

Article

Qualitative research: Understanding its underlying philosophies

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Abstract: In the realm of research, it is emphasized that research must be grounded in a clearly stated research philosophy and set out early in the research process. It is significant because research philosophy enables researchers to promote clarity and decisions about the research design and guide them in identifying a suitable design. Therefore, understanding the underlying philosophies of qualitative research is crucial for researchers, especially those who are just starting their journey in this field. This paper aims to provide beginning researchers with a basis for the development of key philosophical understandings related to qualitative research. A descriptive analysis of the philosophies of ontology and epistemology and the subsets of philosophical foundation of qualitative research. The paper serves as a basis for novice researchers to distinctively identify the philosophical underpinnings of qualitative research and as a resource that enables and guides them towards designing and conducting qualitative studies.

Keywords: qualitative research; ontology; epistemology; realism; relativism; constructivism; interpretivism

1. Introduction

The intersection between research and philosophy is a dynamic and multidimensional space, where philosophical perspectives shape the foundational principles, methodologies, and interpretations of research. As far as research philosophy is concerned, there are distinct differences between the philosophies of quantitative and qualitative research [1], and these differences influence how researchers approach the study of phenomena. As a matter of fact, a fundamental challenge that the research world highlights and many novice researchers face is the philosophical underpinning of research that serves as the foundational framework for designing and conducting a study. According to Mkansi and Acheampong [2] research philosophies such as the concepts of ontology, epistemology, and axiology can indeed be a source of confusion for research students, particularly when navigating the quantitative-qualitative debates. Contemporary scholarship also highlights the persistence of the aforementioned challenge [3,4]. Quite naturally, research philosophy matters [4] and research students may find themselves in a dilemma when choosing between these paradigms. Understanding the implications of these philosophical choices is crucial for aligning research methods with the goals of the study. However, literature on research philosophies are scant. In the existing literature the philosophical terminology is complicated and poorly defined [5].

Therefore, for novice researchers who grapple with navigating the research

landscape for clarity and purpose, an introductory literature survey that serves as a guide broken into simpler terms is in demand. This study accounts for a response to that call and demystifies research philosophies for the beginners within the context of qualitative research. This study contributes to building a foundation upon which novice researchers can confidently embark on their research journeys and can make informed decisions with confidence about research methodology.

2. Objectives and research questions

The objective of this study is to synthesize different philosophical underpinnings of qualitative research methods through literature review. To achieve this goal, the study poses the following research questions:

What are the fundamental philosophies of qualitative research?

3. Methods

3.1. The study

This study by type is unsystematic, uncritical and a selective review of literature concerning the topics that offer simple grasps of synthesized threads of ideas about different philosophies that underpin qualitative research. This is a simplified literature review article in the sense that it is based on the authors' understanding of research philosophies coupled with prior scholarly literature in the chosen topic. Explicitly reviewing the ideas regarding a topic (in this example, "qualitative research") is one of the roles of narrative literature reviews, which this study can somewhat correlate with Pae [6].

3.2. The data

As obvious from the research nature stated above, the present study does not essentially employ any empirical data. Instead, the study runs a general survey of the existing literature that deals with various philosophies of qualitative research. Put otherwise, this study is based on secondary data. Asynchronous literature searches were accomplished the authors. The search activities were linear with the order of the topics around research philosophies, without following any review protocol practice of systematic review [7]. The literature searches ended up with relevant definitional, and illustrative texts and excerpts which the authors copied and inserted in this paper either as direct quotations or as paraphrases with appropriate citations.

3.3. Analysis

The study did not fundamentally entail any synthesis and criticism from an analytical standpoint or approach because it is not a systematic literature review. But first, a random general literature review was conducted, followed by database searches, a classification of the studies based on their recentness, relevancy, and compatibility with the Scopus and WoS indexes, and a detailed examination of the highlighted sections of the chosen articles. Elo and Kyngäs [8] align this episodic survey with qualitative content analysis. In order to contribute to a comprehensive grasp of the distinguishing traits and guiding principles of qualitative research, the matched and

pertinent chunks are copied and incorporated into the textual aggregates. As a result, the paper functions as a comprehensive introduction of research philosophies for inexperienced researchers entering the qualitative research field.

4. Results of literature survey

4.1. What is qualitative research

Unlike quantitative research, which focuses on quantifiable variables and statistical analysis, qualitative research seeks to understand phenomena from a subjective perspective, exploring meanings, interpretations, and experiences. Aspers and Corte [9] define qualitative research "as an iterative process in which improved understanding to the scientific community is achieved by making new significant distinctions resulting from getting closer to the phenomenon studied." As for the importance and purposes of qualitative research, Morse and Field [10] maintain that "the contribution of qualitative research is both vital and unique to the goals of research in general. Qualitative research enables us to make sense of reality, to describe and explain the social world and to develop explanatory models and theories. It is the primary means by which the theoretical foundations of social sciences may be constructed or re-examined". Henwood [11] points to the methodological process of qualitative research as "careful looking, listening, recording, and contextualizing people's "real-world" experiences, thoughts, and actions..." A further pattern of qualitative research that is often acknowledged is that "most qualitative research relies on the researchers' close engagement with the data that they collect and analyze" [12]. For data collection, qualitative research employs the methods including structured interviews, semi-structured interviews, unstructured, i.e., open interviews, and group discussions or focus groups to capture the subjective view and meaning of an area of study [13]. In addition, qualitative research takes on inductive and deductive approaches for data analysis [14]. Qualitative research is widely used in disciplines such as anthropology, sociology, psychology, education, and health sciences, offering valuable insights into diverse aspects of human behavior, culture, and society.

4.2. What is research philosophy

To put in simple words, a research philosophy refers to a researcher's fundamental beliefs or assumptions about the nature of reality, knowledge, and the process of inquiry. Any research study starts from the researcher's philosophical assumptions. That is, a researcher takes a foundational perspective on what reality is, how we can know things, and how we go about learning new information. It is like the lens through which the researcher sees the world and conduct their studies. In this regard, Mbanaso et al. [15] emphasize that "the researcher must be grounded in a clearly stated research philosophy, early in the research process". Precisely, the philosophical beliefs guide how researchers should perceive the world, approach their research, and interpret their findings of an undertaken research. From this perspective, research philosophy is an influencing force that plays a deterministic role in three major things: the questions we ask, the methods we use, and the ways we interpret our results.

4.3. Categories of research philosophies

Research philosophies can be divided into some broad categories. The categorical diversity of research philosophies suggests two important things. One, researchers need to have a clear understanding of each research philosophy. Two, they have options to draw from more than one philosophy to develop hybridity in approaching the research questions, research contexts, and research methods. For example, mixed-method approach is based on two philosophies—positivism and constructivism [16–18]. Broad categories of philosophies are discussed below:

4.4. Epistemology

Audi [19] defines that "epistemology, or "the theory of knowledge," is concerned with how we know what we know, what justifies us in believing what we believe, and what standards of evidence we should use in seeking truths about the world and human experience" (P. Epistemology, i). In other words, epistemology is the branch of philosophy that deals with questions about knowledge, belief, justification, and the nature of truth. An epistemological stance on the nature of knowledge is that it is typically understood as justified true belief. That being said, for something to count as knowledge, it must be true. Besides this, the believer must have good reasons or evidences for believing it. In addition, those reasons or evidences must actually be the basis for the belief. Epistemologists consider various sources or avenues through which we acquire knowledge. These sources or avenues may include sensory perception, reasoning, intuition, memory, testimony from others, and introspection.

It is to be noted that understanding the reliability and limitations of these sources is crucial for understanding how we come to know things about the world. This understanding requires justification of our beliefs. Reasons or evidences may support these beliefs. Sufficient empirical evidences may justify our beliefs. Logical or conceptual coherence may help justify our beliefs. Epistemologists explore various theories of justification to understand when our beliefs can be considered well-founded or reasonable. When beliefs suffer from the lack of justification, epistemological arguments intervene in the inevitable doubts about and genuine threats to knowledge. To address these challenges of skepticism, epistemologists offer some epistemic norms, principles and standards for acceptance or rejection of any kind of evidences.

To add, epistemology addresses these questions through various theories and approaches including empiricism, rationalism, skepticism, foundationalism, coherentism, and pragmatism, among others [20–25]. Thus, epistemology is a fundamental area of inquiry in philosophy that underpins our understanding of the world and our place in it. The above cited theories and approaches are discussed below:

4.5. Empiricism

Empiricism is a philosophical approach that emphasizes the role of experience and evidence, particularly sensory experience, in the formation of ideas and knowledge. According to Calvente and Manzo [26], "Broadly speaking, "empiricism" is a label that usually denotes an epistemological view that emphasizes the role that experience plays in forming concepts and acquiring and justifying knowledge". It holds that knowledge comes primarily from sensory experience and observation rather

than from pure reason or speculation. That is, we make sense of any phenomenon or object of the world by seeing it, hearing it, touching it, tasting it or smelling it. Empiricists emphasize that sense experience is the only guide to understanding the world [27]. They argue that all meaningful concepts and knowledge claims must be grounded in experience. Empiricist experience may be direct (such as through sensory perception) or indirect (such as through experimentation or observation of empirical data). Empiricism and qualitative research share some common ground in their emphasis on the importance of observation, experience, and evidence in the pursuit of knowledge. For example, if a researcher has decided to investigate some teachers' teaching practices through a qualitative research, a direct experience of observing (sensory experience of seeing, and hearing) the classroom of those teachers can help the researcher understand their teaching practices. Thus, the principles of empiricism align with the process of conducting qualitative research to understand teachers' teaching practices through direct observation. By prioritizing sensory experience that is turned into empirical data, researchers can gain valuable insights into the complex dynamics of teaching and learning in real-world educational settings.

4.6. Rationalism

Rationalism is a philosophical stance where we are all rationalists and that reason is the primary source and means of acquiring knowledge and understanding the world [28,29]. Unlike empiricism, which emphasizes sensory experience and observation, rationalism asserts that certain truths and knowledge can be grasped through reason alone, independently of experience. In that sense, rationalism is opposed to empiricism. Rationalists argue that there are innate ideas or principles that exist within the mind, and through rational reflection and deduction, one can uncover these truths. Rationalists argue that certain mathematical principles, such as the concept of numbers, geometric shapes, and logical relationships, are not learned from sensory experience but are inherent in the structure of the mind. For instance, why is two, a two? We believe two is two (more than one but less than three) not because of sensory experience but because of an innate grasping capacity in us. Let us suppose that you want to explore the development of moral reasoning in children. This study then aligns with rationalist principles because it does not depend on sensory experience of the children but investigates the existence of innate cognitive structures that may underlie moral understanding and decision-making.

4.7. Skepticism

According to Tate [30], skepticism emerges from an epistemological judgment that concerns the possibility of knowledge. Skepticism and epistemology intersect in the realm of questioning knowledge and its attainability. Skepticism refers to the attitude of doubting or questioning the validity or truthfulness of claims, beliefs, or knowledge. Jash [31] maintains that basically skepticism is a philosophical attitude that casts doubt on the reliability of knowledge or questions the possibility of knowledge. Feuerstein [32] maintains that skepticism is a "tendency towards a kind of judicious doubt and promotes recognizing any information or rationale offered as limited by the perspective and/or motivations of its narrator". A skeptic typically

approaches information with a critical mindset, not readily accepting assertions without evidence or reasoning. Furthermore, skeptics may challenge assumptions about what constitutes valid evidence, reliable sources, or sound reasoning. They may also question the limits of human understanding and the possibility of achieving certain knowledge about the world. Thus, skepticism leads into the discussions within the field of epistemology about how we justify beliefs, what counts as evidence, and whether absolute certainty is attainable. Let us suppose that you want to explore the experience of some people on some certain phenomenon that they have experienced. Now, you decide to use interviews as the data collection method. Skepticism pertains here with questions that doubt about 'psychological, cognitive and biological correlations of experience' and about 'unreliability of episodic memory' of those people [33]. This complexity of experience created by the account of human cognition and memory suggests that qualitative researchers need to critically assess the trustworthiness of the data collected through interviews. Thus, this epistemological approach of skepticism influences the data analysis method of qualitative research.

4.8. Foundationalism

Foundationalism is a philosophical theory that suggests knowledge and beliefs are justified by basic beliefs, or foundational beliefs, which are self-evident or evident to the senses. These foundational beliefs serve as the ground or basis upon which all other beliefs are built. Foundationalists argue that there must be certain beliefs that do not require further justification because they are either immediately evident or indubitable. Fumerton [34] explains that some beliefs or knowledge is non-inferential and sometimes called direct knowledge. The truths that are known in this way are also called self-evident or directly evident. If there is any knowledge at all, the foundationalists argue, it is either non-inferential knowledge or, alternatively, it is knowledge that involves inferences that can be traced back ultimately to what is known non-inferentially. The famous metaphor is that all knowledge is built upon a foundation of knowledge that is non-inferential. Bouchard [35] maintains that foundationalism emphasizes the necessity to introduce truth by means of true propositions that are inherently true and do not require further justification. These truths serve as the starting point or the bedrock of knowledge, upon which all other knowledge is grounded. An example of truth or knowledge may be the geometric axiom that two parallel lines never intersect. Qualitative researchers can take a foundationalist perspective and put a set of fundamental beliefs as the grounds for theoretical and conceptual frameworks. In some other words, qualitative researchers may start with foundational theories or concepts and use them as a basis for developing more complex understandings of social phenomena through methods such as grounded theory or thematic analysis. In addition, foundationalism underscores the necessity of justifying knowledge claims based on foundational beliefs or principles. In qualitative research, this might involve providing detailed descriptions and explanations of the methods used to collect and analyze data, as well as explicitly connecting findings to the theoretical or conceptual framework that underpins the research.

4.9. Coherentism

Coherentism is a philosophical theory of epistemology that contrasts with foundationalism. While foundationalism holds that knowledge is grounded on certain basic, foundational beliefs, coherentism suggests that the justification for any belief comes from its coherence with a set of beliefs, rather than from any foundational beliefs. Young [36] explains coherentism in terms of alethic and epistemic positions and goes on to maintain that "Coherentism comes in alethic and epistemic versions. As an alethic doctrine (the coherence theory of truth), coherentism is an account of what it is for a proposition to be true. In this sense, coherentism is the theory that a proposition is true when it coheres with a system of beliefs. As an epistemic position (the coherence theory of justification), coherentism is a theory of what it is for a proposition to be justified. Coherentism in this sense is the view that one is justified in believing a proposition when it coheres with a system of beliefs". Coherence here refers to the view that beliefs are justified if they fit together in a coherent and mutually supportive way in relation to a set of other beliefs. There is a kind of holism where a belief does not stand independently but exists in the holistic set of beliefs, meaning that the justification of any individual belief is dependent on its relationship with the entire system of beliefs. This contrasts with foundationalism, which often treats beliefs as justified independently. All beliefs are justified in relation to each other within the coherent system.

In qualitative research, coherentism can influence the way researchers approach the interpretation and trustworthiness of their findings. For example, qualitative researchers often collect rich, detailed data through methods like interviews, observations, or documents collection to seek the coherence. Coherentism encourages researchers to interpret these data by considering how they fit within the broader context of existing theories, literature, and their own conceptual frameworks. Instead of seeking to match data directly to preconceived hypotheses, researchers look for patterns and themes that cohere with their existing understanding of the phenomenon under study. Furthermore, coherentism suggests that findings are validated through the coherence of interpretations rather than statistical significance or replication. To establish trustworthiness through coherence, researchers may use methods such as member checking, peer debriefing, or triangulation to enhance the coherence and credibility of their interpretations. In addition, coherentism allows for the integration of multiple perspectives and voices within qualitative research. Researchers may seek to reconcile conflicting findings or interpretations by identifying underlying patterns or themes that cohere across different viewpoints. This approach promotes a more holistic understanding of the phenomenon under study.

4.10. Pragmatism

Pragmatism is a philosophical approach that emphasizes the practical consequences of beliefs, theories and actions. It is more often referred to as the 'theory of truth' [37] and it is in essence "an account of the way people think, the way they come up with ideas, form beliefs, and reach decisions..." [38]. Pragmatism emphasizes the practical consequences of beliefs and actions. In qualitative research, this means that researchers focus on the practical implications of their findings for understanding,

addressing, or solving real-world problems. Rather than solely seeking abstract truth or theoretical coherence, researchers prioritize the usefulness and relevance of their research to stakeholders and communities. In addition, pragmatism views inquiry as a practical and ongoing process rather than a quest for absolute certainty. Qualitative researchers engage in iterative cycles of data collection, analysis, and interpretation, continually refining their understanding of the phenomenon under study. This pragmatic approach recognizes that knowledge is provisional and subject to revision in light of new evidence or changing circumstances. Precisely, pragmatism provides a philosophical foundation for qualitative research that values practical consequences, pluralism, ongoing inquiry, problem-centeredness, and action orientation. By embracing these principles, qualitative researchers can conduct research that is relevant, responsive, and impactful in addressing complex real-world issues.

4.11. Ontology

In the broadest sense, ontology is the philosophical study of the nature of being, existence, or reality. It seeks to understand the fundamental categories of being and their interrelationships. Ontology addresses questions such as; What exists? What are the basic building blocks of reality? How do different entities relate to each other? What is the nature of existence and reality? Maedche [39] defines ontology as "a philosophical discipline, a branch of philosophy that deals with the nature and the organization of being...". Philosophers try to answer questions on "being" and "the features common to all beings". When juxtaposed, "philosophical positions partly consist of ontological and epistemological assumptions. Ontological issues pertain to what exists, whereas epistemology focuses on the nature, limitations, and justification of human knowledge" [40]. It is common to speak of a philosopher's ontology, meaning the kinds of things they take to exist, or the ontology of a theory, meaning the things that would have to exist for that theory to be true. Almost similarly, Jacquette [41] offers a fundamental idea that pure philosophical ontology deals with "what is meant by the concept of being, why there exists something rather than nothing, and why there is only one logically contingent actual world".

Ontology is intertwined with qualitative research. The relationship between ontology and qualitative research is fundamental because the researcher's ontological stance shapes the entire research process, including the research questions, methodology, data collection techniques, analysis, and interpretation. There are several ontological perspectives such as realism and relativism. These are discussed below:

4.12. Realism

Realism is a philosophical perspective that posits the existence of an objective reality independent of human perception. In the realm of ontology, realism asserts that there is a world external to our minds that exists whether or not we perceive it, and that this world is governed by laws and principles that remain constant regardless of individual perspectives or interpretations. Craig [42] maintains that "the basic idea of realism is that the kinds of thing which exist, and what they are like, are independent of us and the way in which we find out about them. (p. Summary)". Erismann [43]

explains that realism is a philosophical stance that asserts the existence of certain entities beyond mere mental constructs. These entities can include universals, categories, relationships or propositions. The term "realism" carries various meanings in philosophical discourse. It can signify a contrast to idealism, suggesting the belief in the external existence of material objects irrespective of our sensory experiences. It can also pertain to direct realism in perception theory, advocating that perception directly connects us with external objects. Furthermore, it can denote moral realism, positing the existence of objective moral values. Scientific realism suggests that scientific knowledge pertains to phenomena independent of theoretical frameworks, extending even to entities not directly observable. Modal realism posits that possible worlds hold the same ontological status as the actual world. In medieval philosophy, realism predominantly refers to ontological discussions. Staudacher [44] adds that someone might adopt a realist perspective regarding entities existing in space and time, such as trees, rocks, and molecules, as well as abstract entities like numbers or values, properties such as color, or facts such as the roundness of the Earth. As realism holds one reality independent of contexts and individuals' perception, interpretations, and experiences, qualitative research is usually not compatible with realism because qualitative research takes on a relativism which holds that multiple realities are possible and they are subject to individuals' diverse interpretations and experiences. However, critical realism posits that certain elements within the social realm maintain an independent existence, irrespective of how they are interpreted, conceptualized, or labeled [45–48].

4.13. Relativism

Relativism is the philosophical standpoint that asserts there are no absolute truths or standards, and emphasizes that there is the contextual or subjective nature of truth and morality. According to Kipfer [49], it rejects the existence of a universal, objective truth, asserting instead that each viewpoint holds its own truth. What is true in Malaysia may not be true in Bangladeshi context. Morality or culture may be relative to class, or time in history, or simply to an individual's beliefs [50] or relative as well to the context in which they are adopted [51] or relative to the attitudes or faculties of each individual, or to a cultural group, or to a species [52]. Qualitative research may be based on the ontological perspective of relativism. Research in relativism entails the exploration of how individuals derive meaning from their experiences, with the perspective that reality is confined to specific contexts. Reality is understood as being shaped by various perceptual frameworks, influenced by both personal encounters and social dynamics. As a result, each individual possesses a distinctive reality. Relativism posits that realities are collaboratively formed, with 'truths' being subjective, fluid, and context-dependent, thereby situating knowledge within specific contexts. Moreover, it acknowledges the existence of multiple, potentially contradictory truths, all of which can be valid, while also recognizing that perceptions or truths may evolve over time [53,54].

4.14. Constructivism

Constructivism is an epistemological approach that suggests that individuals

actively construct their understanding and knowledge of the world through their experiences, interactions, and interpretations. It proposes that knowledge is not passively received from the outside world, but rather actively built by the mind based on the individual's experiences and mental processes. Henson [55] precisely puts that constructivism, as an epistemological approach, views all knowledge about our world as being constructed by each individual. As Gogus [56] and Giliberto [57] explain, Constructivist, derived from the noun constructivism, refers to a theory concerning both the nature of reality and the theory of knowledge (epistemology). This theory posits that humans create knowledge and derive meaning from their experiences, mental frameworks, and beliefs, which they use to interpret objects and occurrences. Constructivism underscores the significance of individual knowledge, beliefs, and skills acquired through the learning process. It suggests that understanding is formed by integrating existing knowledge with new information, allowing individuals to either embrace novel ideas or assimilate them into their preexisting worldview. Constructivism and qualitative research share a common emphasis on understanding subjective constructions of reality, contextualized interpretations, and flexible, openended inquiry. They provide complementary frameworks for exploring the complexity and diversity of human experiences and perspectives. Constructivism, for example social constructivism, "has indeed gained prominence in qualitative research..." [58].

4.15. Interpretivism

Interpretivism emphasizes the importance of understanding human behavior and social phenomena through the subjective interpretations of individuals involved. Unlike positivism, which seeks to uncover objective truths through empirical observation and measurement, interpretivism focuses on the meanings, symbols, and interpretations that people attach to their experiences. According to interpretivism, reality is not predetermined but is constructed socially through the ways individuals interpret it [59] and humans, from this perspective, are the creators of meaning [60]. "Qualitative research is often associated with interpretivism" [61] particularly for investigating the phenomenon with qualitative aspects rather than quantitative nature such as social phenomena, psychological issues, human behavior, education and others [62]. This accounts for why interpretivist paradigm is employed in qualitative research and methods such as interviews, participant observation and textual analysis are adopted to explore the meanings and interpretations people assign to their experiences. These methods allow researchers to delve into the rich complexity of human behavior and social interactions.

5. Conclusion

This article has delved into the foundational aspects of qualitative research, with a specific focus on its underlying philosophies. We have explored the fundamental relationship between research philosophy and qualitative inquiry. Research philosophy serves as the theoretical framework that shapes the researcher's perspective, guiding the entire research process from conceptualization to interpretation of findings.

Throughout this article, we have discussed various kinds of research philosophies

that inform qualitative inquiry. Epistemology, the study of knowledge and how it is acquired, plays a central role in shaping researchers' approaches to understanding reality. The paper discusses key epistemological perspectives such as empiricism, which emphasizes the importance of empirical evidence, and rationalism, which prioritizes reason and logic in knowledge acquisition. Additionally, we have explored skepticism, foundationalism, coherentism, and pragmatism as alternative epistemological stances that influence researchers' beliefs about the nature and sources of knowledge. Ontology, the study of existence and reality, has also been a focal point of our review. The paper discusses ontological perspectives such as realism, relativism, constructivism, and interpretivism, which offer distinct views on the nature of reality and the relationship between the researcher and the researched. With the discussed underlying philosophies, the paper helps the novice researchers gain a deeper understanding of the theoretical underpinnings of qualitative research. It helps them recognize the diverse epistemological and ontological perspectives that inform qualitative inquiry which is essential for researchers to critically engage with their own assumptions, biases, and interpretations. Ultimately, this awareness enhances the rigor, trustworthiness, and richness of qualitative research endeavors.

To sum up, this article serves as a comprehensive exploration of the philosophical foundations of qualitative research, shedding light on the intricate interplay between research philosophy, epistemology and ontology. By elucidating these underlying philosophies, the paper aims to provide novice researchers with a nuanced understanding of qualitative inquiry and its theoretical underpinnings.

The philosophies introduced in this paper are all self-explanatory. Therefore, novice researchers are not directly guided with hands-on instructions on how to make a match between qualitative research design and its underlying philosophies, which anyway might be repurposed by another manual. What the prospective researchers are supposed to do while going through this paper is that they have to engage with their research questions in mind and qualify them against each philosophy.

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