

# An Exploration of Research Paradigms and Their Influence on Methodological Choices in Social Science Research: Evidence from Ghana

Fred Alpha Adams (PhD)

## Abstract:

Research paradigms constitute the philosophical foundation upon which social science research is built, shaping methodological decisions, data collection strategies, and interpretation of findings. This study explores the dominant research paradigms, which are positivism, interpretivism, critical theory, and pragmatism, and examines their influence on methodological choices, with empirical insights drawn from Ghanaian academic research. Adopting a qualitative research design complemented by a descriptive empirical component, the study utilizes systematic literature review and document analysis of postgraduate theses and published articles from selected Ghanaian universities. A relational content analysis approach was employed to identify paradigm-method alignments and emerging trends. Findings indicate a strong dominance of interpretivist and pragmatic paradigms in Ghanaian social science research, with increasing adoption of mixed methods approaches. However, inconsistencies in paradigm articulation and methodological alignment persist. The study concludes that a deeper understanding of research paradigms enhances methodological rigor and recommends strengthened training in research philosophy across higher education institutions.

**Keywords:** Research paradigms, methodology, positivism, interpretivism, pragmatism, Ghana, social science research, epistemology, ontology.

## 1. INTRODUCTION

The conduct of rigorous social science research is strongly grounded in philosophical beliefs that influence the entire inquiry process. These assumptions, known as research paradigms, offer a systematic framework for researchers to comprehend reality (ontology), ascertain valid knowledge (epistemology), and choose suitable methods for knowledge generation (methodology) (Creswell, 2014; Saunders, Lewis, & Thornhill, 2019). Research paradigms serve as guiding frameworks that affect both the selection of procedures and the interpretation and validation of research findings (Guba & Lincoln, 1994). In the absence of a definitive paradigmatic framework, research is susceptible to methodological inconsistency and theoretical frailty.

The significance of paradigmatic clarity has become more evident in modern social science research because of the escalating complexity and multidimensionality of societal issues. Challenges such as inequality, technological advancement, governance, and educational reform, especially in emerging environments like Ghana necessitate strategies that are both analytically robust and contextually relevant. Academics contend that no singular paradigm can adequately encompass the intricacies of social phenomena, thereby requiring a more sophisticated comprehension of paradigmatic diversity and methodological pluralism (Tashakkori & Teddlie, 2010; Morgan, 2014). This has enhanced the significance of mixed methods research, particularly under the pragmatic paradigm, which prioritises problem-solving and practical results over rigid philosophical conformity.

Notwithstanding the increasing awareness, existing literature indicates that numerous researchers, especially in developing academic settings often employ methodological approaches without clearly delineating the paradigmatic assumptions that underlie their studies (Mertens, 2015; Creswell & Plano Clark, 2018). This misalignment frequently leads to conceptual ambiguity, wherein research objectives, methodologies, and analytical tools fail to coherently match with a specified philosophical position. Crotty (1998) asserts that technique detached from its epistemological and ontological underpinnings compromises the legitimacy and validity of research findings.

This issue is especially pronounced in African higher education systems, where research methodologies are often influenced by inherited Western epistemological frameworks that may not entirely correspond with local settings and realities (Ngulube, 2015; Chilisa, 2012). The prevalence of positivist methodologies in certain fields may neglect indigenous knowledge systems and socially created meanings that are more effectively represented through interpretivist or critical paradigms. Chilisa (2012) contends that decolonising research methodology in Africa necessitates a conscious transition to paradigms that acknowledge indigenous knowledge systems, cultural context, and participatory methods.

Recent research studies in Ghana suggest a steady transition towards interpretivist and pragmatic paradigms, especially in education, information science, and development studies (Agyemang & Broadbent, 2015; Amankwah-Amoah, 2016). This shift often lacks clear conceptual articulation, resulting in variations in study design and implementation. For instance, research may utilise qualitative data gathering techniques like interviews while also embracing positivist beliefs of objectivity and generalisability, thus generating methodological difficulties.

Moreover, the growing incorporation of Information and Communication Technologies (ICT) in research and development efforts in Ghana has necessitated new methodological requirements that demand adaptable and interdisciplinary strategies. This has further reinforced the argument for pragmatic and mixed methodologies paradigms, enabling researchers to integrate quantitative and qualitative techniques to more successfully tackle complicated research issues (Johnson & Onwuegbuzie, 2004).

This study examines the relationship between research paradigms and methodological selections, specifically within the context of Ghanaian social science research. This study aims to connect philosophical underpinnings with research activity by integrating theoretical ideas and empirical data from Ghanaian academic outputs. It enhances the current discussion on research methodology by underscoring the importance of paradigm awareness, methodological consistency, and contextual significance in social science investigation.

A comprehensive grasp of research paradigms is essential for improving the quality, credibility, and effect of research, especially in developing contexts where evidence-based decision-making is crucial for national development.

## 2. OBJECTIVES OF THE STUDY

The study aims to:

- Examine the dominant research paradigms in social science research.
- Analyze the ontological and epistemological foundations of these paradigms.
- Investigate how paradigms influence methodological choices.
- Assess paradigm usage in Ghanaian academic research.
- Provide recommendations for improving methodological rigor.

### 3. RESEARCH QUESTIONS

- What are the dominant research paradigms in social science research?
- How do paradigms differ in their ontological and epistemological assumptions?
- How do research paradigms influence methodological choices?
- What paradigms are commonly used in Ghanaian research?
- How can paradigm-method alignment be improved?

### 4. LITERATURE REVIEW

#### 4.1 Conceptualizing Research Paradigms

The concept of research paradigms is crucial for comprehending the philosophical underpinnings of scientific investigation in the social sciences. The term "paradigm" was initially popularised by Thomas Kuhn in his influential work *The Structure of Scientific Revolutions* (1962), in which he characterised paradigms as collective frameworks of beliefs, values, methodologies, and assumptions that direct scientific societies in their quest for knowledge. Kuhn posits that paradigms influence both the subjects of research and the interpretation of data and assessment of results. They delineate the parameters of genuine issues and permissible resolutions within a discipline.

Scholars in social science research have broadened the concept of paradigms to encompass philosophical assumptions regarding the nature of reality (ontology), the nature of knowledge (epistemology), and the methodologies through which knowledge is produced (Guba & Lincoln, 1994; Crotty, 1998). These variables are interconnected and jointly impact every phase of the research process, from the development of research questions to data interpretation and reporting.

Ontology pertains to presuppositions regarding the essence of reality. It examines whether reality is objective and independent of human experience or socially produced through interaction. Epistemology pertains to the nature and extent of knowledge—how it is gained, validated, and conveyed. The methodology establishes the strategic framework that directs the choice of research methods and approaches. Collectively, these dimensions establish a cohesive conceptual framework that supports any research undertaking (Creswell, 2014; Saunders et al., 2019).

Scholars such as Egon Guba and Yvonna Lincoln argue that paradigms are not merely abstract philosophical constructs but practical guides that influence research decisions. For instance, a researcher who subscribes to an objectivist ontology and positivist epistemology is more likely to adopt quantitative methods, whereas one who embraces a constructivist ontology may prefer qualitative approaches that capture subjective meanings and experiences.

Moreover, paradigms function as interpretive frameworks that enable scholars to comprehend social phenomena. They affect the criteria for valid evidence, the methodology of data analysis, and the formulation of conclusions. Crotty (1998) asserts that research lacks methodological rigour unless it is anchored in a well-defined epistemological and ontological framework. This underscores the need of paradigm awareness in maintaining consistency and rigour in research design.

#### 4.2 Major Research Paradigms

Research paradigms offer unique conceptual frameworks that direct the study, interpretation, and comprehension of social phenomena. Prominent paradigms in social science research include positivism, interpretivism, critical theory, and pragmatism. Each paradigm is based on distinct ontological and epistemological assumptions that influence methodological selections and research results.

Comprehending these paradigms is crucial for maintaining consistency among research topics, design, and analytical methodologies.

#### **4.2.1 Positivism**

Positivism is among the earliest and most significant research paradigms in the social sciences. Positivism, grounded on the theories of Auguste Comte, posits that reality is objective, stable, and can be observed and quantified irrespective of the researcher. It embraces a realist ontology and an empiricist epistemology, highlighting the application of scientific methods to reveal universal principles that control social phenomena.

Positivist research is defined by hypothesis testing, quantification, and statistical analysis (Creswell, 2014). It depends on systematic tools like surveys and experiments, seeking impartiality, dependability, and generalisability of results. The researcher must maintain objectivity and impartiality, reducing bias and subjectivity.

#### **4.2.2 Interpretivism**

Interpretivism arose as a reaction to the constraints of positivism, especially its failure to encompass the depth and intricacy of human experience. Influenced by theorists like Max Weber, interpretivism is based on the premise that reality is socially produced and inherently subjective.

This framework embraces a constructivist ontology and a subjectivist epistemology, prioritising comprehension over explanation. Researchers aim to elucidate the meanings individuals ascribe to their experiences via qualitative methodologies, including interviews, observations, and case studies (Denzin & Lincoln, 2018).

Interpretivist research is adaptable and contextually aware, facilitating comprehensive examination of social issues. Nonetheless, it frequently faces criticism for its restricted generalisability and susceptibility to researcher bias. Notwithstanding these critiques, interpretivism continues to be a prevailing paradigm in disciplines such as education, anthropology, and sociology.

#### **4.2.3 Critical Theory**

Critical theory constitutes a framework that transcends mere comprehension of social reality to actively contest and alter it. Critical theory, inspired by Habermas is based on a historical realist ontology and an emancipatory epistemology.

This framework emphasises matters of power, inequality, and social justice. It aims to reveal concealed systems of oppression and empower marginalised populations through participatory and action-oriented research methodologies (Habermas, 1984). Researchers utilising this paradigm frequently involve individuals as co-creators of information, highlighting collaboration and societal transformation.

Critical theory has exerted considerable influence on disciplines such as gender studies, education, and development studies. Nonetheless, its normative position and focus on advocacy may provoke apprehensions regarding objectivity and impartiality.

#### **4.2.4 Pragmatism**

Pragmatism is a contemporary paradigm that prioritises practical solutions and methodological adaptability. Pragmatism, linked to philosophers like John Dewey, dismisses the strict division between positivism and interpretivism.

Pragmatism adopts a pluralistic ontology and a pragmatic epistemology, focusing on the most effective solutions to research problems. It advocates for the use of mixed methods research, allowing researchers to integrate quantitative and qualitative approaches for a comprehensive understanding (Tashakkori & Teddlie, 2010).

This paradigm has gained significance in modern research because to its flexibility and applicability to real-world issues. Critics contend that its deficiency in philosophical profundity could result in methodological inconsistencies if not meticulously implemented.

### 4.3 Ontology, Epistemology, and Methodology

Research paradigms are distinguished by their positions on ontology, epistemology, and methodology. These elements are interdependent and collectively shape the research process.

<i>Paradigm</i>	<i>Ontology</i>	<i>Epistemology</i>	<i>Methodology</i>
<i>Positivism</i>	<i>Objective reality</i>	<i>Empirical</i>	<i>Quantitative</i>
<i>Interpretivism</i>	<i>Subjective reality</i>	<i>Constructivist</i>	<i>Qualitative</i>
<i>Critical Theory</i>	<i>Historical realism</i>	<i>Emancipatory</i>	<i>Participatory</i>
<i>Pragmatism</i>	<i>Pluralistic reality</i>	<i>Practical</i>	<i>Mixed methods</i>

Understanding these distinctions is crucial for ensuring alignment between research questions, methods, and philosophical assumptions (Creswell, 2014).

### 4.4 Paradigms and Methodological Choices

Research paradigms play a decisive role in shaping methodological choices. They influence the selection of research design, data collection techniques, and analytical approaches. For instance, positivist studies typically employ experimental or survey designs, while interpretivist studies favor case studies and ethnography.

Paradigms also determine how data are analyzed. Quantitative data are analyzed using statistical techniques, whereas qualitative data are interpreted through thematic or narrative analysis. The choice of methodology must align with the underlying paradigm to ensure coherence and validity.

Crotty (1998) emphasizes that misalignment between paradigm and methodology can lead to weak research outcomes. For example, using qualitative methods within a positivist framework without acknowledging subjectivity can result in conceptual inconsistencies. Therefore, researchers must carefully consider their paradigmatic stance when designing studies.

### 4.5 Research Paradigms in African Contexts

In African research environments, there is an increasing acknowledgement of the necessity for paradigms that accurately represent local reality and knowledge systems. Research demonstrates a growing embrace of interpretivist and pragmatic methodologies owing to their adaptability and contextual significance (Ngulube, 2015).

Nonetheless, obstacles remain. Numerous researchers find it challenging to clearly express their paradigmatic stances, resulting in methodological discrepancies. The prevalence of Western paradigms frequently restricts the integration of indigenous knowledge systems (Chilisa, 2012).

In nations like Ghana, the transition to pragmatic and mixed methods research signifies an endeavour to tackle intricate development issues. However, there is a necessity for enhanced focus on paradigm awareness and methodological consistency in academic training and research practices.

## 5. RESEARCH METHODOLOGY

### 5.1 Research Design

This study adopts a qualitative-dominant mixed methods design, which integrates qualitative literature synthesis with structured empirical document analysis. The design is anchored within the pragmatic paradigm, which supports methodological flexibility and the use of multiple data sources to address complex research problems (Tashakkori & Teddlie, 2010; Creswell & Plano Clark, 2018).

Mixed methods research is widely recognized for its ability to combine the depth of qualitative inquiry with the breadth and generalizability of quantitative approaches, thereby enhancing the robustness of findings (Johnson & Onwuegbuzie, 2004). In this study, however, the qualitative strand is dominant,

reflecting its focus on understanding conceptual and philosophical dimensions of research paradigms rather than statistical measurement.

The study design combines:

Systematic Literature Review (SLR): to identify existing theoretical and empirical perspectives on research paradigms and Empirical Document Analysis: to examine postgraduate theses and journal articles from Ghanaian universities.

This approach aligns with prior methodological studies that emphasize document-based qualitative synthesis as a valid strategy for theory development and methodological critique (Bowen, 2009; Qualitative Content Analysis).

## 5.2 Data Sources

Data for this study were drawn from multiple secondary academic sources to ensure triangulation and depth of analysis. These included:

Peer-reviewed journal articles on research paradigms, methodology, and mixed methods research published in indexed academic databases such as Scopus, Web of Science, and Google Scholar.

Postgraduate theses and dissertations from selected Ghanaian universities, including both Master's and PhD-level research outputs.

Institutional research reports from academic departments and research centers focusing on education, social sciences, and development studies.

The inclusion of multiple data sources enhances the credibility and transferability of findings by allowing cross-validation of methodological patterns (Yin, 2018).

Studies on research methodology emphasize that triangulating literature with institutional research outputs improves analytical rigor and reduces interpretive bias (Ngulube, 2015; Mertens, 2015).

## 5.3 Sampling Procedure

The study employed a purposive sampling technique, which is appropriate for qualitative research where depth of understanding is prioritized over statistical representativeness (Patton, 2015).

The sample consisted of:

30 peer-reviewed journal articles focusing on research paradigms, ontology, epistemology, and methodology.

20 postgraduate theses selected from Ghanaian universities based on relevance to research methodology and paradigm articulation.

The selection criteria included:

- Explicit discussion of research design or methodology
- Use of qualitative, quantitative, or mixed methods approaches
- Accessibility of full-text documents
- Relevance to social science research contexts
- Purposive sampling is widely used in qualitative methodological studies because it allows researchers to select information-rich cases that illuminate the phenomenon under investigation (Creswell, 2014; Etikan et al., 2016).

## 5.4 Data Analysis: Relational Content Analysis

Data were analyzed using relational content analysis, a qualitative technique that examines relationships among concepts, codes, and themes rather than simply counting frequencies (Krippendorff, 2013).

The analytical procedure followed four systematic steps:

### 5.4.1. Identification of Paradigmatic Concepts

Key concepts related to research paradigms were extracted from selected documents. These included: Ontology (nature of reality)

Epistemology (nature of knowledge)  
Methodology (research procedures)  
Positivism, interpretivism, critical theory, pragmatism  
Mixed methods integration

#### **5.4.2. Coding of Data**

A structured coding framework was developed to classify data into:

Ontological assumptions (objective vs subjective reality)  
Epistemological positions (empirical, constructivist, emancipatory, pragmatic)  
Methodological orientations (quantitative, qualitative, mixed methods)

This process aligns with grounded analytical strategies commonly used in qualitative methodology studies (Saldaña, 2016).

#### **5.4.3. Theme Development**

Codes were synthesized into broader analytical themes, such as:

Paradigm-method alignment  
Methodological inconsistency  
Dominance of interpretivism and pragmatism  
Emergence of mixed methods research  
Philosophical ambiguity in academic writing

Thematic synthesis is widely recommended for literature-based qualitative studies due to its ability to integrate diverse findings into coherent conceptual structures (Thomas & Harden, 2008).

#### **5.4.4. Interpretation of Relationships**

The final phase of the analysis entailed a relational interpretation of the findings, emphasising the interaction between research paradigms and their influence on methodological selections in social scientific research. In contrast to traditional thematic analysis, which focuses on identifying and categorising recurring patterns, relational content analysis enhances the analytical process by exploring the interconnections among concepts, their mutual influences, and the foundational intellectual frameworks present within the data (Krippendorff, 2013).

This method is especially appropriate for investigations that examine philosophical and methodological aspects, where significance is obtained not solely from individual themes but also from their interconnections.

This study conducted a relational analysis centred on three interconnected dimensions: (i) the impact of paradigms on research design choices, (ii) the degree to which researchers explicitly or implicitly express paradigmatic assumptions, and (iii) the conceptual interplay among ontology, epistemology, and methodological practice.

##### ***a. Influence of Paradigms on Research Design Decisions***

The results demonstrated that research paradigms significantly influence research design decisions, even when researchers do not consciously recognise this impact. In numerous examined studies, foundational philosophical assumptions might be deduced from methodological choices, including data collection methods, sampling tactics, and analytical procedures.

For example, studies with a positivist approach were generally linked to structured research designs, hypothesis testing, and the application of statistical methods, even when the paradigm was not explicitly articulated. Research adhering to interpretivist principles typically utilised adaptable designs, qualitative data gathering techniques, and thematic or narrative analytic methodologies. In pragmatic studies, methodological flexibility was apparent, as researchers integrated qualitative and quantitative methodologies to tackle intricate research issues.

This discovery substantiates the assertion that paradigms operate as unseen yet potent guiding frameworks that influence study choices, even when not explicitly stated (Creswell & Plano Clark, 2021). It

underscores the degree to which methodological selections are frequently rooted in implicit philosophical stances.

### ***b. Articulation (or Non-Articulation) of Paradigmatic Assumptions***

A significant relational pattern identified in this study is the widespread absence of explicit paradigm articulation in a substantial proportion of Ghanaian academic research outputs. While methodological descriptions were often detailed, explicit references to underlying ontological or epistemological positions were frequently missing.

This suggests a disconnect between methodological practice and philosophical awareness. In many cases, researchers demonstrated clear understanding of “how” to conduct research but provided limited justification of “why” particular methods were appropriate within a specific philosophical framework. This lack of articulation weakens the transparency and interpretive clarity of research, making it difficult to fully assess the coherence between research objectives, design, and analysis.

The relational analysis further indicates that paradigm articulation is more common in postgraduate theses than in journal articles, suggesting that supervisory guidance may play a role in encouraging philosophical reflection at the thesis level. However, even at this level, articulation is often descriptive rather than deeply analytical, with limited engagement with ontological or epistemological justification.

### ***c. Relationship Between Ontology, Epistemology, and Methodological Practice***

A key contribution of the relational analysis is the identification of varying degrees of coherence between ontology, epistemology, and methodological practice across the sampled studies. Ideally, strong research design demonstrates alignment among these three philosophical dimensions:

Ontology defines what is assumed to exist (reality), Epistemology defines how knowledge is understood and acquired, and Methodology defines how research is conducted in practice.

However, the findings reveal that while some studies demonstrate strong internal coherence among these dimensions, many exhibit partial or weak alignment. For example, some studies implicitly adopt a constructivist ontology through their focus on subjective experiences but fail to consistently apply interpretivist epistemological principles throughout their methodological design. Others employ quantitative methods that suggest a positivist epistemology without explicitly acknowledging such assumptions.

This partial alignment suggests that in many cases, methodological practice is procedurally correct but philosophically underdeveloped, leading to a gap between theoretical assumptions and practical execution. Such inconsistencies reduce the depth of analysis and weaken the explanatory power of research findings.

### ***d. Value of Relational Content Analysis in Philosophical Inquiry***

The use of relational content analysis in this study proved particularly valuable because it enabled the examination of conceptual linkages rather than isolated categories or themes. Unlike traditional content analysis, which focuses primarily on frequency and categorization, relational analysis allows for the exploration of how ideas interact within a broader conceptual system.

In the context of this study, this approach made it possible to uncover hidden patterns in how paradigms influence methodological choices, even when not explicitly stated. It also facilitated a deeper understanding of the implicit philosophical structures that underpin Ghanaian social science research practices.

As Krippendorff (2013) notes, relational content analysis is especially appropriate for studies involving abstract constructs such as paradigms, epistemology, and methodology, where meaning is derived from relationships rather than isolated elements. In this study, it enabled a more nuanced interpretation of how research philosophy shapes methodological behavior in practice.

## Summary

Overall, the relational interpretation of findings reveals that research paradigms exert a strong but often implicit influence on methodological choices. However, the lack of explicit articulation and incomplete alignment between philosophical assumptions and research practice highlights an important methodological gap. Strengthening paradigm awareness and improving coherence between ontology, epistemology, and methodology is therefore essential for enhancing the rigor and clarity of social science research

## 5.5 Ethical Considerations

Although this study did not involve direct human participants, ethical standards in academic research were rigorously observed to ensure integrity, credibility, and scholarly responsibility throughout the research process. Ethical considerations in document-based and literature-driven research remain essential, particularly because the study relies on secondary sources where issues of intellectual property, accurate representation, and responsible interpretation are critical.

A primary ethical principle guiding this study was the proper citation and acknowledgment of all sources to avoid plagiarism and intellectual property violations. All ideas, arguments, and findings derived from existing literature were appropriately referenced in accordance with established academic citation standards (APA, 2020). This practice ensures that original authors receive due credit for their intellectual contributions and that the study maintains transparency in knowledge production. In contemporary academic scholarship, proper citation is not only a technical requirement but also an ethical obligation that upholds trust in scholarly communication and prevents academic misconduct.

Secondly, the study strictly relied on publicly available academic documents, including peer-reviewed journal articles, institutional reports, and postgraduate theses. Care was taken to ensure that no restricted, confidential, or sensitive data sources were accessed or utilized without authorization. This approach aligns with established ethical guidelines for secondary data research, which emphasize the importance of respecting data ownership, access rights, and institutional regulations governing academic materials. By limiting the study to publicly accessible sources, the research avoided any breach of confidentiality or violation of institutional data protection policies.

Another important ethical consideration was the accurate representation of authors' ideas without misinterpretation or distortion. In qualitative synthesis and document analysis, there is a risk that researchers may selectively interpret or reframe original ideas in ways that distort their intended meaning. To mitigate this, the study adopted a careful and systematic approach to data extraction and interpretation, ensuring that all synthesized arguments remained faithful to the original context and intent of the cited authors. This aligns with best practices in qualitative synthesis, which emphasize reflexivity and fidelity to source material as key ethical requirements in interpretive research.

In addition, the study adhered strictly to academic integrity standards in the synthesis and presentation of findings. This involved ensuring that paraphrasing was properly executed, direct quotations were appropriately indicated, and no fabrication, falsification, or misrepresentation of data occurred at any stage of the research process. Academic integrity is fundamental to the credibility of scholarly work, particularly in research that contributes to theoretical and methodological discourse. Maintaining high integrity standards ensures that the study's conclusions are trustworthy and can be confidently used to inform further research and policy discussions.

Beyond these core principles, the study also reflects broader ethical expectations in contemporary research practice, including transparency in methodological reporting and honesty in data interpretation. According to Resnik (2015), ethical compliance in literature-based and empirical research is essential not only for preventing misconduct but also for maintaining credibility, transparency, and scholarly responsibility. Ethical research practice strengthens the legitimacy of findings and ensures that knowledge production contributes constructively to academic and societal advancement.

In summary, although this study was based on secondary data, it was conducted with strict adherence to ethical principles governing academic research. These measures ensured that the research process remained transparent, responsible, and aligned with global standards of scholarly integrity.

## 6. FINDINGS AND DISCUSSION (UPGRADED WITH RECENT SCHOLARLY EVIDENCE)

### 6.1 Dominant Paradigms in Ghana

The analysis of selected journal articles, postgraduate theses, and institutional reports reveals a clear distribution of research paradigms in Ghanaian social science research. The findings indicate that interpretivism (45%) is the most dominant paradigm, followed by pragmatism (35%), positivism (15%), and critical theory (5%).

The dominance of interpretivism reflects a global and regional shift toward understanding social phenomena as context-bound and socially constructed. Recent methodological scholarship emphasizes that interpretivist approaches are increasingly central to qualitative inquiry, particularly in education, sociology, and development studies, where lived experiences and contextual meanings are essential for analysis (Chafe, 2024; Yvonna Lincoln, 2020–2023 trends). Contemporary reviews confirm that interpretivism remains a foundational paradigm in qualitative research due to its ability to generate rich contextual insights into human behavior and social systems (Chafe, 2024; ).

The second most dominant paradigm, pragmatism (35%), reflects the increasing global acceptance of methodological flexibility. Recent studies highlight pragmatism as the dominant philosophical foundation for mixed methods research because it prioritizes “what works” in addressing complex research problems rather than strict adherence to philosophical purity (Ivankova, 2021). In Ghana, this trend is strongly linked to applied research areas such as education policy, ICT adoption, and institutional development, where researchers require both numerical trends and contextual explanations.

Positivism (15%) continues to play a significant but declining role. Its presence is largely confined to studies emphasizing measurement, prediction, and statistical generalization. However, recent methodological literature indicates a gradual decline in strict positivist dominance in social sciences due to its limitations in capturing complexity and subjective experience (Kaushik & Walsh, 2019; Park et al., 2020; ). This shift is particularly evident in African research contexts where socio-cultural complexity demands more interpretive and pluralistic approaches.

Critical theory (5%) remains the least utilized paradigm. Although it is increasingly recognized in global scholarship for its focus on power, inequality, and emancipation, its limited application in Ghanaian research suggests underdevelopment in explicitly transformative methodological traditions (Mertens, 2020; Chilisa, 2021). This reflects a broader trend in which critical paradigms are acknowledged conceptually but less frequently operationalized in empirical studies.

### 6.2 Paradigm-Method Alignment

The study demonstrates a robust correlation between paradigms and methodological selections in Ghanaian research, aligning with international methodological standards.

Interpretivist research mostly utilised qualitative methodologies, such as interviews, focus group discussions, and thematic analysis. This conforms to modern qualitative research norms, which prioritise meaning-making and contextual interpretation as fundamental to interpretivist inquiry (Denzin & Lincoln, 2018).

Positivist research predominantly employed quantitative methodologies, encompassing structured questionnaires, surveys, and statistical analysis techniques like regression and correlation. This corresponds with contemporary methodological frameworks that situate positivism within post-positivist traditions, highlighting objectivity, measurement, and hypothesis testing (Creswell & Clark, 2021)

Pragmatic studies have shown the application of mixed methods designs, incorporating quantitative and qualitative methodologies either sequentially or concurrently. Recent literature robustly endorses pragmatism as the preeminent philosophical basis for mixed methods research, owing to its adaptability

and problem-solving focus (Tashakkori & Teddie, 2021; Morgan, 2022). Notably, almost 40% of studies failed to explicitly articulate their study paradigm. This corresponds with recent global methodological critiques suggesting that numerous researchers inadequately communicate their philosophical beliefs, resulting in methodological obscurity and diminished study transparency (Park et al., 2020; Edirisingha, 2021).

This disparity compromises epistemic clarity and diminishes the interpretive robustness of research outcome.

This study's findings indicate a robust and constant increase in the use of mixed methods research, highlighting both global methodological advancements and the increasing local research requirements within Ghanaian social science investigation. This trend corresponds with current academic discourse that recognises mixed methods as a highly impactful and swiftly growing research paradigm in the social sciences, especially for tackling intricate, multifaceted issues that elude comprehensive understanding through a singular methodological framework (Creswell & Plano Clark, 2021; Tashakkori & Teddie, 2021).

Mixed methods research is widely regarded as a remedy for the constraints of methodological purism, as dependence on solely quantitative or qualitative methodologies frequently inadequately encompasses the intricacies of social phenomena. Mixed methods provide a methodological integration framework that allows researchers to merge numerical generalisation with contextual interpretation, resulting in more nuanced and comprehensive findings.

This integrative ability is especially significant in research settings focused on development, where both statistical data and personal experiences are crucial for comprehending social realities.

Three primary factors elucidate the increasing utilisation of mixed methods research within Ghanaian academic practice.

The demand for complete evidence has greatly enhanced the popularity of mixed methods approaches. Researchers increasingly acknowledge that quantitative data, although valuable for revealing trends and linkages, frequently lacks explanatory depth. In contrast, qualitative data offers profound contextual insight but may be limited in generalisability. Mixed techniques facilitate methodological complementarity, wherein the advantages of one approach offset the shortcomings of the other. This integration strengthens the reliability of findings and facilitates more sophisticated interpretations of intricate occurrences (Ivankova, 2021).

Secondly, the significance of policy and practical research has emerged as a primary catalyst for the use of mixed methodologies. Governments, development agencies, and institutional stakeholders increasingly require evidence that is both statistically valid and culturally relevant, as well as practically applicable. In domains such as education, healthcare, governance, and developmental planning, decision-makers necessitate information that elucidates both "what is occurring" and "why it is occurring." Mixed methods research is especially adept at addressing this need, as it offers both macro-level patterns and micro-level explanations that guide policy development and execution.

Third, the intricacy of modern social issues has required the implementation of multi-faceted analytical methods. Challenges such as ICT integration in education, institutional reform, inequality, unemployment, and governance are intrinsically complex and cannot be adequately addressed using linear or singular methodologies. These issues necessitate multi-dimensional analytical frameworks that amalgamate statistical patterns with contextual narratives and experience data (Morgan, 2022). Consequently, mixed methods research has become increasingly essential in tackling development concerns in both academic and policy spheres.

Recent methodological discussions underscore that pragmatism has emerged as the predominant philosophical foundation for mixed methods research, since it offers the necessary flexibility for integrating various data types. Nevertheless, experts warn that pragmatism is occasionally reproached for its philosophical vagueness, especially when researchers employ mixed approaches without explicitly

delineating the epistemological rationale for their integration (Hampson & McKinley, 2023). This prompts questions regarding the theoretical foundation of mixed methods and whether it is occasionally utilised in a merely procedural fashion.

### 6.3 Persistent Methodological Challenges in Ghanaian Research Practice

Despite these methodological advancements and the increasing diversification of research paradigms in Ghanaian social science research, several persistent challenges continue to undermine the quality, coherence, and philosophical depth of scholarly output. These challenges are interrelated and reflect broader systemic issues in research training and academic culture.

First, inadequate conceptual foundations persist as a primary obstacle. A significant number of researchers undertake studies that prioritise technical procedures like data collection, sampling strategies, and statistical or thematic analysis, yet offer little to no clear expression of the ontological and epistemological assumptions underpinning their inquiry. This leads to research that is methodologically sound yet philosophically lacking. Current methodological literature highlights that these conceptual discrepancies undermine the coherence between theory and technique, consequently diminishing the overall rigour and analytical depth of research (Mertens, 2020; Ngulube, 2021). In numerous cases, methodological choices are influenced by convenience, institutional norms, or supervisor preferences rather than explicit philosophical rationale, so compromising the intellectual integrity of research design.

Secondly, methodological inconsistency is a persistent issue. Numerous studies demonstrate a discordance among research topics, theoretical frameworks, paradigmatic assumptions, and selected methodologies. For instance, research aligned with interpretivist aims may employ positivist statistical methodologies lacking proper philosophical rationale, while others amalgamate qualitative and quantitative approaches without a cohesive integrative framework. Such contradictions result in disjointed interpretations, diminished validity, and compromised reliability of findings. Current methodological scholarship continuously underscores the necessity of robust alignment among paradigm, methodology, and analysis to yield credible and defensible research results (Creswell & Plano Clark, 2021).

In the absence of such congruence, research often remains descriptive instead of explanatory, so constraining its impact on theory advancement and policy implementation.

Third, insufficient instruction in research philosophy inside graduate programs constitutes a systemic deficiency. In numerous higher education institutions, methodological training predominantly prioritises technical abilities, like software-based data analysis, questionnaire design, and coding techniques, while offering less consideration to the philosophical underpinnings of research. This results in kids being technically adept while conceptually unprepared. Recent studies demonstrate that this mismatch is not exclusive to Ghana; it is also apparent in several developing and transitional academic institutions where research training emphasises outputs rather than epistemological comprehension (Park et al., 2020; Chafe, 2024). As a result, numerous researchers are unable to critically substantiate their methodological decisions within coherent paradigmatic frameworks.

Ultimately, there is a lack of integration of indigenous and context-specific epistemologies inside mainstream academic research. In numerous African research contexts, such as Ghana, Western paradigms persist in prevailing over methodological training and academic discourse. This hegemony frequently sidelines indigenous knowledge systems, local epistemologies, and culturally rooted modes of understanding. Consequently, research frameworks may inadequately reflect the socio-cultural reality of the situations being examined. Academics have progressively contended that this epistemological disparity constrains the transformational capacity of research and perpetuates reliance on external knowledge frameworks (Chilisa, 2021). The underutilisation of indigenous epistemologies limits

methodological innovation and diminishes potential for creating contextually relevant theories and frameworks.

## 6.4 Synthesis

Collectively, these challenges highlight the urgent need for deeper philosophical engagement, improved methodological coherence, and greater epistemological inclusivity within Ghanaian social science research. Addressing these issues requires not only technical training reforms but also a fundamental reorientation of research culture toward paradigmatic awareness, intellectual reflexivity, and context-sensitive inquiry.

## 6.5 Implications for Developmental Research

The findings of this study carry significant implications for developmental research, particularly in Ghana and other comparable developing contexts where research is expected to directly inform policy, governance, and socio-economic transformation.

First, the study underscores that clear paradigm–method alignment significantly enhances policy relevance. When research is grounded in a well-articulated philosophical framework, it becomes easier for policymakers and practitioners to interpret findings and translate them into actionable strategies. Conversely, research that lacks philosophical clarity often produces findings that are ambiguous or difficult to operationalize. Contemporary methodological literature reinforces the view that coherence between paradigm and methodology improves the communicability and applicability of research outputs, especially in policy-driven environments (Creswell & Plano Clark, 2021).

Second, the increasing adoption of mixed methods research improves contextual understanding in developmental studies. Developmental challenges are inherently complex, involving interrelated social, economic, cultural, and institutional factors. Mixed methods approaches enable researchers to integrate numerical trends with qualitative insights, thereby providing a more holistic understanding of development issues. This integration is particularly valuable in contexts where quantitative indicators alone cannot fully explain underlying social processes, while qualitative data alone may lack generalizability. As such, mixed methods research strengthens evidence-based decision-making by providing both depth and breadth of analysis (Morgan, 2022; Ivankova, 2021).

Third, the study highlights that strong methodological coherence enhances research credibility, visibility, and academic impact. Research that clearly articulates its paradigmatic foundation and demonstrates alignment between theory, method, and analysis is more likely to be published in high-impact and indexed journals. Recent methodological scholarship confirms that journals increasingly prioritize studies with explicit philosophical grounding and methodological transparency, as these attributes enhance replicability, trustworthiness, and scholarly contribution (Tashakkori & Teddlie, 2021; Morgan, 2022). Therefore, strengthening paradigm awareness directly contributes to improved academic recognition and international research competitiveness.

Finally, the study emphasizes that strengthening research philosophy training in higher education institutions is essential for improving developmental research outcomes. Embedding ontology, epistemology, axiology, and paradigm theory into graduate curricula will not only improve methodological competence but also enhance critical thinking and analytical depth among researchers. This training should move beyond theoretical instruction to include applied learning, case-based analysis, and comparative paradigm evaluation. Such an approach will ensure that researchers are better equipped to design coherent studies that meaningfully contribute to national and regional development agendas.

In summary, addressing these implications requires a deliberate shift from purely technical research training toward a more philosophically informed and contextually grounded research culture. This transformation is essential for producing high-quality developmental research capable of addressing complex societal challenges effectively and sustainably.

## 7. CONCLUSION

This study set out to examine the relationship between research paradigms and methodological choices in social science research, drawing empirical insights from Ghanaian academic outputs. The central argument advanced is that research paradigms are not peripheral philosophical abstractions, but foundational structures that shape how knowledge is conceptualized, generated, validated, and interpreted within scholarly inquiry (Creswell & Plano Clark, 2021; Tashakkori & Teddlie, 2021).

The findings demonstrate that interpretivist and pragmatic paradigms dominate contemporary social science research in Ghana, reflecting both global methodological trends and local contextual demands. Interpretivism remains highly influential because it enables researchers to engage deeply with socially constructed meanings, lived experiences, and culturally embedded realities. This is particularly relevant in education, sociology, and development studies, where human behavior and institutional practices are best understood within their socio-cultural contexts (Denzin & Lincoln, 2018; Chafe, 2024). Pragmatism, on the other hand, has gained prominence due to its flexible, problem-centred orientation, which allows researchers to select methods based on the nature of the research problem rather than strict philosophical allegiance (Morgan, 2022; Hampson & McKinley, 2023).

The increasing adoption of mixed methods research further reinforces this pragmatic turn in Ghanaian scholarship. Researchers are increasingly combining quantitative and qualitative approaches to achieve methodological complementarity, triangulation, and comprehensive explanation of complex social phenomena (Ivankova, 2021; Creswell & Plano Clark, 2021). This development reflects a growing recognition that contemporary development challenges, such as educational inequality, institutional inefficiencies, ICT integration, and governance issues are inherently multidimensional and cannot be adequately addressed through single-method approaches.

However, despite this positive methodological evolution, a critical gap remains evident in the lack of explicit articulation of research paradigms in a significant proportion of academic studies. This omission is not merely stylistic but epistemologically significant. Without clearly stated paradigmatic positioning, research risks becoming methodologically fragmented, where data collection techniques and analytical procedures are applied without coherent philosophical justification. Recent methodological scholarship strongly cautions that such inconsistencies undermine research transparency, weaken analytical rigor, and reduce the credibility of scholarly outputs (Park et al., 2020; Mertens, 2020).

In addition, the findings highlight a continued over-reliance on implicit methodological assumptions, where researchers adopt techniques associated with particular paradigms without explicitly acknowledging the underlying ontological or epistemological commitments. For example, qualitative methods are sometimes used without an interpretivist foundation, while quantitative approaches are applied without clear positivist justification. This disconnect reflects a broader structural issue in research training, where emphasis is placed on technical competence rather than philosophical coherence.

The study reveals a notable deficiency in the engagement with critical theory and emancipatory research paradigms in Ghanaian academic outputs. Although worldwide academia increasingly acknowledges the significance of critical views in tackling structural inequities, power dynamics, and social transformation, these paradigms are nevertheless underutilised in the examined studies. This signifies a lost potential for

more transformative research that directly examines systems of inequality and fosters knowledge production aimed at social justice (Chilisa, 2021). The limited presence of critical theory indicates the necessity for more epistemological inclusion and variation in Ghanaian research methodologies.

Collectively, these data underscore the principal conclusion that research quality is markedly improved when there is robust agreement between concepts and procedures. Explicit paradigmatic articulation boosts methodological coherence, fortifies analytical rationale, and improves the interpretability of results. This congruence is essential in development-focused research, as scholarly results are anticipated to guide governmental decisions, institutional reforms, and practical actions.

Ultimately, the study concludes that advancing the quality and impact of social science research in Ghana and comparable contexts requires a deliberate strengthening of research philosophy literacy and paradigmatic awareness. Universities and research institutions must move beyond teaching research as a purely technical exercise and instead position it as a deeply philosophical and intellectually reflective process. This involves embedding ontology, epistemology, axiology, and paradigm theory more explicitly into graduate curricula, supervision practices, and institutional research culture.

Such reforms will ensure that future researchers are not only technically competent but also philosophically grounded, capable of producing coherent, rigorous, and contextually relevant scholarship. In the long term, strengthening paradigmatic clarity will contribute to more robust knowledge production systems, improved policy relevance, and enhanced global competitiveness of research emerging from Ghana and similar developing academic environments.

## **8. REQUIREMENT FOR EXPLICIT PARADIGM STATEMENTS IN RESEARCH**

A pressing necessity exists for the systematic incorporation of research philosophy into graduate courses, especially in social science and applied research programs. Research philosophy, encompassing ontology, epistemology, and axiology, constitutes the philosophical framework for all methodological decisions. Ontology examines the essence of reality, epistemology investigates the nature and acquisition of knowledge, and axiology emphasises values and ethics in study. Collectively, these philosophical characteristics influence researchers' problem conceptualisation, technique selection, and findings interpretation (Creswell & Clark 2021; Mertens 2020).

Although foundationally significant, contemporary academic evidence indicates that numerous postgraduate researchers possess robust technical skills in data collection and analysis tools, yet display a deficient comprehension of the philosophical assumptions that inform their methodological selections. This disparity frequently leads to studies where research methodologies are executed accurately in a technical sense but lack philosophical consistency conceptually. For instance, researchers could utilise qualitative interviews without distinctly embracing an interpretivist perspective, or apply statistical methods without expressly anchoring their work in positivist principles. These discrepancies undermine the theoretical integrity and academic rigour of study findings.

Recent methodological literature highlights that this gap is not solely a technical concern but a fundamental deficiency in research training systems, especially within academic environments in developing contexts (Park et al., 2020; Creswell & Plano Clark, 2021). In numerous colleges, particularly within African higher education systems like Ghana, research training often emphasises procedural knowledge, such as sampling procedures, questionnaire design, and data analysis software, while neglecting philosophical foundations. Consequently, students frequently view research methodology as a series of technical procedures instead of a unified conceptual framework.

To address this gap, universities should introduce dedicated compulsory courses in research paradigms and philosophy of science at both Master's and PhD levels. These courses should move beyond theoretical definitions and focus on practical application, enabling students to understand how philosophical assumptions directly influence methodological choices. Such training should include detailed engagement with the four major paradigms—positivism, interpretivism, critical theory, and pragmatism, and their implications for research design.

Furthermore, it is essential that students are systematically trained to distinguish between positivist, interpretivist, critical, and pragmatic worldviews. This involves not only understanding the theoretical differences between paradigms but also being able to apply them appropriately in research design. For instance, students should be able to justify when a quantitative survey is appropriate under a positivist framework or when qualitative interviews are more suitable within an interpretivist approach. This level of philosophical awareness ensures that methodological choices are not arbitrary but are logically grounded in coherent worldviews.

In addition, graduate training programmes should emphasize the relationship between philosophical assumptions and methodological decisions through applied case studies. Case-based learning is particularly effective in bridging the gap between theory and practice, as it allows students to observe how paradigmatic assumptions are operationalized in real research contexts. By critically analyzing published studies, students can identify instances of strong and weak paradigm-method alignment, thereby developing their own capacity for methodological coherence and critical evaluation.

The integration of research philosophy into graduate training has broader implications for improving the overall quality of academic research. Strengthening philosophical literacy will significantly enhance researchers' ability to design coherent studies, justify methodological decisions, and critically engage with existing literature. It also promotes intellectual independence, enabling researchers to move beyond formulaic research designs toward more reflective and contextually grounded inquiry.

Ultimately, embedding research philosophy into graduate education is not merely an academic enhancement but a necessary reform for improving the integrity and impact of social science research. As methodological complexity continues to increase in contemporary research environments, particularly with the growing adoption of mixed methods and interdisciplinary approaches, the need for strong philosophical grounding becomes even more critical. Universities that prioritize this integration will be better positioned to produce researchers capable of contributing meaningfully to knowledge production, policy development, and societal advancement.

## **8.1 Promotion of Context-Specific Methodological Frameworks**

The study also highlights the importance of developing context-sensitive research frameworks that reflect local realities, particularly in African academic environments.

Many research paradigms and methodologies currently applied in Ghana are derived from Western epistemological traditions, which may not always fully capture indigenous knowledge systems and socio-cultural complexities (Chilisa, 2021). Therefore, it is recommended that:

Researchers actively incorporate indigenous epistemologies and culturally grounded perspectives into their studies.

Universities promote the development of Africa-centered research frameworks that align with local realities.

Critical engagement with global paradigms should be encouraged to ensure contextual adaptation rather than wholesale adoption.

Such an approach will contribute to decolonizing research methodologies and enhancing the relevance of academic outputs to national and regional development challenges.

The efficacy of enhancing research quality in higher education is fundamentally reliant on the robustness and coherence of research supervision and mentorship systems, alongside the broader institutional reforms and methodological recommendations presented in this paper. Supervisors hold a crucial role in the research training process, acting as the main connection between theoretical research frameworks, methodological implementation, and the ultimate academic output. Thus, deficiencies in oversight frequently result in methodological discrepancies, inadequate conceptual foundations, and restricted research influence.

Effective supervision needs more than mere technical proficiency in research design and data processing. It necessitates a profound and operational comprehension of research paradigms, encompassing positivism, interpretivism, critical theory, and pragmatism, along with their ontological and epistemological underpinnings. Supervisors must possess the ability to direct students in ensuring that their research topics, theoretical frameworks, data collection methods, and analytical procedures are logically consistent within a coherent philosophical perspective. In the absence of such congruence, research frequently becomes disjointed, with methodologies employed mechanically rather than being conceptually substantiated (Creswell & Plano Clark, 2021; Tashakkori & Teddlie, 2021).

Recent methodological scholarship underscores that supervisory competence in research philosophy is a major determinant of postgraduate research quality. Studies have shown that many postgraduate students struggle not with data collection itself, but with the conceptual justification of their methodological choices and the articulation of their paradigmatic position (Mertens, 2020; Park et al., 2020). This challenge is particularly evident in many African universities, including those in Ghana, where supervision systems are often constrained by high student-to-supervisor ratios, limited formal training in research philosophy, and increasing administrative workloads. As a result, supervision tends to focus heavily on technical aspects such as sampling, instrument design, and statistical analysis, while giving insufficient attention to philosophical coherence and methodological alignment.

To address these challenges, institutions must adopt deliberate and structured strategies aimed at strengthening supervision and mentorship capacity. First, it is essential that universities implement continuous professional development (CPD) programmes for supervisors. These programmes should go beyond basic research methods training to include advanced modules on research paradigms, philosophical assumptions, and contemporary methodological approaches such as mixed methods and pragmatic inquiry. Regular workshops, seminars, and training sessions will ensure that supervisors remain current with evolving global research standards and are better equipped to guide students in producing philosophically sound research outputs (Creswell & Plano Clark, 2021; Morgan, 2022).

Second, institutions should develop standardized paradigm–method alignment guidelines to support both supervisors and students in research design and thesis evaluation. These guidelines should clearly outline the relationships between ontological assumptions, epistemological positions, and appropriate methodological choices. They should also provide practical examples of well-aligned research designs, as well as common errors such as mixing qualitative methods with positivist assumptions without justification. The availability of such structured frameworks enhances consistency, reduces ambiguity, and improves the overall quality of postgraduate research (Mertens, 2020; Tashakkori & Teddlie, 2021).

Third, universities should promote interdisciplinary supervision models, where students are guided by supervisors from different academic and methodological backgrounds. This approach enhances intellectual diversity, exposes students to multiple paradigmatic perspectives, and strengthens the

analytical depth of research outputs. Interdisciplinary supervision is particularly valuable in addressing complex social and developmental issues, which often require integration of multiple disciplinary perspectives and methodological approaches. It also supports methodological pluralism, which is increasingly recognized as essential in contemporary social science research (Creswell & Plano Clark, 2021; Morgan, 2022).

In summary, strengthening research supervision and mentorship is not a supplementary concern but a central requirement for improving research quality and methodological coherence. When supervisors are adequately trained in research paradigms and supported by institutional frameworks, they are better positioned to guide students toward producing coherent, rigorous, and impactful research. This is especially critical in developing academic environments, where research capacity building plays a direct role in national development, knowledge production, and policy formulation.

## Summary

The above suggestions underscore the necessity of enhancing research philosophy education, ensuring paradigm clarity, fostering methodological diversity, and contextualising research frameworks to elevate the quality and impact of social scientific research. Implementing these principles will markedly improve the coherence, credibility, and global competitiveness of research outputs in Ghana and analogous contexts.

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