Qualitative, Quantitative and Mixed Methods: An Overview

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The knowledge claims, the strategies, and the method all contribute to a research approach that tends to be more quantitative, qualitative, or mixed. Table 1.4 creates distinctions that may be useful in choosing an approach for a proposal.

A **quantitative approach** is one in which the investigator primarily uses postpositivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data.

A **qualitative approach** is one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (i.e., the multiple meanings of individual experiences, meanings socially and historically constructed. with an intent of developing a theory or pattern) or advocacy/participatory perspectives (i.e., political, issue-oriented, collaborative. or change oriented) or both. It also uses strategies of inquiry such as narratives, phenomenologies, ethnographies, grounded theory studies, or case studies. The researcher collects open-ended. emerging data with the primary intent of developing themes from the data.

A **mixed methods approach** is one in which the researcher tends to base knowledge claims on pragmatic grounds (e.g., consequence-oriented, problem-centered, and pluralistic). It employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews) so that the final database represents both quantitative and qualitative information.

Table 1.4 Qualitative, Quantitative, and Mixed Methods Approaches

Tend to or Typically	*Qualitative Approaches*	*Quantitative Approaches*	*Mixed Methods Approaches*
Use these philosophical assumptions Employ these strategies of inquiry	Constructivist/Advocacy/ Participatory knowledge claims Phenomenology, grounded theory, ethnography, case study, and narrative	Postpositivist knowledge claims Surveys and experiments	Pragmatic knowledge claims Sequential, concurrent, and transformative
Employ these methods	Open-ended questions, emerging approaches, text or image data	Closed-ended questions, predetermined approaches, numeric data	Both open- and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
Use these practices of research, as the researcher	Positions himself or herself Collects participant meanings Focuses on a single concept or phenomenon Brings personal values into the study Studies the context or setting of participants Validates the accuracy of findings Makes interpretations of the data Creates an agenda for change or reform Collaborates with the participants	Tests or verifies theories or explanations Identifies variables to study Relates variables in questions or hypotheses Uses standards of validity and reliability Observes and measures information numerically Uses unbiased approaches Employs statistical procedures	Collects both quantitative and qualitative data Develops a rationale for mixing Integrates the data at different stages of inquiry Presents visual pictures of the procedures in the study Employs the practices of both qualitative and quantitative research

Match between problem and approach is important

Certain types of research problems call for specific approaches. For example, if the problem is identifying factors that influence an outcome, the utility of an intervention, or understanding the best predictors of outcomes, then a quantitative approach is best. It is also the best approach to use to test a theory or explanation. On the other hand, if a concept or phenomenon needs to be understood because little research has been done on it, then it merits a qualitative approach. Qualitative research is exploratory and is useful when the researcher does not know the important variables to examine. This type of approach may be needed because the topic is new, the topic has never been addressed with a certain sample or group of people, or existing theories do not apply with the particular sample or group under study.

A mixed methods design is useful to capture the best of both quantitative and qualitative approaches. For example, a researcher may want to both generalize the findings to a population and develop a detailed view of the meaning of a phenomenon or concept for individuals. In this research, the inquirer first explores generally to learn about what variables to study and then studies those variables with a large sample of individuals. Alternatively, researchers may first survey a large number of individuals, then follow up with a few of them to obtain their specific language and voices about the topic. In these situations, the advantages of collecting both closed-ended quantitative data and open-ended qualitative data prove advantageous to best understand a research problem.