Chapter 7
Philosophical Considerations in Combining Mixed Methods and Participatory Action Research

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ABSTRACT

This chapter examines the philosophical foundations and methodological benefits of incorporating mixed methods within Participatory Action Research. Mixed methods research combines qualitative insights with quantitative findings, thus providing a holistic understanding of the phenomena under investigation. While Participatory Action Research involves research participants in all stages of the research process, combining both methods broadens perspectives beyond the scope of any single

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research methodology. The chapter contributes to the field by helping doctoral researchers who have employed Participatory Action Research and mixed methods in their research understand how to craft and discuss their philosophical stance.

1. INTRODUCTION

This chapter provides an overview of the philosophical foundations that underpin academic research and highlights their significance for doctoral candidates preparing their studies. Research is anchored in assumptions about what counts as knowledge, what constitutes reality, and how researchers relate to the people and environments they study. Collectively, these assumptions are often described as paradigms. They establish the intellectual environment that shapes research questions, informs methodological decisions, and frames interpretations.

As Groer, Morrissey, and Glatte (2025) suggest, these philosophical orientations influence not only how data are collected but also how research evidence is judged and communicated. A researcher's philosophical stance interrelates with every stage of the research inquiry, from the development of research aims, the justification of the need for the research to its conclusions. For this reason, philosophical positioning should be understood as a central component of research design not just as a preliminary formality.

The chapter begins by examining key research paradigms and the ways in which they influence research interpretation and analytic strategy. It then considers ontology and epistemology, the two dimensions of philosophy most relevant to methodological decision-making. Ontology deals with assumptions about what exists, whereas epistemology concerns how knowledge is produced and validated (Hothersall, 2025)

The chapter also introduces Participatory Action Research (PAR) and mixed methods research. PAR emphasizes collective inquiry, shared power, and community-driven change (Biedermann, Calder, Leitão, & Lette, (2025). While mixed methods design integrates qualitative and quantitative approaches to capture complexity (Coe, Waring, Hedges, & Ashley, 2025). We explore how these approaches embody particular philosophical assumptions and how they can be brought together coherently. A discussion of methodological integration follows, showing how philosophical commitments guide the blending of research methods. The chapter concludes with an applied illustration from a social-enterprise context, demonstrating how philosophical reasoning translates into practical research choices and community impact.

2. PARADIGM DEBATE

According to Kuhn (1962) concept of a paradigm underscores how research is shaped by shared beliefs about valid questions and appropriate methods. A paradigm acts as a conceptual filter, amplifying certain aspects of the social world while obscuring others. Awareness of these assumptions is essential for making sound research methodological decisions.

Positivism historically is linked with the natural sciences, privileges empirical observation and quantification . Its roots lie in Enlightenment thought, although authors such as Bacon (1561–1626) articulated empiricism long before Comte (1798–1857) formalised positivist philosophy. Positivists claim that reality can be known through systematic observation and that researchers should maintain distance to prevent bias. Rigour is measured through adherence to procedures to ensure replicability, generalisability, and objectivity. Values, within this tradition, are treated as distortions that must be controlled, and ethical considerations typically remain external to the research logic (Maksimovic & Evtimov, 2023; Maher & Sidei, 2025).

Post-positivism emerged in response to critiques of absolute objectivity. Popper (1902–1994) argued that scientific claims must be falsifiable, while Kuhn (1922–1996) emphasised the influence of historical and cultural factors on scientific practice. Post-positivists maintain that evidence can never fully confirm a theory, only strengthen or weaken it. Triangulation, the use of multiple data types or perspectives, is encouraged to offset methodological limitations (Denzin, 2012; Marlina, Purwaningsih, Al Hakim & Maryati, 2025). Although post-positivism remains concerned with explanation, it acknowledges that all knowledge is partial (Clark, Foster, Bryman & Sloan, 2021).

Parallel to this, participatory and action-oriented approaches challenged traditional research power structures. Early action research did not adequately address gender or intersectional inequalities. Feminist scholars argued that scientific knowledge often reflected masculinist assumptions, thereby excluding women lived experiences (Peake & Mikhail, 2024; Wilcock, 2024). Later interventions from women of colour highlighted the need to address race and class dynamics in research (Bhati, 2023).

In addition, Marxist theory introduced a different form of critique, asserting that economic structures shape consciousness and that dominant groups control both material resources and cultural meaning (Joseph, 2024). These ideas contributed to the ethical and political commitments now common in Participatory Action Research and other critical paradigms. Both Marxist and feminist perspectives seek to challenge the status quo and bring about change.

Furthermore, decolonial perspectives extend these critiques by interrogating how colonial legacies continue to shape epistemic authority. Decolonial scholars aim to re-centre marginalised knowledge systems and challenge Western dominance in

research design and interpretation (Nwafor, 2024; Bhuda, Setshego & Koitsiwe, 2025). The approach demands an ongoing, reflexive engagement with power, culture, and representation to be more prominent in research (Omodan & Dastile, 2023).

Contemporary philosophical positions add additional nuance. Critical realism proposes a layered reality composed of mechanisms, events, and experiences (Saliya, 2023). These mechanisms cannot always be directly observed; explanation involves theorising how they generate observable outcomes under particular conditions. This stance supports mixed methods research designs that pair quantitative data analysis with qualitative mechanism of exploration (De Oliveira, 2024; Joseph, 2024).

In practice, researchers often combine paradigmatic elements in ways that reflect the evolving needs of their research projects. For example, a realist evaluation might be paired with interpretive fieldwork or participatory action research co-design. Maxwell (2012) outlines three principles for ensuring coherence across such approaches: aligning assumptions with design, applying quality criteria appropriate to the paradigm, and grounding methodological innovation in ethical reflection. These principles echo Åkerblad, Seppänen-Järvelä and Haapakoski's (2021) call for paradigm-appropriate forms of rigour.

Within mixed methods research, debates continue regarding paradigm compatibility. Klassen et al. (2012) reject the assumption that qualitative and quantitative paradigms cannot coexist, arguing instead that integration can strengthen explanatory power. For instance, statistical trends can be contextualised through interviews, while qualitative insights can inform the development of quantitative instruments. Realist mixed methods design takes this further by connecting contextual patterns with causal mechanisms to explore what works, for whom, and in which circumstances (Gillespie, Glăveanu, & de Saint Laurent, 2024).

Ultimately, philosophy is less about drawing boundaries and more about constructing transparent and defensible rationales. A clear philosophical stance illuminates how assumptions, methods, and interpretations relate, allowing researchers to produce work that is both analytically coherent and socially meaningful (Hoda, 2024).

3. ONTOLOGY AND EPISTEMOLOGY

Ontology concerns what exists and how reality is structured (Klakegg, & Tvedt, 2024). It asks questions about the character of the world, whether it is singular or plural, and whether the social realm can be understood as fixed, variable, or entirely dependent on perspective. Epistemology, in turn, examines how we come to know that reality and the kind of relationship that exists between the researcher and what is known (Roeber, Sosa, Steup, & Turri, 2024).These two philosophical positions are intertwined: assumptions about the nature of reality shape what kinds

of knowledge are considered possible and the ways in which that knowledge can be pursued (Yulianto, 2021). Ontological commitments subtly influence research choices, clarity about one's position becomes essential, guiding decisions about what counts as evidence, what is treated as a cause or mechanism, and how units of analysis are selected (Grass, 2024; Roeber, Sosa, Steup, & Turri, 2024).

The ontology of constructivism adopts a relativist positing that multiple, context-dependent worlds exist and that these worlds are constituted through human interpretation. From this perspective, there is no single external reality that exists independently of human consciousness; instead, individuals inhabit meaning systems that differ across groups and contexts (Ignacio, & Paras, 2024). This position distinguishes constructivism from other paradigms (Montgomery, 2025). Critical realists offer a contrasting view: they argue that an independent reality exists but acknowledge that access to it is mediated by fallible theories. Interpretivists emphasise meaning making as the basis of social reality, while post-structural and new materialist scholars treat reality as relational and continually produced (Saliya, 2023). Positioning researcher's work within this landscape helps avoid errors such as, applying variable-based causation to phenomena that are better understood as situated practices.

Epistemological issues follow from ontological ones. If reality is assumed to be singular and independent of the observer, researchers pursue knowledge that aspires to objectivity and detachment (Aivas, Fatah, Bayz, Karem, Salih, & Hussein, 2025). If reality is seen as constructed, knowledge becomes inherently perspectival: what researchers and participants "know" emerges from interaction. This does not imply that all interpretations are equally defensible; rather, each paradigm employs criteria suited to its assumption's credibility and transferability under constructivism, for example, and validity and reliability within positivist traditions (Yulianto, 2021; Klakegg & Tvedt, 2024). Methodological choices therefore flow from philosophical foundations: assumptions about stable realities support variable control and measurement, whereas assumptions about multiple realities necessitate methods attentive to interpretation and context.

Within constructivism, the response to the question "How do I know?" centres on the co-production of knowledge. Researcher and participant are seen as connected, and findings emerge through their interaction. Epistemology thus addresses the grounds upon which knowledge claims are built and the processes through which understanding is generated (Moon & Blackman, 2014). A clearly articulated epistemic stance helps ensure that data-gathering techniques and analytic strategies align with the research purpose for instance, using case-based strategy within a critical realist study or interpretive interviews within an interpretivist stance (Clark, Foster, Bryman & Sloan, 2021; De Oliveira, 2024).

Epistemological discussions also draw attention to social and political positioning. Intemann (2023) argues that epistemic advantage comes not simply from occupying marginalised positions but from possessing critical awareness of power structures, reframing objectivity as accountability situated within specific contexts. Under a transactional, subjectivist epistemology, values are integral to research rather than sources of contamination. Reflexivity becomes a methodological tool for establishing rigour, documented through positionality statements, analytic logs, and transparency about provides interpretive choices (Yang, 2024; Montgomery, 2025).

Examining quality within this framework requires attention to context and purpose. Research is evaluated according to how well it engages with the historical and social conditions under study that is conducted and whether it contributes to reducing knowledge gaps or enabling action. Such evaluative criteria are especially visible in paradigms oriented toward transformation, where ethical consequences, cultural responsiveness, and shared decision-making form part of quality (Yulianto, 2021; Yang, 2024).

Constructivism differs from positivist and post-positivist positions primarily at the epistemological level. Guba and Lincoln (1994, 2000) argue that research inquiry involves dialogue among stakeholders whose constructions are compared, refined, and sometimes merged. When consensus cannot be reached, mapping the diversity of perspectives becomes the outcome. Accordingly, research findings are joint products of researcher and participant engagement.

Two major sets of criteria guide that quality assessment: trustworthiness (credibility, transferability, dependability, and confirmability) and authenticity (fairness, ontological and educative authenticity, catalytic and tactical authenticity) (Maher & Bedwei-Majdoub, 2025). These dimensions are operationalised through thick description, collaborative checking, transparent analytic processes, and attention to the socio-political factors that shape interpretation. Constructivist work treats values as fundamental to knowledge creation and embraces interpretive, phenomenological, and hermeneutic approaches (Clark, Foster, Bryman & Sloan, 2021).

Constructivism argues that knowledge is made rather than found (William, 2024). Meaning arises in the interplay between human consciousness and the objects toward which it is directed, illustrating the intentionality that shapes all understanding (Park, 2023). Post-positivists accepts that social categories are constructed but differ in their commitment to explanation and prediction. Constructivists, by contrast, judge research according to credibility and resonance rather than generalisability (Maksimovic & Evtimov, 2023; Dulal, 2025).

Although positivists acknowledge that human interpretation affects social life, constructivists take the further step of treating all meaningful reality as constructed. Researchers therefore play an active role in facilitating meaning-making, working iteratively with data by coding, synthesising, and developing themes. Many con-

structivist researchers are involved with participants more directly, inviting their input when developing research questions and co-interpretation processes (Park, 2023). The researcher's responsibility includes recognising their own assumptions, being transparent with participants, and working toward uncovering participants' own meaning structures.

Table 1. Research Paradigms and Associated Characteristics

Paradigm	Ontological / Epistemological Orientation
Post-positivism	A mind-independent reality exists but is understood through human lenses; objectivity is incomplete and mediated.
Pragmatism	Multiple realities shaped by experience; knowledge is judged by its usefulness.
Interpretivism	Reality is produced through subjective interpretation; emphasis on meanings people attribute to events.
Constructivism	Knowledge is jointly constructed by researchers and participants within social contexts.

Choosing a paradigm structures the entire research process and supports doctoral researchers in making coherent methodological decisions.

4. METHODOLOGY

Methodology describes the philosophical and theoretical scaffolding that shapes the design and execution of research (Brown & Kim, 2025). Whereas "methods" refer to the specific tools used to collect or analyse data. Methodology provides the justification for why those tools are appropriate and how they contribute to answering the research question. Maher (2026) describes methodology as the analytical framework that explains how a study is conceptualised, organised, and interpreted.

Methods such as interviews, surveys, or experiments are situated within a broader methodological rationale. They derive their legitimacy from their alignment with the study's epistemological assumptions, theoretical commitments, and practical aims. A coherent methodology ensures that research contributes meaningfully to existing knowledge and that the chosen design is both rigorous and suitable for the phenomenon being examined.

Quantitative and qualitative methodologies rest on different assumptions and serve different purposes (Saunders, & Darabi, 2024). Quantitative studies typically involve statistical procedures and standardised instruments to test hypotheses or identify patterns. Qualitative research, on the other hand, prioritises depth of understanding through interviews, case studies, ethnography, or narrative inquiry. The selection of a methodological pathway depends on the nature of the questions

being posed, the kind of knowledge sought, and the philosophical orientation of the researcher (Maher, 2026).

A sound methodology also requires articulating why certain data-gathering strategies are preferred over others why interviews might be more appropriate than surveys, or why observations offer insights that documents cannot. By explaining these choices, the methodology strengthens the credibility and coherence of the study (Gillespie, Glăveanu, & de Saint Laurent, 2024)

Two methodological frameworks that have gained prominence are Participatory Action Research and mixed methods. Participatory Action Research is a collaborative approach in which the people affected by a problem become co-investigators. It seeks both to produce knowledge and to support social transformation, making it particularly relevant to equity-focused research. Mixed methods research integrates quantitative and qualitative approaches, enabling researchers to capture patterns while also understanding meanings and contexts. When used together, these strategies allow researchers to address complex issues holistically (Maher, 2018).

The following section explores how these methodologies translate into specific data collection practices, demonstrating how participatory principles and methodological integration inform real-world research designs.

4.1 Participatory Action Research

Participatory Action Research traces its intellectual roots to the Highlander Research and Education Centre in Tennessee, founded in 1932 (Lewis, 2001). While the term "participatory research" emerged formally in the 1970s, similar practices developed concurrently in places such as India, Brazil, Colombia, Tanzania, and Appalachia (Stoecker & Falcón, 2022; Mallory, 2024). Its more recent evolution has been influenced by movements in educational action research and post-colonial critiques of development practices (Cornish et al., 2023).

What differentiates Participatory Action Research from other qualitative approaches is the active role of participants. Rather than being studied, participants help shape research design, guide data generation, and determine the relevance of findings. This emphasis on shared inquiry addresses the longstanding tension between producing rigorous research and ensuring that research remains relevant to those it affects (Cornish et al., 2023). Participatory Action Research is grounded in the belief that people should have agency in shaping the knowledge that influences their lives (Attwood, 1997).

To bridge the gap between research and implementation, Participatory Action Research adopts an iterative cycle of planning, action, reflection, feedback, and revision (Stoecker & Falcón, 2022; De Oliveira, 2023). This cyclical process supports learning, fosters collective ownership of findings, and strengthens the sustainability

of interventions. Participatory Action Research has been taken up widely across disciplines education, public health, community development, business, and social work due to its commitment to empowerment and collaboration.

Researchers often identify two central aims of Participatory Action Research:

1. Creating knowledge and action that directly benefits a community, and
2. Enabling participants to gain greater control and insight through the research process.

Through collaboration, community members and researchers jointly identify questions, interpret findings, and decide how knowledge should be used. This approach challenges conventional hierarchies of expertise and opens space for innovative, community-driven solutions. It also serves as a methodological alternative to more prescriptive research traditions (Marshall & Rossman, 2006).

While Participatory Action Research poses challenges such as managing power dynamics, time demands, and ethical complexities it offers doctoral researchers a pathway for conducting inquiry that leads to tangible change. Its theoretical and practical commitments rest on the integration of values, reciprocity, and shared governance. In many applied contexts, this involves agreements regarding data ownership, community consent, and feedback procedures.

Participatory Action Research promotes the development of "living knowledge" embedded within the everyday contexts where action occurs. This rests on the ethical claim that communities have a right to participate in research that concerns them (Stoecker & Falcón, 2022; De Oliveira, 2023). Although aligned with constructivist and critical perspectives, Participatory Action Research borrows measurement practices from positivist traditions when useful, such as co-designing surveys or combining qualitative insights with quantitative indicators.

Epistemologically, Participatory Action Research emphasises co-created knowledge and critical subjectivity. Ontologically, it recognises that while people experience multiple constructed realities, a material world still exists. Human perception is therefore an interaction between subjective interpretation and external conditions (Yulianto, 2021; Yang, 2024). These philosophical commitments support a methodology grounded in partnership, joint decision-making, and the blending of qualitative and quantitative approaches when they serve community goals. The rise of mixed-methods Participatory Action Research reflects this pragmatic pluralism and its alignment with transformative research agendas (Stoecker & Avila, 2021).

Early precedents for mixing different forms of inquiry appear as far back as ancient Babylon, where astronomers around 1000 BC paired observational records of celestial bodies with numerical calculations (Goshu & Ridwan, 2024). In modern scholarship, however, the notion of systematically combining methods

did not gain clear recognition until Campbell and Fiske's (1959) seminal work on triangulation. Creswell and Plano Clark (2011) note that by the late 1980s and early 1990s researchers from several fields began to articulate designs that went beyond separating qualitative and quantitative approaches. They describe the years from the 1950s through the 1980s as a foundational period in which the basic interest in multi-method inquiry took shape.

Across business, management, and social science disciplines, the integrated use of numerical and interpretive data has gained prominence because of its capacity to illuminate complex processes such as managerial judgement, career decision-making, workplace culture, and organisational routines. Venkatesh, Brown, and Sullivan (2023) provide a set of guiding principles for combining these approaches, stressing their flexibility and the added depth they bring to understanding research problems. Their work reflects the increasing relevance of mixed methods for capturing nuance in contemporary organisational environments.

4.2 Mixed Methods

The use of quantitative with qualitative methods in a single study are increasingly being recognised for their ability to provide deep insights into organisational culture, human resource management and commercial processes. Several researchers (Maher, 2016; Leppens, Chatteur, & Perkins, 2023; Oranga, 2025) outline the principles, strategies, and guidance for effectively combining quantitative and qualitative methods. They emphasise the adaptability of mixed-methods research across various disciplines, highlighting its utility in providing a more robust and nuanced understanding of research questions (Maher, 2018).

Mixed methods research is also designed to address different types of questions and produce varied forms of evidence, thereby offering a more rounded response to the overall research aim. Some scholars, including Aguzzoli et al. (2024), argue that selecting a method inherently reflects a specific stance on ontology and epistemology, as each methodology embodies underlying assumptions about how knowledge is created. Others challenge this view, maintaining that methods carry more philosophical flexibility than previously assumed (Åkerblad, Seppänen-Järvelä, & Haapakoski, 2021; Takona, 2024). This perspective opens the opportunity for combining qualitative and quantitative approaches in a single study. Pragmatism is frequently adopted as the philosophical frame that links methodological choice to practical consequences (Creswell, 2021).

Ongoing debates amongst researchers seeks to broaden the range of voices represented and encourage attention to multiple viewpoints. Recognising the aims, strengths, and limits of each methodological tradition enhances understanding of

the phenomenon under study. This promotes appreciation of the different types of insight each method offers instead of positioning one as inherently superior.

Nevertheless, mixed methods scholarship faces persistent challenges. Dawadi, Shrestha, and Giri (2021) recognise that tensions may arise from incompatible philosophical assumptions, risking superficial integration. Ivankova and Clark (2016) similarly observe that critiques differ across disciplines because of divergent theoretical traditions. Foster (2024) adds that one strand may dominate the other if researchers are more experienced in one paradigm than the other, potentially compromising the study's balance. To address these issues, scholars recommend intentionally identifying the point at which strands interface, using joint displays to make integration visible, and explicitly noting areas of convergence or divergence rather than glossing them over.

Mixed methods designs may involve merging datasets, connecting phases sequentially, or embedding one strand within another. Their value lies in purposeful integration rather than mere coexistence. Each design type for instance, exploratory sequential or explanatory sequential brings particular rationales and standards. Rigorous studies justify the design, clarify how the strands intersect, and explain how philosophical positioning influenced key research decisions (Tang, 2025).

4.3 Mix Method Project Case - One

The interest of the research is primarily in understanding the career anchors and career path preferences of social enterprise managers. Given the limited literature in the area of research and related theory on the subject matter, the author decided to employ a mixed method (quantitative and qualitative). Understanding how managers' career path preferences are influenced by the organisational factors and the environment in which they are employed would lead to theory development.

A purely quantitative approach would not have produced adequate data from which to draw sound conclusions, and it would have been difficult to make anything other than superficial comparisons between the career anchors and career path preferences of these managers. The combination of these methods (survey and semi-structured interviews) produced some important results which would not have been evident had the author used only one approach. For example, the quantitative data which the author collected from managers' career anchors and career path preference survey scores were further explained by the qualitative semi-structured interview data collected from managers.

The author adopts the social constructionist stance (Hoda, 2024) in which the author and the research participants can become an interactive entity, and thus, create new knowledge (Saunders & Darabi, 2024).The author selected this approach because interaction between the researcher and the research participants will influ-

ence both parties and may cause changes in their perceptions by jointly creating new knowledge and understanding of the career anchors and career path preferences of social enterprise managers.

4.4 Mix Method Project Case - Two

A social enterprise whose mission is to generate community benefit by ensuring that service users successfully complete its programme. Quantitative research shows the organisation reporting a completion rate of 90%, which on the surface appears highly positive. Yet qualitative inquiry reveals a different outcome. Many of the organisations' beneficiaries were experiencing extensive delays and finish their appointments without a clear understanding of how to apply the guidance the received in practice.

A Participatory Action Research (PAR) project, co-led with community partners, redesigned the organisation's workflow processes and embedded a brief two-minute "teach-back" technique aimed at improving comprehension and accessibility. Qualitative feedback following these changes indicated stronger engagement, increased inclusion, and enhanced understanding of recommended actions.

Philosophically, the design demonstrates clear alignment. A critical realist stance draws attention to underlying mechanisms such as bottlenecks in workflow that shape observed outcomes. A post-positivist epistemology supports cautious causal claims grounded in systematic evidence. Constructivist and critical approaches address the importance of meaning-making, empowerment, and equity. Pragmatism ensures that insights lead to tangible improvements. Integration is demonstrated through linking emergent qualitative themes (e.g., communication and empowerment) with quantitative indicators showing stable levels of re-engagement and participation. Collectively, the project illustrates how theoretically coherent mixed methods research can validate a social enterprise's capacity to create sustained social value.

5.CONCLUSION

Philosophical perspectives frame assumptions about reality, what counts as knowledge, and how researchers engage with participants and evidence. These perspectives structure how interpretations are formed and what kinds of claims can be made. Following the Enlightenment, positivism became dominant because it offered the promise of certainty through observation, experimentation, and the search for general laws. Over time, however, researchers recognised that many social and organisational problems cannot be fully captured using positivist assumptions alone. This realisation led to the development of alternative perspectives including

post-positivism, constructivism/interpretivism, and critical traditions such as feminist and Marxist approaches which sought to address these limitations.

Critiques of combining qualitative and quantitative approaches in Participatory Action Research often stress that each method reflects particular philosophical commitments. While this is true, it does not necessarily rule out integration. If researchers clearly articulate their ontological and epistemological positions, acknowledge the limits of each strand, and design integration points that honour these assumptions, mixed methods can be used coherently.

A shift away from treating philosophy as a strict gatekeeper and toward viewing research methods as tools has supported wider acceptance of combining strands. From this perspective, philosophy affords clarity about how and why methods should be brought together for a specific problem and context, rather than restricting their use (Adhikari & Timsina, 2024; Russell, 2025).

Doctoral researchers typically begin with clearly formulated questions and consideration of the data required to address them. Researchers also need to identify relevant ethical issues during data collection. In practice, this involves writing concise statements on ontology (what exists and in what form), epistemology (how knowledge is obtained, including the researcher's position), and methodology (the strategies and procedures guiding the investigation). Quality criteria must match the chosen paradigm: validity and reliability for post-positivist work, and credibility, transferability, dependability, confirmability, and authenticity for constructivist and participatory designs (Pretorius, 2024; Braun & Clarke, 2023).

Each strand must meet its own standards of rigour, but this alone is insufficient. Researchers must also specify how the strands are brought together to support meta-inferences (Younas, Fàbregues, & Creswell, 2023; Bazeley, 2024). Techniques such as joint displays enhance transparency by making links between strands auditable (Nessle et al., 2023). Divergences between findings should be interpreted as analytical opportunities potentially revealing subgroups, hidden mechanisms, or social desirability effects rather than problems to be smoothed out (Younas, 2025).

Philosophical clarity should function as a practical design tool, helping align sampling, instruments, analysis, ethical procedures, and quality criteria. When coherence is achieved whether through Participatory Action Research cycles of collaborative action or mixed methods' disciplined integration the resulting research becomes both principled and practically meaningful.

Ultimately, ethical practice, rigour, and philosophical consistency reinforce one another. Participatory Action Research enables empowerment and accountability within iterative cycles of inquiry, while mixed methods position integration as the basis on which credibility and depth are judged. Philosophy thus operates both as a compass guiding coherent design and as an anchor grounding the rigour and trust-

worthiness of the study. In doing so, it enables research that explains, interprets, and contributes to positive social change

6.DISCUSSION

This chapter offers a practical guide for doctoral researchers designing studies in fields such as social science, business management, health, or education especially when mixed methods are combined with Participatory Action Research. The intention is not to revisit historic paradigm debates but to show how ontological and epistemological positions translate into specific decisions about design, ethics, quality, and reporting.

Mixed methods and Participatory Action Research are often selected for research problems that involve multiple stakeholders, high stakes, and both measurable and meaning-based outcomes. In such contexts, philosophical ambiguity can undermine coherence. If a researcher implicitly assumes a single external reality while simultaneously inviting participants to co-construct meanings, decision-making becomes confused. Similarly, assuming multiple realities but framing findings as universal generalisations will attract methodological critique. The solution is clear: declare a philosophical orientation and apply it consistently.

Philosophy plays an essential role in the use of mixed methods within Participatory Action Research. Post-positivism provides a moderated view of objectivity, using triangulation and replication to reduce bias (Fodouop Kouam, 2025). This foundation is particularly important in mixed methods research, which requires the two strands to interact without one dominating the other. Constructivism strengthens the participatory dimensions of Participatory Action Research by emphasising co-constructed meaning while maintaining evaluative standards such as credibility, dependability, and confirmability.

Critical approaches including feminist and Marxist traditions further prompt researchers to consider questions of power, representation, and benefit: who frames the research problem, whose voices shape the analysis, and who gains from the findings (Onwuegbuzie & Abrams, 2025). Mixed methods scholars now explicitly link these philosophical positions to design typologies convergent, sequential, embedded, transformative paired with planned integration points (Creswell & Plano Clark, 2018). As mixed methods Participatory Action Research continues to grow, researchers must also anticipate potential tension within research teams when philosophical and methodological backgrounds differ. Mutual learning and clarity of purpose are critical for producing coherent outcomes.

Mixed methods within Participatory Action Research will remain an influential approach across diverse fields. Its success depends not only on integrating data

strands effectively but also on bridging philosophical positions in a way that supports collaboration and maintains rigour.

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KEY TERMS AND DEFINITIONS

Epistemology: The study of knowledge, exploring what knowledge is, how it is acquired, and its limitations, particularly in social and group contexts.

Explaining Relationships Between Variables: Quantitative data often identifies relationships between variables, which can be further explored through qualitative inquiry.

Exploring Micro and Macro Levels: Using both qualitative and quantitative approaches allows analysis at multiple levels, from individual experiences to broader systemic patterns.

Fill Gaps: A single methodology may not capture all the information needed to fully answer a research question; combining methods can address these gaps.

Ontology: The branch of philosophy that examines the nature of social reality, asking what kinds of social entities exist and how they relate.

Provide Hypotheses: Qualitative data can be used to generate hypotheses that may later be tested through quantitative methods, such as surveys.

Screening: Quantitative data can identify participants with specific characteristics for more in-depth qualitative study.

Snapshot Versus Process: Quantitative data provides a point-in-time snapshot, while qualitative data offers detailed insights into processes and dynamics over time.

Solving a Problem: Employing a different research strategy than previously used can help investigate unexpected or puzzling outcomes.