Module: Research Methodology

Level: Master 1

Lecture: 02

QUANTITATIVE/ QUALITATIVE APPROACH / TRIANGULATION

According to Drake and Heath (2011), social science academics often struggle with deciding between quantitative and qualitative approaches. Thus, selecting one approach over another should be rationalized based on questions about **what** and **how** to study. However, the two approaches have been approached from different perspectives. Quantitative research prioritizes objectivity, repeatability, and verifiability of findings, which are frequently based on statistics or experimental data. However, this approach could ignore complex details about human experience, context, and subjective understanding, reducing the accuracy of conclusions. Qualitative research seeks to understand human behavior, emotions, and social contexts, gathering details and meanings that numbers cannot. Drake and Heath argue that objectivity in quantitative research could ignore particular insights that can add depth to our understanding of complex phenomena. In token of that some academics believe that there is an idea that qualitative research is subject to bias and, worse, may not be considered scientific. Similarly, Tavakoli (2013) argues that both quantitative and qualitative approaches are open to bias. In qualitative research, the researcher acts as the research instrument, which can lead to bias or incorrect interpretations. On the other hand, bias in quantitative research may also happen due to poor sampling or analysis.

Qualitative Research Bias

1/ Researcher's Personal Bias: Studying the effects of social media on learners' self-development and what if the researcher personally believes social media is harmful so that he may focus more on negative experiences rather than exploring positive impacts.

2/ Interpretative Bias: A participant mentions feeling "pressured," the researcher may interpret this as evidence of social media's negative influence, even if the participant didn't explicitly say that. In this regard, researcher's interpretation might align with their own preconceptions

3/ Selection Bias: A researcher who only interviews students from one specific department might end up with biased results

Quantitative Research Bias

1/ Sampling Bias: Literary study that focuses mainly on works from Western literature while ignoring important contributions from non-Western literature.

2/ Measurement Bias: How satisfied are you with your specialty's selection? if the questions are overly positive, this might bias the data

3/ Analysis Bias: In an experiment on the impacts of a new method in teaching, reporting results from participants who responded well and ignoring those who didn't can lead to an analysis bias.

Quantitative Approach

Converting variables into quantifiable data that can be statistically interpreted from various angles is the main goal of the quantitative approach. Finding the pattern that connects variables is the task at hand once sufficient data has been acquired. In order to identify patterns from the data, various analytical techniques are applied. Distributional analysis (Distributional analysis is a

method used in linguistics to examine how words and structures are distributed in language data), multivariate analysis, statistical significance, constraint ranking, relative strength, and comparison are a few examples of basic operations that a researcher could use. Or, he/she would opt for more advanced programming languages like SPSS which would yield a more in-depth analysis of the behavior of variables.

Qualitative Approach

The type of questions asked undoubtedly influences the decision to use one strategy over another. It is a truism that the quantitative approach has advantages as it provides reliable and objectively proven data, however, the call for the qualitative approach is essential. First and foremost, the two approaches are thought to complement one another from a purely methodological point of view (Novikov & Novikov, 2013). Dependency on the qualitative approach is unavoidable since the majority of studies on social phenomena cannot avoid using data collection methods like case studies, interviews, and observation (Mackey & Gass, 2010).

	Qualitative	Quantitative
Conceptual	Concerned with understanding human behaviour from the informant's perspective	Concerned with discovering facts about social phenomena
	Assumes a dynamic and negotiated reality	Assumes a fixed and measurable reality
Methodological	Data are collected through participant observation and interviews	Data are collected through measuring things
	Data are analysed by themes from descriptions by informants	Data are analysed through numerical comparisons and statistical inferences
	Data are reported in the language of the informant	Data are reported through statistical analyses

Source: Adapted from Minchiello *et al.* (1990, p. 5)

The Mix-Method Approach

The qualitative approach has benefits, even though the quantitative approach may be considered more beneficial. As a result, occasionally using both strategies—known as the "mixed methods approach"—is required. The idea refers to the process of combining qualitative and quantitative data in a single piece of writing. The idea behind this methodology's adaptation is that, even though statistics from measured data and outcomes of the work, numbers by themselves are insufficient to draw conclusions. To address questions about people and their attitudes, a deeper and more personal perspective is required.

Triangulation Method

Triangulation is described as "measuring the same concept using two or more methods" by Kadushin et al. (2008, p.61). In each method, the underlying or hidden concept is measured after indicators of the concept have been gathered. Triangulation refers to the use of two or more data collection tools, as compared to the use of both quantitative and qualitative approaches in the same study. Triangulation can be used to capture various aspects of the same phenomenon rather than just validating data.

Eg: Learners' engagement in online English sessions

In Literature

Textual Analysis Method:

To examine themes, symbolism, motifs, narrative devices, and stylistic elements in primary texts, including plays, novels, poems, and short stories. You can use discourse analysis to

understand language patterns and meanings, or you can use close reading to look closely at particular passages.

Content Analysis Method:

To measure and examine the frequency of specific words, themes, or ideas in literary works. In order to do this, the text must be coded for common themes or symbols that can be collected and statistically examined. Both quantitative and qualitative data can be obtained through content analysis, which offers a comprehensive picture of common themes in various texts**.**

Historical Research Approach:

To understand the historical, cultural, or biographical elements that may have influenced the meaning of a literary work, as well as the context in which it was written. Literature can be placed in a wider context by reading through historical documents, biographies, letters, and works from the same era. This approach offers literary texts' qualitative background information.

In Civilization

Historical Diachronic Approach:

To divide the research into comprehensible and important historical eras so that changes and continuity can be clearly seen over time. Determine significant dates, occasions, or historical periods that are relevant to the subject (e.g., ancient, medieval, modern, and contemporary periods). A timeline for tracking changes in themes, values, practices, or structures is produced by defining periods.

Chronological Approach:

To put past events in chronological order in order to better understand their chronology and reasons. This method depends on the sequence of events to emphasize connections between them.

It helps in following the development of a movement, event, or trend and is especially helpful for understanding how social or political developments have changed over time.
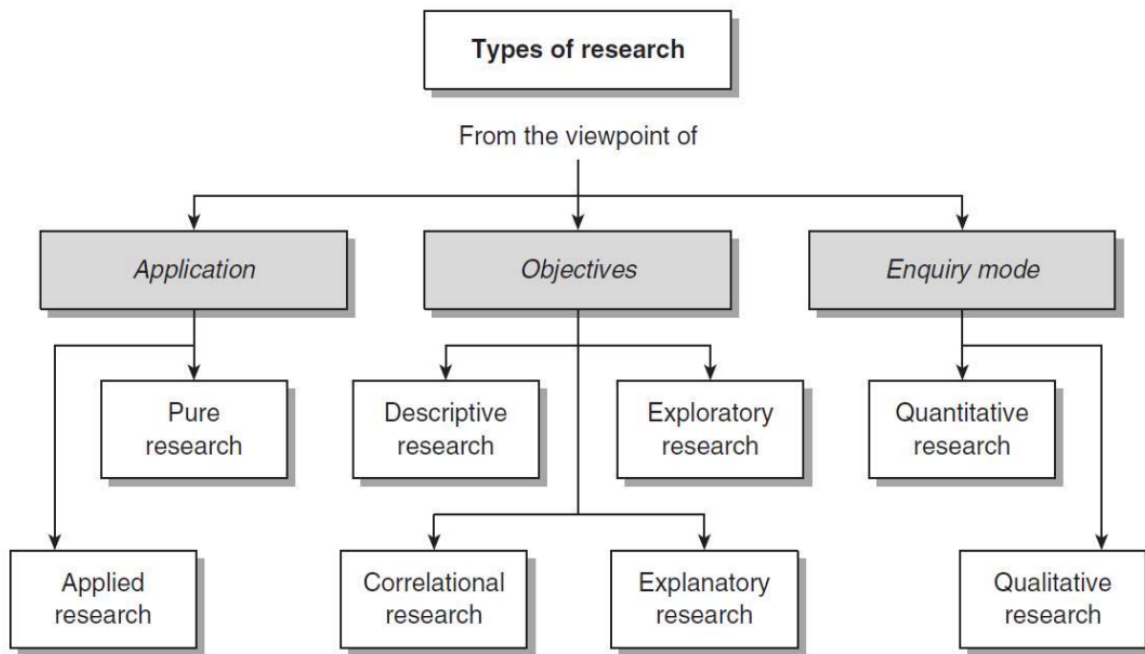
Types of Research

Figure 1. Types of Research. Retrieved from (Kumar, 2011)