methods perform a significantly different service for the both the researcher and the interested audience.

The importance of advancing each of these methods is great considering the plethora of social research studies conducted each year. While the final study from a group of 50 may be as important as the rest (or even more important in some instances), the value of understanding the previous 49 is equally important for they provide the foundation from which the final study may be drawn. As social research continues to evolve, it is realistic to assume that our 50th study will not remain the final study for very long. Soon, other studies will follow, each requiring an accurate evaluation of previous research.

The concluding point is to suggest that, while these review methods were spawned from the traditional literature review and while the traditional review is still practical and essential to social research, all three will continue to evolve technically and practically such that they provide more efficient and appropriate service for researchers and stakeholders alike.

About the Author

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