Is There One Kind of Qualitative (Quantitative) Research?

HyunSeung Koh
School of Library and Information Science, Indiana University
1320 E. 10th St., L1011
Bloomington, IN 47405-3907
hskoh@indiana.edu
http://ella.slis.indiana.edu/~hskoh/resume/

Abstract
This paper is based on the author’s experience preparing to defend her proposal for her doctoral dissertation, Understanding reader-text interaction in active reading: Implications for ebook design. This will be ‘a kind of qualitative’ study (or a ‘quasi’ qualitative study) using multiple data collection methods including quantitative survey, document examination (annotation analysis), on-site interviews, and “naturalistic laboratory” [5, p. 380] observation. The study’s main objective is to gain insights into how to design ebook readers that best facilitate reader-text interaction in the context of active reading.

Author Keywords
Qualitative Research

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Copyright is held by the author/owner(s).
CHI’12, May 5–10, 2012, Austin, Texas, USA.
ACM 978-1-4503-1016-1/12/05.

1 Naturalistic laboratory is defined as a type of laboratory “in which participants have experiences similar to those had in the human ecology.” [5, p. 380]
General Terms
Human Factors, Theory, Design

Introduction
While the author was preparing for her doctoral dissertation proposal defense, the very first question was what qualitative and quantitative research are and how one is different from the other. As a side note, the author wondered why some qualitative or quantitative researchers do not want to talk to each other. In order to seek answers to these questions, the author first examined several introductory books on research design from diverse disciplines (by neither exhaustive nor systematic selection). Next, the author endeavored to determine which among diverse approaches she needed to choose for her own dissertation research design and why.

In this paper, the author discusses the three approaches she identified from a review of introductory books on research design, what approach she selected for her own dissertation study design and why, and what challenges she encountered.

Research Design
With regard to degree of flexibility in the quantitative-qualitative distinction, research has been viewed in various ways. One is a rigid division into quantitative, qualitative, and mixed methods (e.g., [1]). In this approach, each category is strictly coupled with a particular world-view (e.g., post-positivism) and particular methods (e.g., survey, experiment). A less rigid division (e.g., [2]) is into experimental, naturalistic inquiry, and mixed methods. The most flexible division is into scientific and naturalistic inquiry ([3], [7]). Selecting naturalistic inquiry over experimental or scientific inquiry was an obvious choice for the author because the purpose of the dissertation research is to understand the nature of reader-text interaction rather than to test ‘big’ hypotheses. However, it was not easy to decide which position the author needed to take in terms of flexibility in the quantitative-qualitative distinction. For naturalistic inquiry, one group of researchers has prescribed the use of only qualitative methods, whereas a more flexible group has proposed the use of both quantitative and qualitative methods. To understand reader-text interaction holistically, the author decided to integrate the use of both types by utilizing diverse methods from diverse perspectives. This approach is taken from Erlandson et al.’s argument [3] that “by looking holistically at even a corner of the cloth or at a piece taken from the middle of it, we can usually predict with great accuracy the nature of the entire piece of cloth” (p. 11). Also, this approach avoids Erlandson et al.’s [3] concern that a definite distinction between quantitative and qualitative will produce a misunderstanding that naturalistic inquiry concerns “discovery” only, not “verification.”

Mixed (Multiple) Methods
The next question was how to utilize quantitative and qualitative methods. Greene, Caracelli, and Graham [4, p. 259] identified five purposes of mixed methods: “triangulation,” “complementation,” “development,” “initiation,” and “expansion.” The first purpose, triangulation, is to maximize the validity of findings by cross-checking using two methods. The second purpose, complementation, is to use a second method to elaborate or clarify findings obtained from an initial method. The third purpose, development, is to use findings from one method to inform the design of a subsequent method. The fourth purpose, initiation, is to
uncover new insights by comparing consistent and contradictory outcomes from two methods. The fifth purpose, expansion, is to extend the scope of inquiry by investigating different components (e.g., reading processes and outcomes) using different methods. The author decided to employ mixed-methods for the third purpose, development, by using a quantitative survey in the first phase to identify purposive sample(s) or meaningful target group(s) to be investigated in-depth in subsequent phases, using qualitative methods including annotation analysis, interviews, and "naturalistic laboratory" observation. In other words, this design uses a quantitative survey to situate subsequent qualitative data in "a broader context" and identify "representative cases" [6, p. 6]. This design meets the author’s purposes for conducting naturalistic inquiry by enabling her to identify in advance characteristics of people who demonstrate active reading by making annotations (e.g., underlines, highlights), thereby increasing the likelihood that data gathered in the later qualitative research phases will represent participants’ natural active reading behaviors rather than those prompted by the researcher.

Conclusion
For her dissertation research, the author will take a ‘naturalistic inquiry’ approach utilizing a quantitative method (i.e., closed-ended survey) and qualitative methods (i.e., qualitative on-site interviews, “naturalistic laboratory” [5, p. 380] observation, document examination). This means that although she will not employ an ethnographic approach by visiting real sites, she will still try to collect data that are as naturalistic (i.e., context-sensitive) as possible. Does this mean that the study is neither qualitative nor quantitative research? From this experience, the author has come to the conclusion that it might be more accurate to say that there is a spectrum of research design from an extreme quantitative approach (e.g., artificial laboratory) that requires complete control (manipulation) over a target phenomenon to seek one absolute truth, to a middle approach (e.g., "naturalistic laboratory") that requires a minimum amount of control over a target phenomenon to seek relative or constructive truths, to an extreme qualitative approach (e.g., ethnography) that prohibits any control (manipulation) over a target phenomenon. In short, each study, according to its own purposes, must be situated appropriately between the two extremes of purely quantitative methods involving only numerical measurement on the one hand (for one absolute truth) and purely qualitative methods involving only textual reporting on the other (for relative or constructive true).

References


