

A Tri-Process Action Research Conceptual Model for Digital Marketing Adoption among Microenterprises

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ABSTRACT

Existing action research (AR) conceptual models present generic cyclical frameworks that lack domain specificity, do not make the parallel knowledge-production process explicit, and fail to connect fieldwork cycles to thesis chapter development. These limitations reduce their utility as practical guides for doctoral researchers conducting AR in specialised domains. This paper presents the Tri-Process Action Research Conceptual Model, an adapted and extended framework developed for the empirical study of digital marketing adoption among microenterprises in Alor Setar, Kedah, Malaysia. The model integrates three simultaneously operating processes: (1) Proposal Writing, (2) Domain-Specific Fieldwork Cycles embedding digital marketing adoption and outcome nodes within the AR spiral, and (3) Thesis Writing, with each cycle directly mapped to specific thesis chapters. Adapted from Zuber-Skerritt and Fletcher (2007) and Coghlan (2019), the model introduces three novel features absent from existing AR frameworks: domain-embedded action nodes (replacing generic Act/Observe nodes with Digital Marketing Adoption and Digital Marketing Outcome constructs), explicit tri-process parallelism that supplants the single-process assumption of conventional AR models, and a progressive cycle-to-chapter knowledge mapping mechanism. The framework was operationalised across a 21-month doctoral study (October 2022 to July 2024) involving 21 microenterprises purposively sampled from the food and beverage, retail, and service sectors, with all field data analysed in NVivo 14 using reflexive thematic analysis. The paper articulates the theoretical basis of each innovation, demonstrates how the model was operationalised across a pilot study and three fieldwork cycles, and provides evidence of its effectiveness in coordinating the three parallel processes, sustaining methodological rigour, and generating five domain-specific theoretical propositions. The proposed model offers a replicable framework for doctoral and applied researchers conducting domain-specific AR in business, entrepreneurship, and digital transformation contexts.

Keywords: action research; digital marketing adoption; microenterprises; tri-process framework; Zuber-Skerritt

INTRODUCTION

Action research (AR) has been applied across a wide range of disciplinary contexts, including education (Goh, 2016; Jensen & Dikilitas, 2025; Kember & Gow, 1992), nursing (Moreno-Poyato et al., 2023; Terho et al., 2023), organisational development (Wiklund-Engblom et al., 2023), public administration (James et al., 2012), and increasingly in business and management (Alford & Page, 2015; Erro-Garcés & Alfaro-Tanco, 2020; Shani & Coghlan, 2019). Despite its wide application, the conceptual models that inform AR studies have been largely domain-agnostic. The canonical spiral of Kemmis et al. (2014), Stringer's (2007) Look-Think-Act cycle, and Coghlan's (2019) insider AR model have a common structural logic: iterative cycles of planning, acting, observing, and reflecting. Yet this very universality, while enabling AR's application across disciplines, creates challenges for doctoral researchers working in specialist fields.

The lack of domain-specific guidance within existing frameworks therefore creates three interrelated structural gaps for researchers undertaking AR in fields such as digital marketing: the inability to embed domain-relevant action constructs within the cycle architecture; the lack of a coherent mechanism for coordinating the concurrent demands of fieldwork, academic writing and ethical governance; and the absence of an explicit pathway for translating iterative fieldwork cycles into progressive thesis chapter development. Each of these gaps individually degrades the quality of doctoral AR output, and collectively they limit what existing frameworks can provide (Zuber-Skerritt & Wood, 2019; Zuber-Skerritt & Fletcher, 2007; Zuber-Skerritt & Perry, 2002).

Using a 21-month field study, this paper presents the Tri-Process Action Research Conceptual Model as a theoretical intervention that operationalises an integrated framework to effect change in response to these gaps through collaborative effort. The model differs from existing AR frameworks through three structural innovations: the use of domain-embedded action nodes that supplant generic Act and Observe stages with constructs unique to the research domain (DM Adoption and DM Outcome); an explicit tri-process parallelism rendering the concurrent demands of Proposal Writing, Domain-Specific Fieldwork Cycles, and Thesis Writing visible within a single diagram; as well as a progressive cycle-to-chapter knowledge mapping mechanism that addresses what Zuber-Skerritt and Perry (2002) contend to be a chronic gap between AR fieldwork and academic writing output. The paper clearly outlines the theoretical justification for each innovation, describes how it was operationalised and provides evidence for the successful implementation of a model that should support robust doctoral research.

LITERATURE REVIEW

The Generic AR Spiral Tradition

The prevailing conceptual framework for action research (AR) is the AR spiral proposed by Kemmis and McTaggart (2005), which describes the research process as a helical sequence of plan-act-observe-reflect cycles. Its basic contribution is how it depicts iterative learning as a spiralling path. Each cycle is a refinement in the intervention and thus improves understanding.

This model has led to some significant improvements (Zuber-Skerritt & Fletcher, 2007). By establishing an AR thesis schema which described the link between cycles of fieldwork and thesis chapters, as well as a vision of AR that makes visible both practical and academic inquiry, their model remained the closest precedent regarding the integrated nature of our framework. Building on the earlier work of Zuber-Skerritt and Perry (2002), their model acknowledges the dual-output imperative that any doctoral AR study must address. Coghlan (2019) extended this tradition in a different direction, centring the insider AR model on the reflexive and ethical dimensions of researcher-participant positioning.

Three Structural Limitations of Existing Models

Despite this productive tradition, existing AR conceptual models share three structural limitations that reduce their utility for doctoral researchers working in domain-specific fields. These limitations were acknowledged, though not resolved, by Reason and Bradbury (2008) and Herr and Anderson (2014).

The first is the use of domain-independent action nodes. Generic AR spirals label the action phase simply as “Act” and the observation phase as “Observe.” For researchers in a particular field, such labels offer little guidance on what constitutes domain-relevant action such as implementing a social media strategy, for instance, or domain-relevant observation, such as tracking customer engagement metrics. Without domain-specific labels, the framework’s communicative and design functions are weakened considerably.

The second limitation is the single-process assumption. AR conceptual models typically display only the fieldwork cycle. The simultaneous demands placed on proposal development, ethics review and academic writing, which all progress in parallel to any fieldwork in a doctoral study, are absent from the diagram. In the absence of a framework mapping these parallel processes and their interrelations, doctoral researchers are left unsupported to manage complex coordination of these tedious tasks.

The third limitation concerns the knowledge-production pathway. Even models that acknowledge the relationship between AR and thesis writing, such as Zuber-Skerritt and Fletcher (2007), do not specify which cycle generates which chapter content. The connection between fieldwork cycles and thesis chapters is broad rather than operationally mapped.

These limitations are summarised in **Table 1** across four landmark AR models, each compared against the Tri-Process Model.

Table 1: Comparison of Existing AR Conceptual Models and the Proposed Tri-Process Model

AR Model	Domain-Specific Nodes	Tri-Process Explicitness	Cycle-Chapter Mapping	Limitation for Domain-Specific Doctoral AR
Kemmis & McTaggart (2005) AR Spiral	No	No	No	Fully generic; no domain guidance; single-process assumption throughout
Stringer (2007) Look-Think-Act Cycle	No	No	No	Simplified for community research; no academic production pathway
Zuber-Skerritt & Fletcher (2007) Integrated AR Thesis Model	No	Partial	General only	Acknowledges the writing-fieldwork link but lacks domain specificity and cycle-chapter detail
Coghlan (2019) Insider AR Model	No	No	No	Addresses researcher positioning but not domain specificity or parallel processes
Tri-Process AR Model (This Study)	Yes	Yes	Yes	Addresses all three limitations; designed for replication in domain-specific AR contexts

Read column by column, **Table 1** makes the model’s structural advance explicit. On domain-specific nodes, all four prior frameworks score “No”: none embeds intervention constructs within the cycle architecture, leaving researchers to infer for themselves what domain-relevant action and observation entail. On tri-process explicitness, only Zuber-Skerritt and Fletcher (2007) score “Partial,” acknowledging the writing–fieldwork link without rendering proposal development, fieldwork, and thesis production as concurrently visible tracks. On cycle-chapter mapping, the same model offers only a general association rather than an operational specification of which cycle generates which chapter. The proposed model is therefore distinguished not by claiming superiority over these established frameworks since each remains authoritative within its own purpose, but by being the first to satisfy all three criteria within a single, integrated architecture. It is this structural completeness, rather than incremental refinement of any one feature, which constitutes the model’s contribution.

Recent work in doctoral AR supervision confirms that these limitations persist into current practice. Hussin et al. (2023), drawing on participatory action research with doctoral candidates at a Malaysian university, found that fewer than half of participants could explicitly articulate the relationship between their conceptual framework and their research design; a gap they attributed to the absence of structured guidance within existing research process models. Their eight-phase PAR supervisory model offers meaningful scaffolding for doctoral conceptualisation, yet it focuses on a single process: supervisory co-inquiry. The parallel demands of proposal writing, fieldwork execution, and thesis production are not mapped. Similarly, Feekery (2024) developed the 7Cs Framework for Participatory Action Research partly in response to her own difficulty, as a doctoral researcher, in locating a framework that would help navigate PAR methodologies. The 7Cs characterise what PAR is rather than showing how doctoral researchers should coordinate its concurrent demands; they contain no mechanism for mapping fieldwork cycles to specific thesis chapters, nor do they embed domain-specific constructs within the cycle architecture. Together, Hussin et al. (2023) and Feekery (2024) confirm that the three structural limitations identified above remain unaddressed even in recent doctoral-focused frameworks, underscoring the need for a model that integrates all three processes within a single, domain-specific architecture.

METHODOLOGY

The Tri-Process Action Research Conceptual Model

The Tri-Process Action Research Conceptual Model (**Figure 1**) brings three simultaneously operating processes into a single diagrammatic framework. Process 1: Proposal Writing, positioned at the base of the figure, captures the early doctoral activities of planning, drafting, and defending the research proposal. Process 2: Domain-Specific Fieldwork Cycles, occupying the central zone, comprises a Pilot Study followed by three 18-week cycles, each structured around domain-specific action nodes. Process 3: Thesis Writing, shown to the right, maps the progressive production of thesis chapters from Chapter 1 through Chapter 6.

The three processes are simultaneous, and the two-way arrows of feedback indicate that each is informed and shaped by the other two, consistent with the dual-output imperative of Zuber-Skerritt and Fletcher (2007).

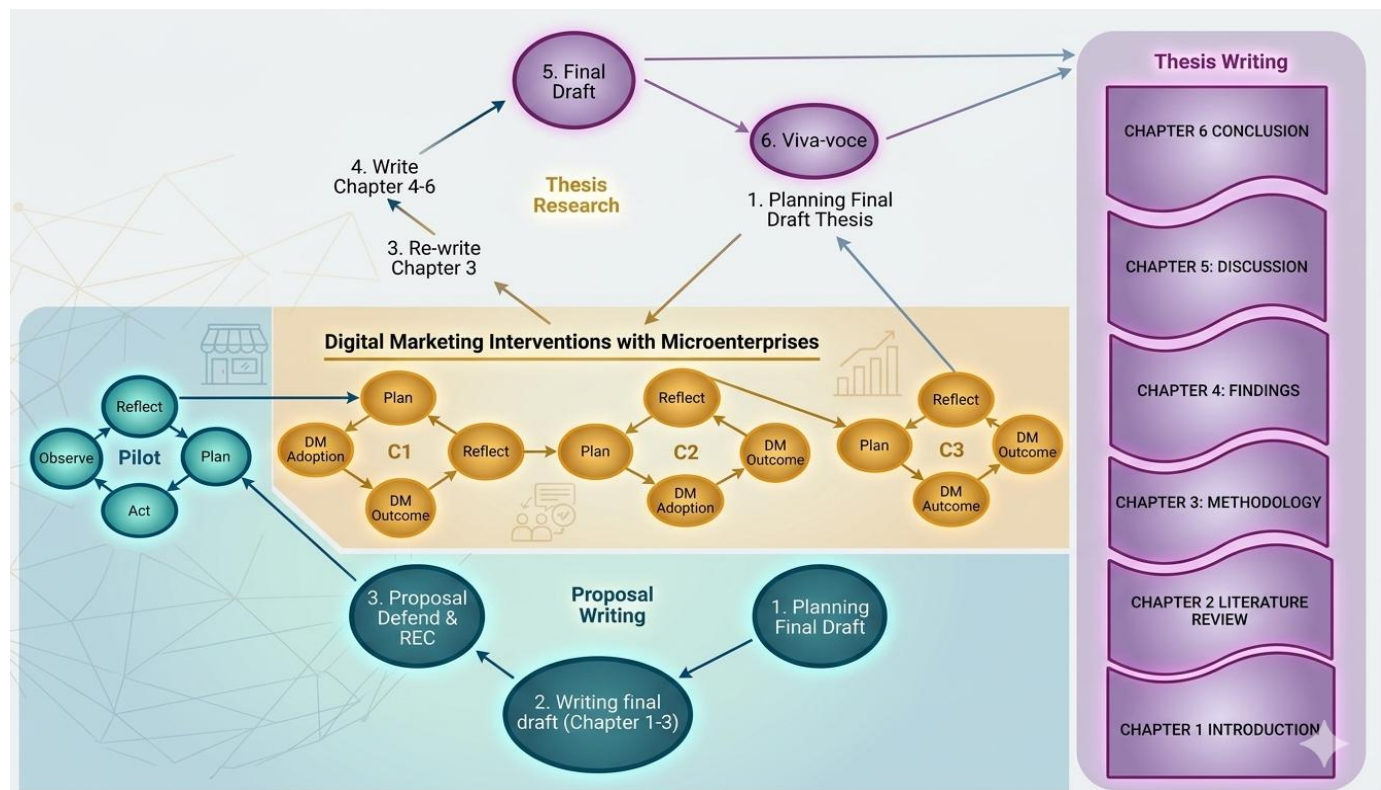


Figure 1: Conceptual Model of the Study (Adapted from Zuber-Skerritt and Fletcher, 2007, p. 421; Coghlan, 2019)

First Innovation: Domain-Embedded Action Nodes

The most visible difference of the Tri-Process Model is the substitution of generic cycle stages by domain-specific action nodes. The four phases listed in the spiral of Kemmis and McTaggart (2005) are Plan, Act, Observe and Reflect. The Tri-Process Model retains Plan and Reflect but substitutes Act and Observe with constructs from the domain of study: DM Adoption (Digital Marketing Adoption) and DM Outcome (Digital Marketing Outcome).

This substitution has serious methodological implications. The action stage name, “DM Adoption,” suggests that the relevant intervention is specifically DM uptake rather than simply participation with possibly irrelevant practices such as social media strategy implementation. Similarly, the naming of the observation stage as “DM Outcome” drives data collection towards performance indicators that are relevant in-domain (e.g., follower growth, customer engagement rates, online ordering frequency and owner-reported confidence with digital marketing). Most importantly, this approach minimises the methodological gap that Herr and Anderson (2014) identify in AR studies: a tendency to observe whatever data is easy to collect rather than what was expected as an outcome of the intervention.

Second Innovation: Explicit Tri-Process Parallelism

Traditional AR diagrams foreground the fieldwork cycle, leaving proposal development and thesis writing as separate, implicit activities. The Tri-Process Model makes visible and connects all three processes in a single diagram within the same visual space, addressing arguably the most practically challenging aspect of doctoral AR: simultaneously building a research argument, executing fieldwork, and writing up. Drawing these links makes two contributions that Shani and Coghlan (2018) identify. For the doctoral researcher, it serves as a coordination map, indicating how every process relates to and relies on the others at each stage of the study. It offers supervisors and examining committees a transparent accountability model that renders the progress of all three processes legible and trustworthy at any point in one's doctoral journey.

Third Innovation: Cycle-to-Chapter Progressive Mapping

In the model, thesis or dissertation writing is not an inactive product of finished fieldwork. It is conceived as a documented processual loop, the content of each arc feeding specific thesis chapters. This process solves what has been termed the "write-up problem" in doctoral AR; namely that producing a linear, coherent thesis from iterative fieldwork can be challenging (Zuber-Skerritt & Wood, 2019; Zuber-Skerritt & Fletcher, 2007; Zuber-Skerritt & Perry, 2002). The model also shifts thesis writing from an end-stage activity to an integral, ongoing part of research by assigning chapter-level outcomes for each cycle up-front.

Research Operationalisation

The model was operationalised across 21 months of doctoral fieldwork (October 2022 to July 2024) involving 21 microenterprises selected through purposive sampling from the food and beverage, retail, and service sectors of Alor Setar, Kedah. **Table 2** documents how each of the three processes was operationalised across the study timeline.

Table 2: Three-Process Operationalisation in the 21-Month Study

Process	Phase	Period	Key Activities
Process 1: Proposal Writing	Planning & Drafting	Oct 2022 - Mar 2023	Literature review; proposal drafting; REC submission; ethics approval
Process 2: Fieldwork Cycles	Pilot Study	Oct 2022 - Apr 2023	Instrument testing; 3 pilot microenterprises ; protocol refinement; DM Adoption baseline
	Cycle 1 (n=8)	Apr - Aug 2023	DM Adoption interventions; 8 businesses; NVivo 14 coding; Chapter 3 revision
	Cycle 2 (n=5)	Aug - Dec 2023	Refined DM interventions; 5 businesses; cross-cycle triangulation; Chapter 4 drafting begins
	Cycle 3 (n=8)	Dec 2023 - Feb 2024	Consolidated DM strategies; 8 businesses; DM Outcome measurement; proposition development
Process 3: Thesis Writing	Writing & Completion	Feb - Jul 2024	Chapters 4-6 writing; Final Draft; Viva-voce preparation; theoretical proposition refinement

Within each fieldwork cycle, the DM Adoption node encompassed four measurable activities: social media account creation and optimisation (primarily Facebook and Instagram); WhatsApp Business setup and customer communication protocols; Google My Business profile registration; and digital content creation.

The DM Outcome node captured the corresponding performance indicators: follower count change, post engagement rate, new customer acquisition from digital channels, and owner-reported confidence in digital marketing practice.

RESULTS

Methodological Rigour

The effectiveness of the Tri-Process Model is illustrated firstly through the methodological rigour it allowed for, during the entire study. In total, 95 primary documents were generated from four phases of fieldwork: 42 semi-structured interview transcripts, 11 formal meeting minutes, 21 field research reports, and 21 reflective journal entries. All documents were systematically analysed using NVivo 14 in line with Braun and Clarke's (2021) six-phase thematic analysis framework. Trustworthiness was based on four criteria developed by Lincoln and Guba (1986). Credibility was established through prolonged engagement for 21 months and member-checking at the reflection meeting of each cycle. Dependability was recorded through the reflective journal audit trail and NVivo 14 codebook. Confirmability was established through participant validation of field reports. Transferability was supported by thick description of the Alor Setar microenterprise context.

Coordination of Three Parallel Processes

An important challenge for the model was to decide whether the three parallel processes could operate simultaneously without disrupting any one of the processes. The fact that the study was completed, including Research Ethics Committee (REC) approval, three full cycles of fieldwork, and a full submission of the thesis, provides direct evidence that the coordination architecture is workable in practice. Two mechanisms proved particularly valuable: the explicit Proposal Writing feedback loop embedded within Cycle 1, and the Chapter 3 revision trigger at the conclusion of Cycle 1, which ensured that the methodology chapter reflected the research process as it unfolded, rather than as originally planned.

Domain-Specific Theoretical Output

The nodes of domain-embedded action also produced theoretical output that generic AR models are unlikely to produce with equivalent precision. The five theoretical propositions of the study (P1: Tri-Dimensional Readiness State, P2: Market-Resource Digital Integration Paradigm, P3: Capability-Resource-Technical Constraint Nexus, P4: Aligned Ecosystem Strategy and P5: The Triad of Outcomes) were distilled directly from the structured data collection around the DM Adoption and DM Outcome nodes in three cycles of fieldwork. The cycle-to-chapter mapping that operationalised the tri-process model is summarised in **Table 3**.

Table 3: Cycle-to-Chapter Progressive Mapping

AR Phase	Thesis Chapter(s)	Knowledge Contribution from Phase
Proposal Writing	Chapter 1 Introduction; Ch. 2 Literature Review	Research problem; theoretical underpinning; research framework; gap analysis; research objectives
Pilot Study	Chapter 3 Methodology (draft)	Instrument validation; participant selection criteria; data collection protocol testing; initial reflexivity documentation
Cycle 1	Chapter 3 Methodology (final); Chapter 4 Findings (Part A)	Baseline digital readiness state; initial facilitating/impeding factors; first-generation DM strategies
Cycle 2	Chapter 4 Findings (Part B)	Refined facilitating/impeding factors; intervention refinement evidence; second-generation DM strategies; cross-cycle thematic saturation
Cycle 3	Chapter 4 Findings (Part C); Chapter 5 Discussion	DM Outcome evaluation; Tri-Dimensional Readiness State framework; five theoretical propositions
Analysis & Write-up	Chapter 6 Conclusion	Integrated theoretical contributions; practical implications for MSME policy; discussion; future research agenda

DISCUSSION

Theoretical Contribution to AR Methodology

The Tri-Process AR Conceptual Model represents a unique and verifiable contribution to the existing action research methodology literature. It is not a mere transposition of an existing AR framework to another domain; it represents a structural innovation that addresses how AR frameworks should be constructed for the purpose of domain-specific doctoral studies. Its design addresses three limitations that Zuber-Skerritt and Fletcher (2007), Coghlan (2019), and Reason and Bradbury (2008) have collectively acknowledged but not resolved within a single integrated model.

The parallelism innovation is perhaps the most theoretically significant. Shani and Coghlan (2018) identify the dual obligation of AR scholars, producing both practical change and academic knowledge simultaneously as one of the defining methodological challenges in the field. By making both obligations visible within the same conceptual diagram, the Tri-Process Model offers a clear visual argument for why action research is not simply consulting with writing appended, but a methodologically distinct mode of inquiry with its own knowledge-production architecture. The domain-embedded node innovation, meanwhile, responds to a gap that is surprisingly persistent across decades of AR framework development: no prior model has specified, within its cycle structure, what kind of action or observation a given research domain requires. The cycle-to-chapter mechanism, finally, transforms what Zuber-Skerritt and Perry (2002) describe as an implicit relationship into one that is explicit, plannable, and auditable.

Practical Implications for Doctoral AR Researchers

For researchers planning AR doctoral studies, the Tri-Process Model offers something that existing AR guides do not: a planning instrument that maps, from the study's outset, the temporal relationships among fieldwork commitments, chapter writing milestones, and administrative processes such as ethics approval and viva-voce preparation. Doctoral supervisors may find the cycle-to-chapter structure in **Table 3** particularly useful as a progress-monitoring tool that makes the knowledge contribution of each fieldwork phase visible well before thesis submission, rather than emerging only at the point of write-up.

A Simplified Implementation Roadmap

Although the Tri-Process Model was designed for doctoral action research, its underlying logic is not confined to thesis production. The model can be applied by practitioners, consultants, and non-thesis researchers through the five-step procedural sequence summarised in **Table 4**. The roadmap deliberately presents the architecture as a linear progression, allowing novice researchers to adopt it incrementally without first internalising the full parallel structure depicted in **Figure 1**.

Table 4: Implementation Roadmap for the Tri-Process Model

Step	Procedural Action	Adaptation for Non-Thesis Settings
1. Define domain nodes	Replace the generic Act and Observe stages with two intervention-specific constructs.	DM Adoption and DM Outcome in this study; any intervention-response pair in applied projects.
2. Map the parallel tracks	Identify the concurrent processes that must be coordinated alongside fieldwork.	"Proposal Writing" becomes "Scoping and Approval"; "Thesis Writing" becomes "Reporting and Deliverables."
3. Set cycle length and number	Determine the duration and count of intervention cycles.	A pilot plus three 18-week cycles here; shorter consultancy work may compress this to two cycles.
4. Assign outputs up front	Allocate each cycle a concrete written output before fieldwork begins.	Cycle-to-chapter mapping becomes cycle-to-deliverable mapping (e.g., interim report, client briefing).

Step	Procedural Action	Adaptation for Non-Thesis Settings
5. Embed feedback loops	Schedule a structured reflection-and-revision trigger at the close of each cycle.	Mirrors the Chapter 3 revision trigger that kept the methodology aligned with the unfolding process.

Expressed in this way, the model functions as a generic project-coordination instrument for any iterative, intervention-based inquiry, directly addressing the concern that its value might be confined to doctoral candidates. The doctoral cycle-to-chapter mechanism becomes one specialised instance of a broader cycle-to-output principle that applies equally to consultancy, programme evaluation, and organisational change projects.

Transferability Across Research Domains

The domain-embedded action nodes that distinguish the model are, by design, replaceable. Transferring the framework to a new field requires only that the DM Adoption and DM Outcome constructs be re-specified with the intervention and response variables of that field, while the tri-process architecture itself remains intact. In a nursing action research study, for instance, the nodes might become Hand-Hygiene Intervention and Compliance Rate, directing observation toward clinically meaningful indicators rather than convenient ones. In an education study they might become Pedagogical Intervention and Learning Gain; in an organisational-development study, Process Change and Productivity Outcome. In each case the cycle-to-chapter (or cycle-to-deliverable) mapping and the explicit tri-process parallelism are preserved, while only the node labels and their associated indicators change. This separation between a stable architecture and a substitutable node layer is what gives the model its cross-domain reach, and it offers a concrete procedure by which researchers in other disciplines may adopt the framework without re-engineering it.

Limitations and Future Directions

The Tri-Process Model was developed within a specific empirical context: a doctoral study of digital marketing adoption in a non-urban Malaysian microenterprise setting. Its domain-specific action nodes reflect this context and would need adaptation for AR studies in other fields. The cycle-to-chapter mapping in **Table 3** represents one possible configuration; studies with different thesis structures such as those adopting a paper-based format or a creative practice framework would require adapted versions. Future research should test the model's transferability across domains, as recommended by Zuber-Skerritt and Fletcher (2007), and examine whether the tri-process architecture holds in AR studies of different duration, scale, and disciplinary context.

Three avenues for validation follow directly from this scope. First, the model should be tested across disciplines beyond digital marketing, such as healthcare, education, and public administration, to confirm that the node-substitution mechanism set out in Section 5.4 holds in practice. Second, it should be applied at different scales and durations, from short, applied consultancies to multi-year programmatic studies, to establish the boundaries within which the tri-process coordination remains workable. Third, it should be trialled with alternative thesis and reporting formats, including paper-based and creative-practice doctorates, to determine how the cycle-to-chapter mapping adapts. Multi-site and multi-researcher application would further allow the model's transferability and robustness to be assessed independently of the originating study, addressing the single-case basis of the present validation and progressively strengthening confidence in the framework as evidence accumulates across contexts.

CONCLUSION

This paper has presented the Tri-Process Action Research Conceptual Model as a structural contribution to the design of domain-specific doctoral AR frameworks. It targets three gaps in existing models: domain-agnostic action nodes that offer insufficient guidance for specialised inquiry; the invisibility of the parallel knowledge-production processes that doctoral researchers must coordinate; and the absence of an explicit mechanism for linking iterative fieldwork cycles to progressive thesis chapter development.

Adapted from Zuber-Skerritt and Fletcher (2007) and Coghlan (2019) and validated through a 21-month study, the model was tested across 21 microenterprises in the food and beverage, retail, and service sectors,

demonstrating that structured AR cycles can meaningfully guide digital marketing adoption within resource-constrained microenterprise contexts. Doctoral supervisors may adopt the cycle-to-chapter structure in **Table 3** as a progress tracking tool, while researchers in other domains may adapt the node architecture by substituting DM Adoption and DM Outcome with constructs relevant to their own intervention focus.

AR methodology has changed relatively little since Lewin's (1946) original formulation. New structural contributions to framework design remain both rare and consequential for the field. It is hoped that the Tri-Process Model will encourage further innovation in AR framework design, particularly for doctoral researchers navigating the concurrent demands of practical action and academic knowledge production, two obligations that existing frameworks continue to treat as separate when they are, in practice, inseparable.

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