



## A review of methodological choice: Research paradigm underpins

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### Abstract

This paper focuses on removing the ambiguity regarding selecting the research methodology when embarking on a research project by the researcher in the social science phenomenon. Quantitative, qualitative, and mixed methods are the dominant methodologies in the social research milieu. Choosing an appropriate methodology is determined by the research paradigms (positivism, interpretive, transformative, and pragmatism). These paradigms are differentiated by the philosophical assumptions (ontology, epistemology, and research method). Therefore, the researcher should be aware of their philosophical assumptions because they inevitably shape the whole research project.

*Keywords: positivism, interpretive, transformative and pragmatism*

### Introduction

Indeed, a methodology is a vital element for high-quality field research; it is a generic approach used by researchers to conduct the research study (Silverman, 2016). It is a systematic way to solve a research problem. Before 1980, the quantitative approach dominating the forms of research in the social science research milieu, which originated in the natural sciences such as Physics, Biology, Chemistry, Geology, etc., and it was concerned with investigating stuff which could be observed and measured in some way (Morgan & Smircich, 1980; Stephen & Hamza, 2015). Later on “paradigm wars” between quantitative and qualitative research proponents reached a new peak (Stephen & Hamza, 2015). Some researchers within the social sciences had argued that the quantitative approach becomes dissatisfaction for the inquire of the individual being studied (Morgan & Smircich, 1980). Consequently, of this argument, the researchers begun to discover alternative ways of researching the social science atmosphere; as a result of this, the qualitative method was developed and then interest in qualitative research increased (Creswell, 2015). Further, some of advocators in social science criticize both methods and suggest combining both the qualitative and quantitative approaches and offering ‘the best of both worlds’ (Dornyei,



2007). Then mixed method research has also been used in contemporary social science research.

Selecting the appropriate methodology for inquiring is essential because different research methods can answer the same research question, but it will produce the different results and inappropriate research strategy will produce a spurious result (Siti Fatimah, 2010). Therefore, this paper endeavors to offer a detailed understanding of the research methodology for doing a research study.

### **Literature Review**

Stephen and Hamza (2015) state that all research studies are grounded on some underlying philosophical assumptions regarding what constitutes 'valid' research and which research method is appropriate for improving knowledge. Choosing the research methodology depends on the Research Paradigm that guides the research project. Guba and Lincoln (1994) documents that a paradigm is associated with the concepts of ontology (nature of truth and reality), epistemology (how to researcher know the truth and reality), and method.

### **Methodology**

To identify how to select the appropriate research methodology for inquiring the research problem, this study has been chosen last 40 years of peer-reviewed journal articles, conference papers and book. These selected materials mostly discuss the philosophical assumptions and research paradigms but not more talk about the methodology choice clearly. Through the review, those contribute to the objective of this study.

### **Discussions**

Research Paradigm is a set of beliefs and assumptions of different theories and practices used to carry out research projects (Cohen, Manion, & Morrison, 2007). The question regarding the research methods is secondary importance to paradigm (Guba & Lincoln, 1994) because the choice of research methodology depends on the paradigm that guides the research project (Stephen & Hamza, 2015). Figure-1 depicts Research 'onion' that adds that more value paradigm is the prior step than methodological choices in the research project. Paradigm is the first outer layer of the onion.

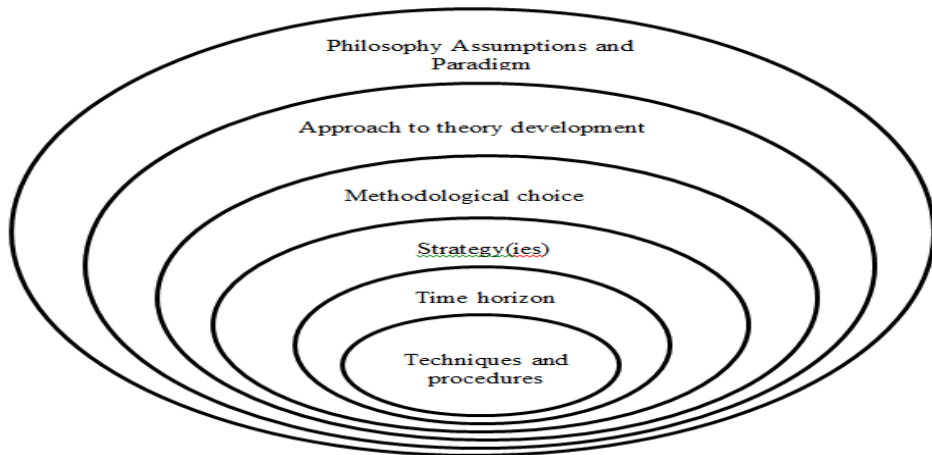


Fig 3. The research 'onion' Adapted from Research Methods for Business Students (5<sup>th</sup> ed.) (p.138), by Saunders, Lewis and Thornhill, 2011.

A lot of the theoretical paradigms are argued in the previous literature such as functionalist, positivist (and post-positivist), interpretive, constructivist, radical humanist, and radical structuralist, transformative, emancipatory, critical realism, postmodernism, pragmatism and deconstructivist (Arghode, 2012; Burrell & Morgan, 1979; Creswell, 2003; Creswell, 2015; Fazliogullari, 2012; Guba & Lincoln, 1994; Mackenzie & Knipe, 2006; Stephen & Hamza, 2015). However, most recent literature documented that there are four significant paradigms in social science phenomena: positivism (post-positivist), constructivism/ interpretive, transformative, and pragmatism (Creswell, 2003; Creswell, 2015; Mackenzie & Knipe, 2006). Different authors have used different terms for each paradigm (Mackenzie & Knipe, 2006). Therefore, reason confusion regarding how many research paradigms there are has arisen among the researchers when they embark on research projects.

These four paradigms are different by philosophical assumptions about science's nature (ontological, epistemological, and methodological aspects) (Fazliogullari, 2012; Mackenzie & Knipe, 2006). The views of social science's nature concerning the two extreme positions of the continuum: either an objective or a subjective approach to research (Burrell & Morgan, 1979). The objectivist approach in social science research has been developed from the natural sciences. Objectivism has been growing criticized as an unfitting approach to investigate social science phenomena. Subjectivism's proponents feel that subjectivism is more relevant to studying social science phenomena due to the complex nature of social science research, that is,



human beings. Later on, the subjectivism approach arose as critics argued, and continue to argue, that both natural and social sciences are disparate. Table 1 illustrates the comparison of the main paradigms about ontology, epistemology, and research methods.

Table 1. Comparison of the main paradigms concerning ontology, epistemology, and research methods

	<b>Positivism</b>	<b>Constructivism/ interpretivism</b>	<b>Transformative</b>	<b>Pragmatism</b>
<b>Ontology</b>	The reality is <b>objective</b> , perceived, external, independent and ordered; Universal true reality for instance researchers reject or fail to reject hypotheses.	The reality is <b>subjective</b> , complex, and socially constructed through culture and language; Reality is socially or experimentally based, local, and specific in nature.	Reality as complex and nominal; Socially constructed through political power relations; The realities are dominated and silenced by others.	Reality as complex, external and it is the practical consequences of ideas; Pluralist
<b>Epistemology</b>	Data, evidence shape knowledge. For instance researcher objectively collects data on instruments based on measures completed by observations recorded, thus developing numeric measures of observations; Measurable facts Law that needs to be tested or verified and refined.	The knowledge consists of mental structures that are surrounded by the relative agreements; Theories and concepts too simplistic; Focus on narratives, stories, perceptions and interpretations; New understandings and worldviews as contribution and collaboration (e.g researchers actively involve participants as collaborators).	Knowledge and truth is decided by dominant ideologies and intertwined with political agenda.	Focus on problems, practical applied research, integrating different perspectives to help interpret the data
<b>Research methods</b>	Deductive approach; Highly	Inductive approach; Small samples, in-	Deconstructive reading texts and realities	Range of methods: mixed,



structured and large samples, measurement; Quantitative methods of analysis, but a range of data can be analyzed.	depth investigations; Qualitative methods of analysis, but a range of data can be interpreted	against themselves; Range of data types, typically qualitative methods of analysis	quantitative, multiple, qualitative, action research
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Adapted from Creswell (2003); Creswell, (2015); Hitchcock and Hughes (1986) Mackenzie and Knipe (2006) ;Saunders et al. (2011)

Mackenzie and Knipe (2006) state that paradigms determine which methodology (qualitative/quantitative or mixed) and data collection would be the most suitable for research. Kuhn (1962) said that throughout the research, the researchers remain within a paradigm in which they are chosen. Positivist paradigm predominantly uses a quantitative methodology for data collection and analysis, while the generally interpretivist operate using a predominantly qualitative methodology (Bogdan & Biklin, 1998; Burns, 1997; Cohen & Manion, 1994; Creswell, 2015; Mackenzie & Knipe, 2006). The pragmatic paradigm operates using a predominantly mixed methodology (Creswell, 2003, p.12). Likewise, the transformative paradigm agrees to apply both quantitative and qualitative research methodology (Mackenzie & Knipe, 2006). Table 2 despite how research methodology cross paradigm boundaries.

Table 2. Paradigms and Methodology

	Positivism	interpretivism	Transformative	Pragmatism
<b>Methodology</b>	Even though this paradigm can use qualitative, but usually quantitative method dominate.	Qualitative methods dominate although quantitative methods can be used, too.	Qualitative, quantitative and mixed methods.	Qualitative and/or quantitative methods can be used.

Adapted from Creswell, (2015); Mackenzie and Knipe (2006).

## Conclusions and Recommendations

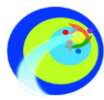
The research is directed by the paradigms' philosophical assumptions (ontology, epistemology and research method), determining the methodology suitable for the research. The paradigms are different from these assumptions. And the paradigms determine which methodology is suitable for the research. In the contemporary world, there are three popular research methodologies used in social phenomenon research. Those are quantitative, qualitative, and mixed methods research methodology.



Quantitative and qualitative represent different ends on a continuum along with assumption i.e., highly objectivist (positivist paradigm) underpins more quantitative than qualitative methodology. In contrast, the other end of the continuum, the highly subjectivist (constructivism/ interpretive paradigm) underpins more qualitative than quantitative methodology. The mixed-method resides in the middle of this continuum (transformative and pragmatism paradigm) because it incorporates elements of both quantitative and qualitative methodologies. Neither of these methodologies is better than the other; the suitability of which needs to be decided by the assumption, paradigm, context, purpose and nature of the research study in question. Sometimes one can be alternatives to the other depending on the kind of study.

### References

- Arghode, V. (2012). Qualitative and quantitative research: Paradigmatic differences. *Global Education Journal*, 2(4), 155-163.
- Bogdan, R., & Biklin, S. (1998). *Qualitative research for education: An introduction to theory and methods* (3rd ed.). Boston: Allyn and Bacon.
- Burns, R. (1997). *Introduction to research methods* (3rd ed.). Australia: Longman.
- Burrell, G., & Morgan, G. (1979). *Sociological paradigms and organizational analysis*. London: Heinemann Educational Books.
- Cohen, L., & Manion, L. (1994). *Research methods in education* (4th ed.). London: Routledge.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education* (6th ed.). Oxon, Routledge, UK.
- Creswell, J. (2003). *Research design: Qualitative, quantitative and mixed method approaches* (2nd ed.). California: Sage.
- Creswell, J. (2015). *Research design: Qualitative, quantitative and mixed method* (4th ed.). California, USA: Sage: Publications Inc.
- Dornyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford: Oxford University Press.
- Fazlhogullari, O. (2012). Scientific research paradigms in social sciences. *International Journal of Educational Policies*, 6(1), 41-55.
- Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. D. (eds), *Handbook of Qualitative Research* (pp. 105–170). London: Sage.
- Hitchcock, G., & Hughes, D. (1986). *Research and the Teacher*. London: Routledge.



- Kuhn , T. (1962). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Mackenzie , N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues In Educational Research*, 16(2), 193-205.
- Morgan, G., & Smircich, L. (1980). The case for qualitative research. *Academy of Management Review*, 5(4), 491-500.
- Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students* (5th ed.). New Delhi, India: Pearson.
- Silverman, D. (2016). *Qualitative research* (4th ed.). London: SAGE.
- Siti Fatimah, B. (2010). Qualitative versus quantitative research strategies: contrasting epistemological and ontological assumptions. *Jurnal Teknologi*, 52(1), 17-28.
- Stephen , K., & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management*, 7(3), 217-225.