

# Exploring the Philosophical Assumptions in Social Education Research

Dr. Norah Alsharidi<sup>1</sup>

<sup>1</sup> King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), Al-Ahsa, Saudi Arabia

Correspondence: Dr. Norah Alsharidi, King Saud bin Abdulaziz University for Health Sciences (KSAU-HS), Al-Ahsa, Saudi Arabia.

Received: May 27, 2024

Accepted: August 6, 2024

Online Published: September 15, 2024

doi:10.5539/jel.v14n1p73

URL: <https://doi.org/10.5539/jel.v14n1p73>

## Abstract

Educational research enquiries differ based on philosophical beliefs and assumptions regarding researchers' explicitly stated views. This paper critically explores the most dominant philosophical stances in social research sciences, namely positivism, interpretivism and pragmatism. It begins with an overview of the role of the aforementioned beliefs and assumptions in shaping research. It then delves into the epistemology, ontology and value views underlying each philosophical belief to examine its strengths and weaknesses. This discussion might be beneficial for researchers who encounter problems in determining designs for their research.

**Keywords:** positivism, interpretivism, pragmatism

## 1. Introduction

Educational research enquiries differ based on philosophical beliefs and assumptions regarding researchers' explicitly stated views, indicating that social science research is a complicated undertaking. These stances, which encompass notions about knowledge (epistemology), reality (ontology) and value (axiology), guide research design and methodology selection, thereby influencing how researchers seek answers to their questions (Creswell, 2003; Gorard & Taylor, 2004; Guba, 1990; Guba & Lincoln, 1994). A philosophical stance is based 'on shared assumptions, concepts, values and practices' (Johnson & Christensen, 2017, p. 31). Such a belief informs worldviews and the various philosophical assumptions associated with these views, which then constitute paradigms (Teddlie & Tashakkori, 2009).

The selection of a philosophical stance is a critical decision that underpins a study's framework and theoretical justification. It directs researchers as they make judgements and implement actions, and it influences the adoption of quantitative, qualitative or mixed methods approaches. This influence, in turn, is mirrored in data collection, analysis and interpretation (i.e. the research outcome).

In consideration of the abovementioned issues, this paper explores how different philosophical stances influence research in education. There are numerous philosophical perspectives, such as positivism, constructivism (interpretivism), pragmatism, postpositivism, critical theory and transformativism (Creswell, 2003; Crotty, 1998; Teddlie & Tashakkori, 2009), but the first three stand out as the most popular and widely adopted viewpoints in social science research (Johnson & Onwuegbuzie, 2004). Understanding these stances not only aids in the selection of appropriate methodologies but also ensures that research aligns with the assumptions that underlie it, thus guaranteeing valid and meaningful findings. Which might suggest implications for curriculum development, teaching methods, assessment, as well as policies on educational equity, teacher training, educational reform.

## 2. Positivism

From a philosophical perspective, positivism can be characterised as an extreme evaluation of science and the scientific method. It was defined by Teddlie and Tashakkori as 'a science of facts and laws and certainty' (2009, p. 56). The positivist approach involves determining causes, effects or outcomes and is associated with enquiries that are underlain by an objectivist worldview. It fundamentally involves quantitative approaches to collecting numerical data and conducting statistical analysis to test hypotheses or theories, administer surveys and conduct experiments. Its primary objective is to generate knowledge via a deductive approach for generalisability to a larger population (Creswell, 2003; Johnson & Onwuegbuzie, 2004; Leedy & Ormrod, 2011).

In educational research, positivist methods are often employed to study variables influencing certain results. For

instance, a researcher might use standardised test scores to evaluate the impacts of different teaching methods on student performance. Moreover, by administering surveys to a large sample of students and analysing the data using statistical techniques, researchers can identify patterns and causal relationships. The generalisability of findings enabled by the positivist approach allows the formulation of evidence-based suggestions for educational policies and procedures. Within this approach, as well, statistics and facts are regarded as the most accurate means of representing knowledge in social science (Cohen et al., 2018). Positivism allows researchers to strive for an understanding of ‘how things are’ and ‘how things work’ (Guba & Lincoln, 1994, p. 111).

A positivist perspective comes with realism as an ontological grounding that puts forward a belief that ‘the world of natural phenomena as being hard, real and external to the individual’ (Cohen et al., 2007, p. 8). Researchers who embrace this perspective strive to maintain distance and objectivity, treating the world as a singular, external reality (Plano Clark & Ivankova, 2016). Positivists assume that the world can be objectively measured and manipulated because it represents a singular, absolute reality independent of the human mind. The idea is that maintaining a degree of distance helps prevent interference, thus ensuring that outcomes remain unaffected by subjective influences or participant characteristics. Guba and Lincoln (1994) argued that enquiry within this philosophical stance ‘takes place as through a one-way mirror’ (p. 110). Since objectivity is a fundamental component of a phenomenon under investigation, the primary goal is to achieve greater validity and reliability. This is made possible by the use of different strategies to reduce and eliminate threats to the validity of a study (Guba & Lincoln, 1994).

Despite the advantages of positivism, however, it is vital to recognise that this perspective is not without criticism. It has been criticised for its perceived tendency to oversimplify reality and the social environment given its heavy reliance on quantification. Being ‘an observer of social reality’ and focusing on objective measurement and quantification may overlook the richness of subjective experiences and the complexities of human perception (Cohen et al., 20118, p. 10). In social behaviour research, positivist approaches might involve large-scale surveys to understand a certain impact. For example, a researcher might analyse data to identify patterns in how students’ performance varies. While this provides valuable insights, it may not capture the nuanced experiences of these individuals, thus potentially missing out on the deeper understanding that qualitative approaches can offer. Human experiences, perceptions, attitudes and behaviours are intricate and constantly changing—complexities that positivists may fail to fully explore and understand. Given the nature of positivism as a subject–object relationship, there is a tendency to inadequately consider the dynamics that underlie a phenomenon being examined (Dörnyei, 2007). This limitation becomes particularly challenging when studying complex phenomena, such as teaching and learning. In simpler terms, translating social realities into numerical data may impact the quality of research findings.

Furthermore, the claim that attaining absolute objectivity is possible raises questions about the practicality and feasibility of eliminating all forms of bias in research. Therefore, it is imperative for researchers to thoroughly evaluate whether the positivist approach is appropriate for their study goals. They should acknowledge that alternative philosophical perspectives, such as interpretivism, serve as distinct research frameworks. Engaging with research issues through interpretivism and the debates associated with it can enable a more extensive comprehension of the decisions that researchers encounter while determining what methodologies to choose.

### **3. Interpretivism**

In-depth descriptions and an understanding of social reality are typically achieved through qualitative data collection, which allows researchers to draw a holistic picture of human complexity. A qualitative approach lies within an interpretive or constructivist philosophical stance, wherein ‘the social world can only be understood from the standpoint of the individuals who are part of the ongoing action being investigated’ (Cohen et al., 2018, p. 19). The main logic behind this stance is to understand, rather than explain, human behaviours and identify causes and effects (Bryman, 2012; Guba & Lincoln, 1994). In other words, human behaviours, not physical objects, necessitate an investigation into the meanings and intentions that humans attribute to their actions in order for these actions to be understood. An interpretivist approach might, for instance, involve an extensive case study of a single school to explore the experiences of teachers and students. Researchers can obtain a comprehensive, contextualised understanding of educational practices and difficulties by means of various methods, such as observations, interviews and document analysis. This approach emphasises the subjective and socially constructed nature of reality.

It is logically associated with the epistemological belief of subjectivism, which emphasises that each participant has a unique voice, experience and opinion worth exploring (Guba & Lincoln, 1994). It recognises that social reality comprises multiple distinct perspectives, thoughts, views and feelings that cannot be quantified and

objectively measured. Thus, the goal of interpretivist research is not to generalise findings but to acquire the knowledge required to establish or develop a theory. Unlike positivism, interpretivism entails using an inductive approach to interpreting complex meanings for the collection of exhaustive data (Creswell, 2014; Dörnyei, 2007; Johnson & Onwuegbuzie, 2004; Leedy & Ormrod, 2011).

Interpretivism is founded on ontological idealism, which regards ‘the social world as being of a much softer, personal, and humanly created kind’ (Cohen et al., 2007, p. 8). Put differently, reality exists within individuals’ minds and is influenced by their values because reality is a creation of humans. It is seen ‘through the eyes of the participants rather than as an outsider’ (Cohen et al., 2018, p. 20). Therefore, comprehensive knowledge must be gained through interaction between researchers and individuals (Guba & Lincoln, 1994). This underscores the rejection of a single truth due to the complexity and dynamic nature of social phenomena, thereby positioning the subjectivity and unique experiences of interpretivism as a challenge to the objectivity and generalisability pursued by positivism. Rich, contextualised data offer comprehensive insights into phenomena and facilitate the concept of transferability rather than strict generalisability. All of these arguably aid in addressing the limitations of a positivist paradigm.

Notwithstanding the profound insights offered by interpretivist beliefs, analysis and theory development under this stance can be complicated and challenging (Dörnyei, 2007). This might also raise concerns about potential researcher bias and difficulties in establishing reliability and validity given the highly subjective nature of interpretation. Data might be influenced by researchers’ values, biases and beliefs, as they cannot fully detach themselves from what they study. The influence of such biases may be mitigated and credibility and trustworthiness may be enhanced using strategies such as reflexivity and transparency (Creswell, 2007). These limitations might also be overcome and our understanding of social reality might be significantly improved by comprehensive analyses and careful methodological decisions.

#### **4. Pragmatism**

The differences between positivism and interpretivism as well as the quantitative and qualitative nature of research questions call for a pragmatic philosophical stance. According to Dörnyei (2007), the first two distinct stances are not mutually exclusive in the context of social research. Some research questions must be answered by explaining causes through objective answers, while the exploration of meanings and the understanding of reasons for social action require subjective, socially constructed answers (Bryman, 2012; Creswell, 2003). Pragmatism takes advantage of the reconciliation of philosophical conflicts between positivism and interpretivism by embracing both worldviews’ underlying ideas and principles (Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2009).

Given that pragmatism ‘[accommodates] other philosophical positions’ (Ormerod, 2006, p. 907), it directly emphasises the purpose of a problem and the nature of research questions as important components in determining what is functional, useful and appropriate in addressing issues (Creswell, 2003; Dörnyei, 2007; Niglas, 2009; Teddlie & Tashakkori, 2009). It does not focus on the use of a philosophical or methodological approach (Creswell, 2003; Dörnyei, 2007; Niglas, 2009; Teddlie & Tashakkori, 2009). This orientation is vital because it ‘offers researchers the advantage of being able to choose from the full repertoire of methodological options’ (Dörnyei, 2007, p. 168).

As defined by Creswell, pragmatism means ‘having a worldview [that] arises out of actions, situations, and consequences’ (2014, p. 10). The pragmatic approach therefore enables researchers to use different strategies for enquiry and various methods of data collection and analysis, thereby enabling the most comprehensive understanding of phenomena from different perspectives that combine inductive and deductive approaches into an abductive one (Creswell, 2014; Edmonds & Kennedy, 2017; Morgan, 2007).

Teddlie and Tashakkori (2009) stated that pragmatism focuses mainly ‘on what works as the truth regarding the research questions under investigation’ (pp. 86–87). Thus, in examining how knowledge of reality is gained, acquired and produced, the middle position of pragmatism allows a researcher to employ a practical approach to their contribution to the search for truth (Creswell & Plano Clark, 2011; Johnson & Onwuegbuzie, 2004). That is, the practicality of the pragmatist worldview reflects that subjectivity and objectivity are distinct from each other but are not opposing orientations; ‘epistemological issues exist on a continuum rather than on two opposing poles’ (Tardlie & Tashakkori, 2009, p. 87). Epistemologically, therefore, valuing both orientations is critical to illuminating issues, stressing that no single type of knowledge is superior to the other. These beliefs and assumptions are encompassed in pragmatism to clarify the ‘what’ and ‘how’ of research problems. To come up with workable solutions to a research problem, it is best to take advantage of different philosophical assumptions.

The ontological perspective of pragmatism indicates that ‘there is no problem with asserting both that there is a single “real world” and that all individuals have their unique interpretations of that world’ (Morgan, 2007, p. 72).

This standpoint highlights a singular reality independent of the mind—a view that agrees with positivism and postpositivism (Teddlie & Tashakkori, 2009). However, this view also recognises the existence of multiple realities within the mind (Creswell, 2014). Thus, researchers espousing a pragmatic philosophical stance believe that an external and absolute truth about reality (e.g., numerical data) and a multiple construction of viewpoints (e.g. participants’ personal experiences and perceptions data) are parts of a phenomenon being investigated. These complement each other, thereby capturing a comprehensive picture that ‘[provides] the most informative, complete, balanced, and useful research result’ (Johnson et al., 2007, p. 129). For example, a pragmatic researcher might use surveys and other quantitative methods to collect numerical data on the results of a specific teaching method while also employing qualitative methods, such as interviews, focus group discussions and participant observations, to explore people’s subjective experiences, opinions and views on the matter.

Values play an undoubtedly important role in conducting research. The pragmatist worldview argues that what is important and interesting to study is based on researchers’ values because ‘pragmatism takes an explicitly value-oriented approach to research (Johnson & Onwuegbuzie, 2004, p. 17). Plano Clark and Ivankova (2016) stated that a pragmatist researcher’s values are essential in expressing questions and reaching conclusions. However, adopting pragmatism as a study framework means attaching importance to a research problem, as this affords researchers the flexibility of using different quantitative and qualitative approaches to addressing research questions and ensuring that rich data are derived. More specifically, such data are obtained by being pluralistic and problem-centred. This might also allow researchers to balance the value of subjectivity and objectivity equally and not be restricted to a single philosophical position on a phenomenon.

Although the use of mixed methodologies appears appropriate in most research contexts (Dörnyei, 2007), it is important to realise that attempting to accommodate both subjectivity and objectivity might lead to compromises or difficulties in research design. Research designs incorporating both perspectives can vary widely due to the complexity of research questions. Thus, in practice and due to the complexity of studies, most applications of mixed methods designs cannot fit what has already been a previously established design, for example. In fact, according to Schoonenboom and Johnson (2017), it is crucial for a researcher who adopts a mixed methods approach to fully justify this decision by indicating the purpose and the aim behind such a study instead of simply labelling its design; this is important because the researcher should instead aim to ‘construct a research design to fit [their] unique research situation and questions (p. 128). The stances of interest are summarised in Table 1.

Table 1. Comparison of philosophical stances

Aspect	Positivism	Interpretivism (Constructivism)	Pragmatism
<b>Ontology (reality)</b>	Objective reality, independent of human mind	Multiple realities constructed by individuals	Reality is practical and changeable.
<b>Epistemology (knowledge)</b>	Objective, measurable and quantifiable	Subjective, knowledge is co-constructed	Both objectivity and subjectivity are valid.
<b>Axiology (values)</b>	Value-free, researcher is detached	Value-laden, researcher’s values influence research	Values play a crucial role.
<b>Methodology</b>	Quantitative	Qualitative	Mixed methods
<b>Data collection</b>	Surveys, experiments, statistical analysis	Interviews, observations	Both qualitative and quantitative methods

## 5. Final Thoughts

To conclude, the key points discussed in this paper include the complexity and multifaceted nature of social science research, influenced by philosophical beliefs; the role of philosophical stances—positivism, interpretivism (constructivism) and pragmatism—in shaping research designs, methodologies and outcomes; and the criticality of selecting a philosophical stance that is consistent with research objectives and contexts. The discussion showed that there is no one-size-fits-all approach to all research endeavours, and the choice of philosophical beliefs should uncover a distinct method with which to obtain unique knowledge. The differences between philosophical research stances cannot be dismissed, as they undoubtedly have profound implications and consequences for the conduct of research (Guba & Lincoln, 1994).

To ensure the coherence and rigour of a study, researchers must carefully select their philosophical stances, and this selection should align with the research questions and objectives that they pursue, along with the contextual factors at play. It is important to recognise that different approaches are suitable for various situations, necessitating a consideration of epistemologies and ontologies. Stance selection is pivotal to determining the quality and

uniqueness of research conducted.

The implications of the discussion here for future research are significant. Researchers should reflect deeply on their philosophical assumptions to ensure that their chosen approaches are compatible with their research goals. They should be open to adopting different stances depending on the nature of their research questions and the contexts that they are investigating. Additionally, recognising the value of a pluralistic approach that may combine elements from different beliefs can enrich research outcomes. By thoughtfully considering these factors, future research can achieve greater rigour, coherence and relevance, ultimately contributing to more robust and meaningful findings in the field of educational research.

#### **Acknowledgments**

Not applicable.

#### **Authors' contributions**

Not applicable.

#### **Funding**

No specific sources of funding were granted for this research paper.

#### **Competing interests**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### **Informed consent**

Obtained.

#### **Ethics approval**

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

#### **Provenance and peer review**

Not commissioned; externally double-blind peer reviewed.

#### **Data availability statement**

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

#### **Data sharing statement**

No additional data are available.

#### **References**

- Bryman, A. (2007). Barriers to integrating quantitative and qualitative research. *Journal of Mixed Methods Research*, 1(1), 8–22. <https://doi.org/10.1177/1558689806290531>
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. Abingdon, Oxon: Routledge. <https://doi.org/10.4324/9780203029053>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research Methods in Education* (8th ed.). Routledge. <https://doi.org/10.4324/9781315456539>
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W., & Plano Clark, V. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: SAGE.
- Crotty, M. (1998). *The foundations of social research*. London: SAGE.
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford: Oxford University Press.
- Edmonds, W., & Kennedy, T. (2017). Mixed methods. In W. Edmonds & T. Kennedy (Eds.), *An applied guide to research designs* (pp. 177–180). Thousand Oaks, CA: SAGE Publications, Inc.

<https://doi.org/10.4135/9781071802779>

- Gorard, S., & Taylor, C. (2004). *Combining methods in educational and social research*. UK: McGraw-Hill Education.
- Guba, E. G. (1990). *The paradigm dialog*. Newbury Park, CA: SAGE Publications.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Sage Publications, Inc.
- Johnson, B., & Christensen, L. (2017). *Educational research: Quantitative, qualitative, and mixed approaches*. Sage Publication.
- Johnson, B., Onwuegbuzie, J. A., & Turner, L. A. (2007). Towards a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2), 112–133. <https://doi.org/10.1177/1558689806298224>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14–26. <https://doi.org/10.3102/0013189X033007014>
- Leedy, P., & Ormrod, J. (2011). *Practical research: Planning and design* (7th ed.). Upper Saddle River, NJ and Thousand Oaks, CA: Merrill Prentice Hall and SAGE Publications.
- Mackey, A., & Gass, S. M. (2005). *Second language research: Methodology and design*. New York: Routledge.
- Morgan, D. L. (2007). Paradigms lost and pragmatism regained. *Journal of Mixed Methods Research, 1*(1), 48–76. <https://doi.org/10.1177/2345678906292462>
- Niglas, K. (2009). How the novice researcher can make sense of mixed methods designs. *International Journal of Multiple Research Approaches, 3*(1), 34–46. <https://doi.org/10.5172/mra.455.3.1.34>
- Onwuegbuzie, A. J., & Leech, N. L. (2005). On becoming a pragmatic researcher: The importance of combining quantitative and qualitative research methodologies. *International Journal of Social Research Methodology, 8*(5), 375–387. <https://doi.org/10.1080/13645570500402447>
- Ormerod, R. (2006). The history and ideas of pragmatism. *Journal of the Operational Research Society, 57*(8), 892–909. <https://doi.org/10.1057/palgrave.jors.2602065>
- Plano Clark, V., & Ivankova, N. (2016). How do personal contexts shape mixed methods? Considering philosophical, theoretical, and experiential foundations for mixed methods research. In V. Plano Clark & N. Ivankova (Eds.), *Mixed methods research: A guide to the field* (pp. 191–216). Thousand Oaks, CA: SAGE Publications, Inc. <https://doi.org/10.4135/9781483398341.n11>
- Teddlie, C., & Tashakkori, A. (Eds.). (2009). *Foundations of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, CA: Sage Publications.

### Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).