What does it mean to ‘do research’?

Part two

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As Part I left off, the following outline and categories explain the differences between various research approaches.

I Quantitative research
  II Qualitative research
    • Phenomenology
    • Ethnography
    • Case study
    • Grounded theory
    • Historical
  III Mixed research

Quantitative research — is research that involves an investigative approach that is often used in science, medical and dental milieu, it refers to the systematic and empirical investigation of a social phenomenon via statistical, mathematical or computational techniques and developing or employing mathematical models, theories and hypotheses pertaining to phenomena.

The process of measurement is vital to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of quantitative relationships. Quantitative data is any data that is in numerical form such as statistics, percentages, etc., and relies on the collection of quantitative data and typically follows all the paradigms characteristics of quantitative research, which is either experimental or non-experimental research. The basic building blocks of quantitative research are variables. Variables are the opposite of constants (something that cannot vary, such as a single value or category of a variable).

Qualitative research — is research that relies on the collection of qualitative data by seeking out the “why,” not the “how” of its topic through the analysis of unstructured information, such as interview transcripts, open-ended survey responses, e-mails, notes, feedback forms, photos and videos. It doesn’t just rely on statistics or numbers, which are the domain of quantitative researchers. A qualitative research study is an investigatory approach or method of inquiry employed in many different academic and social sciences disciplines that are concerned with society and human behaviors.

These include: anthropology, archaeology, economics, education, linguistics, political science, international relations, sociology, geography, history, law and psychology. A qualitative research study is used frequently of market research, which is any organized effort to gather information about customers or markets and often a very important component of business strategy. Qualitative researchers aim to gather in-depth understanding of human behavior and the reasons that govern such behavior, pursuing the why of decision-making and not just what, where or when.

Qualitative research is used to gain insight into people’s attitudes, behaviors, value systems, concerns, motivations, aspirations, cultures or lifestyles. It’s used to inform business decisions, policy formation, communication and research. Focus groups, in-depth interviews, content analysis, ethnography, evaluation and semiotics are among the many formal approaches that are used, but qualitative research also involves the analysis of any unstructured material, including customer feedback forms, reports or media clips.

Collecting and analyzing this unstructured information can be messy and time consuming using manual methods. When faced with volumes of materials, finding themes and extracting meaning can be a daunting task.

Below are examples of five different types of qualitative research approaches:

• Phenomenology — The researcher attempts to understand how one or more individuals experience a phenomenon. For example, interviewing widows and asking them to describe their experiences of the deaths of their husbands. Phenomenological research investigates various reactions to events or a particular phenomenon. It assumes some commonality to the perceptions of human beings and how they interpret similar experiences, seeking to identify, understand and describe these commonalities.

• Ethnography — The researcher focuses on describing the culture of a group of people. Note that a culture is the shared attitudes, values, norms, practices, language and material things of a group of people. For example, deciding to live in Mohawk communities and study the culture and their educational practices.

• Case study — The researcher focuses on providing a detailed account of one or more cases. For an example, studying a classroom that was given a new curriculum for technology use.

• Grounded theory — This is an approach to generate a theory of decision making that involves an investigative approach and may not reflect those of Dental Tribune America. It is research that involves the mixing of quantitative and qualitative methods or paradigm.

• Mixed research — is research that involves the mixing of quantitative and qualitative methods or paradigm.

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