

# QUANTIFYING QUALITATIVE DATA

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## Introduction

Much of the research in social studies is quantitatively constructed; but by including a qualitative component in survey research, for example, one can generate data that may provide insight into what the numbers actually mean and broaden theoretical conceptualizations around many of the issues that concern institutional researchers. Yet, the relevance of qualitative data in informing policy decision making is often ignored and, consequently, less employed as a research strategy in institutional research.

Numbers are much more referential in social studies in that they symbolize the notion of “truth” and “objectivity.” They contribute to the notion of scientific research as rational practice (neutral and logical). But quantitative data in the assessment arena is no guarantee of neutrality or reality. On the other hand, qualitative data are generated out of dialogues or narratives that are grounded in self-constitution, a dialectical process whereby individuals experience themselves in relation to the other, a subjective process which places the qualitative researcher directly into the research, interpreting interpretations, making, unmaking, and remaking stories; a more “feminine” process that causes positivists to question, and rightly so, the veracity of what are, in some measure, subjectively constructed conclusions, resulting in the de-valuing of qualitative data. Yet, there is considerable meaning and richness in what has been made silent in positivist frameworks.

In order to mediate the subordinate positioning of qualitative data in the academy, it has become increasingly important to locate qualitative research within the “confines” of positivist frameworks. That is, quantify qualitative data by (1) constructing a rigorous research frame; (2) applying a suitable methodological approach; (3) utilizing sound analytical procedures; and (4) inverting the results to resemble a quantitative construction. While I would argue that the first three elements are always present in good qualitative research, it is the analytical component and data inversion that I wish to elaborate on since they often influence the perceived value of qualitative data.

## Analytical Procedures

Dohan and Sanchez-Jankowski (1998) note that the analysis of qualitative data has presented two potential problems: First, researchers may use those data that were most dramatic in the fieldwork and erroneously present them as being the most significant; second, they may use more data from the later stages of fieldwork and less of what happened in the middle or beginning because the later data are fresher and clearer in their minds. They suggest that these potential issues can be mitigated by the use of computer-assisted qualitative data analysis programs (CAQDAs). I use Atlasti as my analytical tool. Atlasti is a sophisticated CAQDA that allows for the linking of codes to text in order to develop hypertext that permits one to perform

complex model building. Besides data management, there is the ability to merge narratives and observations into a hermeneutic unit capable of explicating conceptual constructs from linked relationships, facilitating the development of conceptual frameworks.

Corbin and Strauss (1990a, 6) believe that data collection and analysis are integrated processes in that the procedures of data collection and analysis “systematically and sequentially enables the research process to capture all potentially relevant aspects of the topic as soon as they are perceived.” Similarly, Kincheloe and McLaren (2002) suggest that the contextualization of narratives moves research out of thin descriptions of “facts” into thick descriptions of social texts “characterized by the context of their production, the intentions of its producers, and the meanings mobilized in the process of its construction” (97). So it is not in the collection of facts, but in the production of narrative meanings, the concepts and themes, that generate explanations.

I begin the analytical process by importing Word files created from interviews (in the case of female faculty) or from the qualitative component in surveys. It also must be recognized that in writing narratives, one necessarily loses the tones, silences, and cultural cues that signify meaning without speech and this problematizes the presentation of narrative research. This is not to suggest that the narratives presented are not worthy representations of meanings, but that they are incomplete insofar as they cannot represent the contextual component of speech exchange.

It is particularly important to keep the original grammar, spelling, and punctuation since these can generate important information as well. These Word files constitute a hermeneutic unit. It is in this unit that the primary data (the Word files containing the data) are coded and analyzed. Although some researchers (Bernard 1988) suggest that codes be standardized to reflect the numerical system used in the Human Relations Area Files (HRAF) by using Murdock’s (1967) standardized codes, other researchers (Miles and Huberman 1984) recommend developing one’s own codes based on themes. I use the open thematic coding process supported by Atlas.ti. Corbin and Strauss (1990a, 12) define open coding as “the interpretive process by which data are broken down analytically.”

Whichever one chooses, the coding process begins at the textual level as one reads and rereads the text searching for “patterns, narrative threads, tensions, and themes that shape qualitative texts into research texts . . .” (Clandinin and Connelly 2000, 133). A CAQDA program helps facilitate this part of the analysis. After importing the data into Atlas.ti, I begin to search for themes. Of course, many of the themes are apparent—such as those related to a student’s general educational experience—but others may emerge during the data coding process (for example, news reports of our University President’s salary resulted in an additional code, “Salary”). Using a “free coding” technique, I am able to code at the word, sentence, and paragraph level. This entails reading each line of text carefully in order to determine multiple themes. I can also create “families” in order to collapse coded meanings within and between the different respondent narratives.

A more comprehensive analytical process occurs after coding and the writing of memos and annotations has taken place. The extraordinary benefit of using a CAQDA is that it makes the analysis of the qualitative data so much easier than in

the past. While the conceptual framework for analyzing qualitative data has remained (discovery of relationships), it is the ease of “doing” the analysis that has benefited qualitative research.

Having learned traditional domain analysis with its labor-intensive focus on listing domains and taxonomies, sketching maps, marking themes, making inventories, and then organizing, indexing, and translating all of the information into a cohesive explanatory model, it is with relief that I am able to approach the analytical component of qualitative research with the sophisticated tools offered by Atlas.ti. These tools include the ability to search within and across texts for patterns of meanings and their relationships through proximity and distance indicators (such as whether a theme concurs, contrasts, precedes, overlaps, follows, or is embedded in another theme inside or outside of the narratives or thematic families). Strauss and Corbin (1990b, 111) state, “The discovery and specification of differences among and within categories, as well as similarities, is crucially important... .” The process of searching within and across texts for similarities, differences, and various linkages leads to the construction of network relations and, ultimately, to a conceptual model for understanding these relationships.

The creation of a network begins by importing all or some of the codes from all or some of the narratives. This particular process uses an algorithm to place those codes (called nodes in the network) with the highest number of connections into the center space. It is at this point that conceptual relationships can be visually displayed using links that indicate whether the relationship between nodes is “associated with,” “is part of,” “is cause of,” “contradicts,” or is “property of” each other. Although the qualitative analytical results are conceptually valid, it is the re-gendering (quantifying qualitative data) that promotes the wide-spread utilization of such results.

### **Quantifying Qualitative Data**

Although many of the surveys OIR had administered contained qualitative components, the data were largely ignored. No one was interested in reading through a stack of surveys, so they languished in a file cabinet. Coming out of anthropology, I was aware of the importance of qualitative data and found myself extolling the virtues of open-ended questions. Yet, the attitude remained: “Qualitative data, well that’s nice, honey.” Clearly, it would not be enough to just organize the data, I would have to present it in a “numbers—not words” format by creating percentage charts and graphs from the Atlas.ti program. Indeed, using the program, I can export into SPSS and do trend analyses.

Such a strategy has met with great success. Administrators and faculty have begun requesting that qualitative components be incorporated into surveys. Indeed, we administered a survey for our Provost that was entirely qualitative in structure. Of course the downside to such success is an increase in one’s work load since qualitative analysis is so labor intensive.

Qualitative researchers may criticize my quantification of qualitative data, suggesting that such an inversion sublimates the very qualities that make qualitative data distinctive: narrative layering and textual meaning. But assessment in the university (and the policy implications that flow from it) demands that the data are presented within a scientific construct. But, when possible, I always try to incorporate qualitative data into reports. With the quantifying of qualitative data, framing it in a scientific

construct, one is capable of incorporating multiple viewpoints in defining the theoretical boundaries of assessment practice, allowing numbers to “speak” in order to enhance our understanding of data.