

The Compass of a Thesis: How Research Objectives Steer Methodology, Findings, Discussion and Conclusion

Davy Mainde^a,

^a Africa Research University

* Corresponding author. E-mail address: davymainde86@gmail.com; ORCID: <https://orcid.org/0009-0002-0980-4016>

Abstract

Many postgraduate students complete coursework confidently but struggle to connect a chosen title to a workable methodology and later to link findings back to the original objectives. This is a recurring challenge in supervision rooms across Zambian and African universities. This paper presents a desk based systematic literature review, conducted according to the Preferred Reporting Items for Systematic Reviews and Meta Analyses, PRISMA, protocol, of peer reviewed and institutional sources published between 2015 and 2026. It examines how research questions and objectives function as the strategic model that determines a study's methodology, findings, discussion and conclusion. The central argument advanced is that a thesis is not a sequence of loosely related chapters but a single argument whose coherence is secured, or lost, entirely at the point where objectives are formulated. Every subsequent chapter is properly an answer to the objectives set out in chapter one. Guided by Biggs's theory of constructive alignment, adapted here from curriculum design to research design, the review demonstrates concretely how each objective should generate a corresponding research gap, corresponding methodological decision, a corresponding finding, a corresponding line of discussion and a corresponding concluding statement. The review further argues that supervisors are best placed to simplify thesis writing for their supervisees not through additional theory but through the disciplined, repeated use of the research problem, questions and objectives as a checklist against which every chapter is tested. The paper closes with recommendations intended to strengthen the scholarly authority of objectives as the organising instrument of postgraduate research in Zambian universities and beyond.

Keywords: research objectives; research questions; methodology alignment; constructive alignment; postgraduate supervision; thesis writing;

1. Introduction and Background

At its best, a postgraduate thesis is a single sustained argument, yet many students experience it as disconnected hurdles: a title chosen enthusiastically, a literature review compiled anxiously, a methodology adopted by habit and a conclusion written hurriedly to meet a deadline (Yunus et al., 2023). Globally, empirical research on thesis writing confirms that this fragmentation is neither imagined nor rare. Zhang and Carter (2024), interviewing doctoral candidates on the difficulty of the discussion chapter, found that candidates struggled precisely at the point where they were required to relate their own findings back to the expectations established earlier in the study. This struggle traced to insufficient early guidance on what the discussion chapter is meant to do in relation to the rest of the thesis. Yunus et al.'s, (2023) study of postgraduate candidates at Universitas Terbuka, similarly found that the research problem, research objectives and research gap were the aspects students struggled with most, a struggle the authors attribute directly to an underdeveloped understanding of how these elements function strategically rather than decoratively at the start of a study.

Within Africa, the difficulty is compounded by additional linguistic, disciplinary and resource related pressures. Shahsavari and Kourepaz (2020) found that postgraduate students' difficulties in writing their theses

literature review where they reduced it to a summary of other researchers' findings rather than using it to sharpen and justify their own objectives. This is a pattern the authors link to insufficient early modelling by supervisors of how a literature review ought to serve the objectives it is meant to support. Comparative evidence on supervision quality confirms that clarity of purpose established early in a candidature strongly predicts timely, coherent completion, while ambiguity at the proposal stage reliably produces delay and revision later in the study.

In Zambia, Manchishi et al. (2015), in one of the most cited local studies of its kind, found that University of Zambia postgraduate students repeatedly made avoidable errors in proposal writing, many of which stemmed from weakly formulated research objectives. These objectives were often too broad to answer, too numerous to manage, or poorly aligned with the research questions and problem statement they were meant to operationalise. This finding is important because it places the difficulty exactly where this review locates it: not in a general lack of writing ability, but in an early structural failure to treat objectives as the strategic model on which the whole study should be built.

It is this recurring, well documented struggle, visible from global to Zambia perspective, that motivates the present review. The problem is not that students cannot write. The problem is that many students, and at times their supervisors, treat the research question, the statement of the problem and the objectives as an introductory formality to be dispensed with quickly, rather than as the strategic model that should determine every subsequent methodological choice, every finding reported, every line of discussion and the very shape of the conclusion.

2. Statement of the Problem

Postgraduate supervisors in Zambian universities are frequently well versed in their own disciplinary content yet less consistently trained in the specific pedagogical skill of teaching a student how objectives generate the rest of a thesis. This gap leaves many students to discover the connection between chapters through trial, error and repeated correction rather than through a simplified, teachable model (Manchishi, et al., 2015). This review responds to that gap by making explicit, with worked examples, precisely how each research objective should determine the corresponding component of literature review, methodology, findings, discussion and conclusion.

3. Research Objectives and Questions

This review itself pursues three objectives as follows;

1. To establish how research objectives function to determine methodology, findings, discussion and conclusion in postgraduate theses.
2. To demonstrate the interlinkage between each objective and the corresponding chapter components of a thesis.
3. To propose how supervisors can use the research problem, questions and objectives as a simplifying tool in supervision.

4. Theoretical Framework

This review adapts Biggs's theory of constructive alignment, originally developed to explain how intended learning outcomes should determine teaching activities and assessment in curriculum design, to the design of a research study (Biggs, 1996). Biggs argued that a well-designed course achieves coherence when the intended learning outcome, the teaching activity that develops it and the assessment task that measures it are

all aligned to the same underlying verb (Biggs and Tang, 2011). Transposed to research design, this review treats each research objective as the equivalent of an intended learning outcome, the methodology as the equivalent of the teaching and learning activity that operationalises it, and the findings, discussion and conclusion as the equivalent of the assessment that demonstrates the outcome has genuinely been achieved. Where constructive alignment fails in a course, Biggs observed, students learn to pass assessments without achieving the intended outcome. This review argues the parallel failure in a thesis, where chapter four can report findings that do not actually answer the objectives set out in chapter one, or a conclusion that drifts beyond what the methodology was ever capable of establishing. Zhang and Carter's (2024) sociocultural perspective complements constructive alignment by showing that thesis coherence often breaks down because alignment must be actively taught and modelled by supervisors, not assumed to be self-evident to students.

5. Methodology

This study is a desk based systematic literature review conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta Analyses, PRISMA, 2020 guidance (Fleming et al., 2023). As a desk review, it relies exclusively on secondary, published sources, and no primary data were collected from Zambian supervisors or students, a limitation acknowledged in the concluding section.

Searches were conducted across Google Scholar, Taylor and Francis Online, ScienceDirect, ERIC and institutional repositories, using combinations of the terms research objectives, research questions, thesis alignment, methodology, findings discussion conclusion, postgraduate supervision and Zambia. Records were included where they were peer reviewed journal articles, institutional policy documents, or systematic reviews published in English between 2015 and 2026 and addressing the formulation of research objectives or questions, thesis structure, or the coherence between chapters of a thesis or dissertation. Titles and abstracts were screened first, followed by full text assessment against these criteria, with duplicates and off topic records removed at each stage, consistent with PRISMA logic. Retained sources were coded thematically using a constant comparative approach, from which the five themes reported in Section 6 emerged.

6. Results and Discussion

Five themes emerged from the synthesis, each discussed below in dialogue with constructive alignment theory.

6.1. Objectives as the Strategic Model of a Study

The literature broadly agrees that a research objective is not merely a statement of intent but a strategic directive. Properly formulated, an objective specifies what must be measured, observed or explored and therefore implies the method needed to achieve it (Yunus et al., 2023). As Manchishi et al. (2015) found among University of Zambia postgraduates, difficulty in formulating objectives is rarely superficial, because vague objectives cannot produce defensible methodologies. For example, an objective such as, to examine challenges facing students is too general because it does not identify which challenges are under investigation. By contrast, to establish the perceptions of secondary school teachers in Lusaka Province regarding the adequacy of continuous professional development already indicates the population, likely data collection instrument and analytical approach. This theme therefore establishes the review's central premise: writing strong objectives is inseparable from designing a coherent study.

6.2. From Objectives to Methodology

Applying constructive alignment, this review demonstrates that each objective should generate a specific, traceable methodological decision in chapter three (Biggs, 1996). An objective phrased to establish or to determine typically signals a quantitative or descriptive design capable of producing measurable evidence, while an objective phrased to explore or to understand typically signals a qualitative design capable of producing rich, interpretive evidence. Equally, an objective phrased to evaluate the effect of typically signals an experimental or quasi experimental design capable of establishing a causal or comparative claim. For example, an objective to establish the prevalence of a phenomenon should lead directly to a chapter three specifying a survey instrument, a defined sampling frame and a statistical analysis plan. Similarly, an objective to explore lived experiences should lead directly to a chapter three specifying an interview or narrative approach and a thematic or phenomenological analysis plan. Where such alignment is absent, as when an exploratory objective is paired with a rigid, closed ended questionnaire, chapter four is likely to produce findings that fail to answer the objective as framed. Zhang and Carter (2024) document a similar problem among doctoral candidates whose mixed method findings were difficult to integrate because coherence had not been built into the study from the outset.

6.3. From Objectives to Findings

The literature is clear that chapter four should be organised objective by objective rather than instrument by instrument or theme by theme in isolation. A findings chapter structured around the original objectives enables both the writer and the examiner to verify, sentence by sentence, that every objective set out in chapter one has been directly answered. Where a study sets three objectives, chapter four should therefore present findings under three clearly labelled sections that mirror those objectives, with each section briefly restating the objective before presenting the evidence. This structural discipline helps prevent the common failure, documented among L2 doctoral writers, of reporting data that is interesting but only loosely connected to what the study set out to establish (Zhang and Carter, 2024).

6.4. From Objectives to Discussion

Zhang and Carter (2024) identify the discussion chapter as one of the most difficult parts of a thesis because it requires students to return explicitly to the objectives and questions introduced in chapter one and explain what the findings mean in relation to them. This act of synthesis is difficult when students have not been deliberately taught how to connect objectives, evidence and interpretation. Applying constructive alignment, this review argues that each subsection of chapter five should answer the corresponding objective by interpreting the finding reported in chapter four against the literature reviewed in chapter two and the theoretical or conceptual framework introduced earlier in the study. In this way, the discussion becomes the meeting point of objective, evidence and theory, rather than a repetition of findings already presented. The difficulty of writing the discussion chapter therefore reflects the same underlying problem identified throughout this review: a discussion cannot be written coherently if the objectives it must answer were not clearly specified from the beginning.

6.5. From Objectives to Conclusion and Recommendations

A concluding chapter is credible only when its claims remain within the limits of the objectives, methodology and findings. Claims that exceed this boundary are a common source of examiner concern across disciplines

(Ratnani, 2025). A well aligned chapter six should therefore present conclusion objective by objective, clearly stating whether and how each objective was achieved before offering recommendations that flow from the same objectives. It should not introduce new concerns that were not part of the original study. This final link completes the interlinkage chain: the research problem generates the objectives; the objectives shape the methodology; the methodology produces the findings; the findings inform the discussion; and the discussion leads to a conclusion that answers the question with which the study began.

6.6. Simplifying Thesis Writing Through Objectives

The literature offers a clear practical implication for postgraduate supervision. Supervisors should consistently revisit the research problem, research questions and objectives throughout the supervision process, using them as a framework for evaluating the coherence of each chapter and discussion. By asking at each supervision meeting how a particular section, argument or finding contributes to one or more research objectives, supervisors can help students develop an integrated understanding of the thesis rather than viewing it as a collection of independent chapters (Zhang and Carter, 2024; Manchishi et al., 2015). Furthermore, supervisors should require that research objectives are articulated with sufficient clarity at the proposal stage so that the corresponding methodology, anticipated findings and expected contribution to the study can be logically inferred. Such alignment enables students to maintain coherence throughout the research process and reduces the likelihood of conceptual inconsistencies, fragmented writing and delays in thesis completion.

7. The Interlinkage Chain, a Summary Table

The following table summarises, chapter by chapter, how a well formulated objective determines each subsequent component of a typical six chapter Zambian thesis.

Table 1. The interlinkage chain from research objectives to thesis conclusion

Chapter	Core question answered	Determined by objective through	Typical content	Alignment check
One, Introduction	What problem and objectives guide the study	Problem statement generates objectives and questions	Background, problem, objectives, questions, significance	Each objective is specific and answerable
Two, Literature Review	What is already known about each objective	Objectives determine which literature is reviewed	Conceptual, theoretical and empirical review, gap	Every objective has a matching body of literature
Three, Methodology	How each objective will be achieved	Objective verb determines design and instrument	Design, population, sample, instruments, analysis	Each objective has a named data source and method
Four, Findings	What was found for each objective	Objectives structure the presentation of findings	Findings organised objective by objective	Every objective has a corresponding finding
Five, Discussion	What the findings mean for each objective	Objectives structure interpretation against theory and literature	Interpretation, comparison with literature, theory	Every finding is interpreted against its objective
Six, Conclusion	Was each objective achieved, and what follows	Objectives structure conclusions and recommendations	Summary, conclusions, recommendations, limitations	Every objective is answered and no new claims appear

8. Conclusion

This systematic desk review has examined the challenges postgraduate students encounter in maintaining coherence from the formulation of a research title to the presentation of defensible conclusions. Drawing on international, African and Zambian literature, the review demonstrates how research objectives provide the conceptual thread that links the problem statement, literature review, methodology, findings, discussion and conclusions. Collectively, the evidence suggests that research objectives should not be regarded merely as a proposal requirement but as the organising framework through which the coherence of a thesis can be developed and evaluated. In this regard, the principle of constructive alignment, originally advanced in curriculum design, provides a valuable conceptual lens for understanding how alignment between successive chapters contributes to the overall coherence of postgraduate research.

For postgraduate education in Zambia where previous studies have identified persistent challenges in proposal development and thesis writing, this review contributes by making the chain of alignment from title to conclusion more explicit and practically applicable. It offers supervisors and postgraduate students a coherent framework for examining whether each chapter, section and argument contributes directly to the stated research objectives. By promoting this systematic alignment throughout the research process, the review provides a practical basis for strengthening the coherence, methodological consistency and scholarly quality of postgraduate theses.

9. Recommendations

1. Graduate schools and supervisors should require every research objective, at the point of proposal approval, to specify implicitly or explicitly its intended methodology, so that objectives that cannot be traced forward into a defensible design are revised before data collection begins.
2. Institutions of higher learning should adopt, as standard guidance, the practice of organising findings and discussion chapters around the original objectives rather than around instruments or themes in isolation, so that alignment between question and answer remains visible to writer and examiner alike.
3. Universities should include, within mandatory supervisor induction, explicit training in constructive alignment as applied to research design, equipping supervisors to use objectives as a recurring checklist throughout supervision rather than only at proposal stage.

References

- Biggs, J. (1996) 'Enhancing teaching through constructive alignment', *Higher Education*, 32(3), pp. 347 to 364.
- Biggs, J. and Tang, C. (2011) *Teaching for Quality Learning at University*. 4th edn. Maidenhead: McGraw Hill Education and Open University Press.
- Fleming, E., Moore, T.H., Boutron, I., Higgins, J.P., Hrobjartsson, A., Nejtgaard, C.H. and Dwan, K. (2023) 'Using Risk of Bias 2 to assess results from randomised controlled trials, guidance from Cochrane', *BMJ Evidence Based Medicine*, 28(4), pp. 260 - 266.
- Manchishi, P., Ndhlovu, D. and Mwanza, D. (2015) 'Common mistakes committed and challenges faced in research proposal writing by University of Zambia postgraduate students', *International Journal of Humanities, Social Sciences and Education*, 2(3), pp. 126 - 138.
- Ratnani, I., Fatima, S., Fatima, E., Hill, I. and Surani, Z., (2025) Essentials of writing a successful doctoral thesis. *Cureus*, 17(8), pp.1-6.
- Segale, J.N. and Ndalama, L.P., (2025) Assessing the impact of supervision quality on graduate completion rates in institutions of higher learning in South Africa and Zambia. *International Journal of Research and Innovation in Social Science*, 9(8), pp.1111-1128.
- Shahsavari, Z., & Kourepaz, H. (2020) Postgraduate students' difficulties in writing their theses literature review. *Cogent Education*, 7(1). <https://doi.org/10.1080/2331186X.2020.1784620>
- Yunus, M., Bachtiar, B., Syafruddin, S., Juhana, J. and Rachmaningsih, D.M., (2023) Students' conceptions of challenges in writing thesis: A case of postgraduate context. *AL-ISHLAH: Jurnal Pendidikan*, 15(4), pp.5627-5638.

Zhang, L.J. and Carter, S. (2024) 'Understanding doctoral students' needs for thesis discussion writing and supervisory curriculum development, a sociocultural theory perspective', *Language, Culture and Curriculum*, 37(4), pp. 456 - 471.