

# The AI-Assisted Research Workflow

## A Complete Prompt Library for Academic Research Papers

Mark Keith

August 2026 | Version 1.1 | Last Edited: August 3, 2026

Department of Information Systems, Marriott School of Business, Brigham Young University  
mark\_keith@byu.edu | 1-801-674-5159

Developed collaboratively with Claude (Anthropic) and aligned with the AI Engagement Model Canonical Package 1.2.0. Feedback, questions, and suggestions are welcome.

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Format: APA 7th Edition style | Estimated Length: 50–70 pages

## Table of Contents

|                                                                     |    |
|---------------------------------------------------------------------|----|
| Section 1: Introduction.....                                        | 6  |
| 1.1 What This Guide Is and Why Every Recommendation Matters.....    | 6  |
| 1.2 A Legitimate Concern: Does AI Diminish Scholarly Thinking?..... | 6  |
| 1.3 The AI Engagement Model: A Framework for Epistemic Agency.....  | 8  |
| The Eight Modes of AI Engagement.....                               | 8  |
| Three Epistemic Levels.....                                         | 8  |
| 1.4 Who This Guide Is For.....                                      | 9  |
| 1.5 How to Use This Guide as a Cowork Research Protocol.....        | 9  |
| Section 2: Getting Started.....                                     | 9  |
| 2.1 Setting Up a Cowork Project.....                                | 9  |
| Why This Guide Recommends Claude Cowork.....                        | 10 |
| 2.2 Connecting Literature Review Tools.....                         | 10 |
| Consensus.ai.....                                                   | 10 |
| Scholar Gateway.....                                                | 10 |
| 2.3 Understanding Claude's Working Memory.....                      | 11 |
| 2.4 Why Plans and Context Should Live in Markdown Files.....        | 11 |
| 2.5 The Project Context File.....                                   | 12 |
| 2.6 Using Multiple AI Tools Strategically.....                      | 13 |
| Section 3: The Workflow Map.....                                    | 14 |
| 3.1 Overview.....                                                   | 14 |
| 3.2 Three Entry Points.....                                         | 14 |
| Section 4: Stage 1 — Ideation & Research Design.....                | 15 |
| 4.1 Overview.....                                                   | 15 |
| 4.2 Step 1: Present Your Idea and Ask for Creative Expansion.....   | 15 |
| 4.3 Step 2: Identify Weaknesses and Vulnerabilities.....            | 16 |
| 4.4 Step 3: Explore the Theoretical Landscape.....                  | 16 |
| 4.5 Step 4: Compare with Exemplar Papers.....                       | 17 |
| Section 5: Stage 2 — Literature & Theory Development.....           | 17 |
| 5.1 Overview.....                                                   | 17 |
| 5.2 Step 1: Conduct a Systematic Literature Review.....             | 18 |
| Broad Search vs. Discipline-Specific Search.....                    | 18 |
| 5.3 Step 2: Build a Narrative Storyline from the Literature.....    | 19 |

|                                                                              |    |
|------------------------------------------------------------------------------|----|
| 5.4 Step 3: Develop Theory and Hypotheses.....                               | 20 |
| 5.5 Step 4: Check Epistemological Consistency.....                           | 20 |
| Section 6: Stage 3 — Data Analysis & Interpretation.....                     | 21 |
| 6.1 Overview.....                                                            | 21 |
| 6.2 Step 1: Provide Context and Replicate Analyses.....                      | 21 |
| 6.3 Step 2: Run Comprehensive Quality Checks.....                            | 22 |
| 6.4 Step 3: Discover New Storylines.....                                     | 23 |
| 6.5 Step 4: Reconcile Results with Expectations.....                         | 23 |
| 6.6 Step 5: Robustness Checks.....                                           | 23 |
| 6.7 Step 6: Build Appendix Materials.....                                    | 25 |
| Section 7: Stage 4 — Planning the Paper.....                                 | 26 |
| 7.1 Overview.....                                                            | 26 |
| 7.2 Step 1: Build the Master Outline.....                                    | 26 |
| 7.3 Step 2: Plan the Introduction Hook.....                                  | 27 |
| 7.4 Step 3: Plan the Discussion.....                                         | 27 |
| 7.5 Step 4: Plan Limitations, Future Research, Conclusion, and Abstract..... | 28 |
| 7.6 Step 5: Brainstorm Titles.....                                           | 29 |
| Section 8: Stage 5 — Drafting.....                                           | 29 |
| 8.1 Overview.....                                                            | 29 |
| 8.2 Step 1: Let Claude Choose the Drafting Order.....                        | 29 |
| 8.3 Step 2: Draft Each Section.....                                          | 30 |
| 8.4 Step 3: Between-Section Review.....                                      | 30 |
| 8.4 Tables, Figures, and Visual Elements.....                                | 31 |
| Generating Figures with Claude (SVG Workflow).....                           | 31 |
| Section 9: Stage 6 — Revision & Refinement.....                              | 33 |
| 9.1 Overview.....                                                            | 33 |
| 9.2 Step 1: Deep-Dive Review #1 — Structural Integrity.....                  | 33 |
| 9.3 Step 2: Execute the Revision Plan.....                                   | 34 |
| 9.4 Step 3: Deep-Dive Review #2 — Different Analytical Lens.....             | 34 |
| 9.5 Step 4: Iterate as Needed.....                                           | 35 |
| Section 10: Stage 7 — Literature Integration & Citation Quality.....         | 35 |
| 10.1 Overview.....                                                           | 35 |
| 10.2 Step 1: Identify Citation Opportunities.....                            | 36 |

|                                                                      |    |
|----------------------------------------------------------------------|----|
| 10.3 Step 2: Plan the Integration.....                               | 36 |
| 10.4 Step 3: Reference Verification.....                             | 36 |
| Section 11: Stage 8 — Tone, Style & Formatting.....                  | 37 |
| 11.1 Overview.....                                                   | 37 |
| 11.2 Step 1: Create the Tone Card.....                               | 37 |
| 11.3 Step 2: Apply the Tone Card.....                                | 39 |
| 11.4 Step 3: Apply Journal Formatting.....                           | 39 |
| Section 12: Stage 9 — Pre-Submission Quality Assurance.....          | 40 |
| 12.1 Final Quality Checklist.....                                    | 40 |
| 12.2 AI Disclosure.....                                              | 40 |
| Section 13: Handling Revise & Resubmit.....                          | 41 |
| 13.1 Overview.....                                                   | 41 |
| 13.2 Step 1: Process the Reviews.....                                | 41 |
| 13.3 Step 2: Plan the Response Strategy.....                         | 41 |
| 13.4 Step 3: Draft the Response Letter.....                          | 42 |
| Section 14: Using AI for IRB Applications.....                       | 42 |
| 14.1 Overview.....                                                   | 42 |
| 14.2 The AI-Assisted IRB Workflow.....                               | 42 |
| 14.3 Phase 1: Document Review and Question Mapping.....              | 43 |
| 14.4 Phase 2: Answering Remaining Questions.....                     | 44 |
| 14.5 Phase 3: Generating Required Documents.....                     | 44 |
| 14.6 Phase 4: Filling Out the Application with Claude in Chrome..... | 45 |
| 14.7 Phase 5: Critical IRB Review.....                               | 46 |
| 14.8 Phase 6: Revision and Submission.....                           | 46 |
| 14.9 Important Notes.....                                            | 47 |
| Section 15: High-Level Principles.....                               | 47 |
| 15.1 One Thing at a Time.....                                        | 47 |
| 15.2 Always Plan Before Drafting.....                                | 48 |
| 15.3 Ask Claude Where You Are Wrong.....                             | 48 |
| 15.4 Let Claude Think.....                                           | 48 |
| 15.5 Maintain a Complete Record.....                                 | 48 |
| 15.6 Use Cowork Projects.....                                        | 48 |
| 15.7 Context Window Management.....                                  | 48 |

|                                                      |    |
|------------------------------------------------------|----|
| Section 16: The Faculty Research Toolkit Plugin..... | 48 |
| 16.1 Download and Install.....                       | 49 |
| 16.2 How Skills Work in Cowork.....                  | 49 |
| 16.3 Complete Skill Catalog.....                     | 49 |
| Ideation & Research Question.....                    | 49 |
| Theory & Hypothesis Development.....                 | 50 |
| Design & Pre-Data.....                               | 50 |
| Data Collection & Cleaning.....                      | 50 |
| Analysis.....                                        | 51 |
| Writing — Introduction & Contribution.....           | 51 |
| Writing — Body.....                                  | 51 |
| Self-Revision & Quality.....                         | 51 |
| Citations & Literature.....                          | 52 |
| Pre-Submission.....                                  | 52 |
| R&R and Post-Review.....                             | 52 |
| Dissemination.....                                   | 52 |
| Program-Level.....                                   | 52 |
| 16.4 Using the Toolkit Alongside This Guide.....     | 53 |
| 16.5 Philosophy: Skills as Epistemic Scaffolds.....  | 53 |
| Appendix A: Tone Card Template.....                  | 54 |
| TONE_CARD.md Template.....                           | 54 |
| Appendix B: Quick Reference Prompt Cards.....        | 55 |
| Quick Reference by Stage and Step.....               | 55 |
| Appendix C: Tool Setup Guide.....                    | 57 |
| Complete Tool Setup Instructions.....                | 57 |
| 1. Creating a Cowork Project.....                    | 57 |
| 2. Installing Consensus Plugin.....                  | 57 |
| 3. Installing Scholar Gateway Plugin.....            | 57 |
| 4. Connecting File Storage.....                      | 57 |
| 5. Basic Cowork Navigation.....                      | 58 |
| References.....                                      | 58 |

## Download: The Faculty Research Toolkit Plugin

47 purpose-built skills covering every stage of the research lifecycle — from ideation and study design through drafting, R&R, and IRB. Install once in Claude Cowork and Claude will automatically invoke the right skill when you describe what you're working on.

Get it at: [Download the Faculty Research Toolkit plugin](#)

See Section 16 of this guide for what skills are, how they help, installation steps, and the full skill catalog.

## Section 1: Introduction

### 1.1 What This Guide Is and Why Every Recommendation Matters

What follows is a complete, field-tested workflow for using AI — specifically Anthropic's Claude — as a collaborative research partner throughout the academic research process. I have used this workflow across dozens of projects, and it covers the entire lifecycle from initial idea through journal submission and revision.

**Every recommendation I make here exists because something went wrong without it.** This is not a theoretical framework assembled from best practices literature. It is a workflow I refined through extensive trial and error across dozens of real research projects spanning survey methodology, privacy research, information security, crowdfunding analytics, digital product safety, educational technology, and geological sciences. Each recommendation was earned:

- “Draft one section at a time” exists because drafting multiple sections at once produced measurably lower quality and more internal inconsistencies
- “Always plan before drafting” exists because skipping planning consistently resulted in near-complete rewrites
- “Let Claude choose the drafting order” exists because papers drafted in Claude's preferred sequence had fewer logical gaps
- “Ask Claude where you're wrong” exists because the most valuable insights came from critique, not compliance
- “Don't ask Claude to do too much at once” exists because overloaded prompts degraded reasoning quality across all sub-tasks

If you are tempted to skip a step because it seems unnecessary, proceed with extreme caution. The workflow is sequential and cumulative for a reason. Each step builds context and quality that later steps depend on. Every colleague I've shared this workflow with has told me the same thing: the steps they initially thought were optional turned out to be among the most valuable.

## 1.2 A Legitimate Concern: Does AI Diminish Scholarly Thinking?

Before I present this workflow, I want to address a concern that many of you will rightly have: does relying on AI for research make us worse thinkers? This concern is not only legitimate — it is supported by emerging evidence. Research on cognitive offloading shows that when individuals delegate cognitive tasks to external tools, the underlying cognitive abilities can atrophy (Risko & Gilbert, 2016). Habitual GPS use has been shown to negatively impact spatial memory in a dose-dependent manner, with greater use predicting steeper hippocampal-dependent memory decline over time (Dahmani & Bohbot, 2020). The “Google Effect” demonstrates that when people expect future access to information, they show lower recall rates for the information itself while developing enhanced recall for where to find it—the internet has become a form of transactive memory (Sparrow, Liu, & Wegner, 2011). Even in mathematics education, where the evidence is more nuanced, research documents uncritical calculator usage patterns among college students that suggest diminished engagement with underlying reasoning (Matto et al., 2019). There is genuine reason to worry that AI could produce similar effects on the higher-order reasoning skills that define scholarly work.

I take that concern seriously. This is not a guide to having AI think for you. It is a guide to using AI to think better than you could alone — and the distinction is critical. The difference lies not in whether you use AI, but in how you use it.

Bloom’s Taxonomy (Bloom et al., 1956; Anderson & Krathwohl, 2001) distinguishes between lower-order cognitive processes (remembering, understanding, applying) and higher-order processes (analyzing, evaluating, creating). The risk with AI is that we remain at the lower levels — accepting AI output passively, much as a student might copy from a textbook. The opportunity is to use AI as a catalyst for the highest levels: analyzing competing theoretical frameworks, evaluating the strength of evidence, and creating novel contributions to knowledge. Every prompt I include here is designed to operate at the analyzing, evaluating, or creating level of the taxonomy.

Schön’s (1983) concept of the reflective practitioner argues that professional expertise develops not through mechanical rule-application, but through ongoing reflection-in-action — the ability to think critically about one’s own reasoning while engaged in complex problem-solving. I have built reflection into every stage of this workflow. Every step includes prompts that ask you to question assumptions, evaluate alternatives, and reflect on decisions. The Project Context File — a running record of all decisions and their rationales — is itself a tool for reflective practice as Schön conceived it.

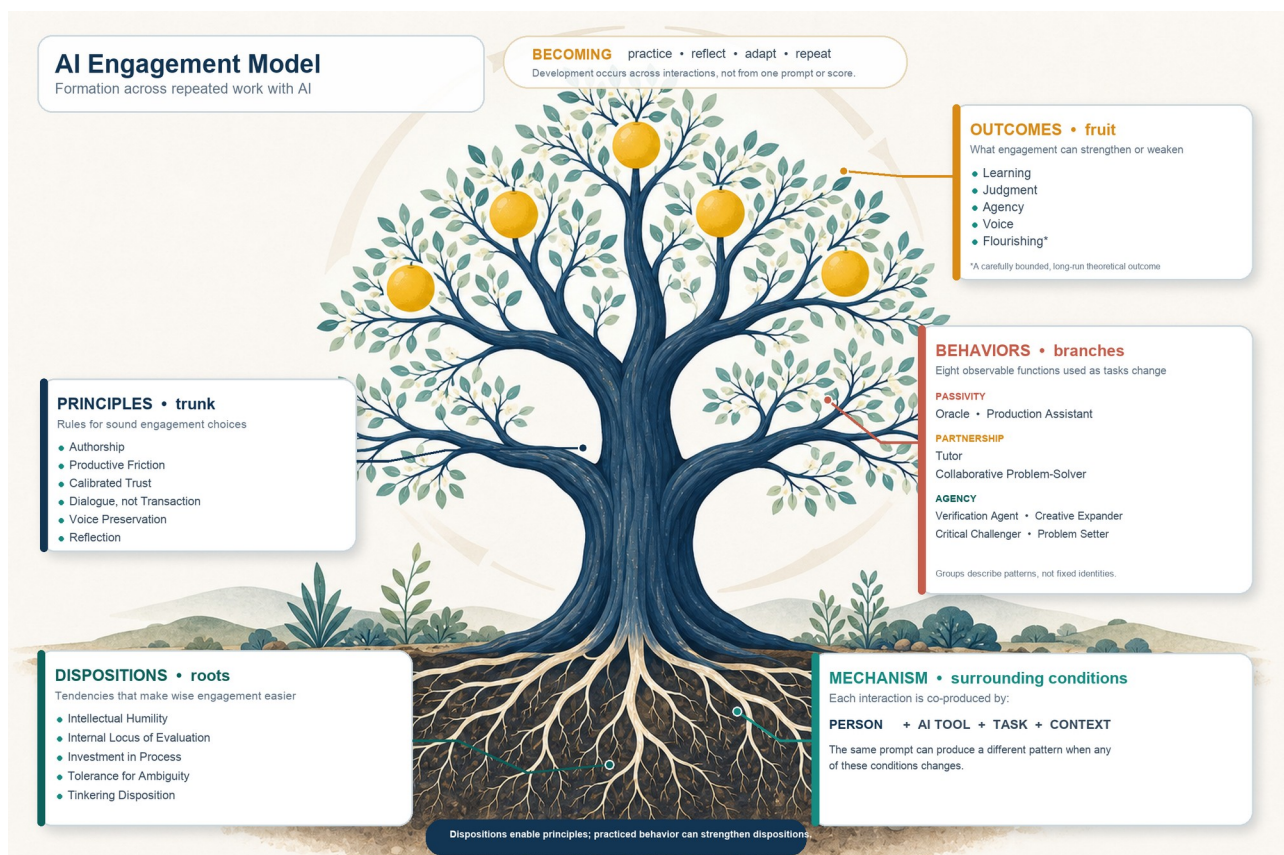
Sperber et al.’s (2010) theory of epistemic vigilance describes the cognitive mechanisms humans use to evaluate the reliability of information from others. In the AI context, epistemic vigilance means not accepting Claude’s output uncritically but actively monitoring it for accuracy, relevance, and logical coherence. I have operationalized epistemic vigilance throughout this workflow by emphasizing verification, critique, and cross-checking at every stage.

Buçinca et al. (2021) demonstrated that cognitive forcing functions — deliberate interventions requiring humans to engage analytically with AI output rather than accepting it passively — significantly improve decision quality in human-AI collaboration. This entire workflow is, in essence, a collection of cognitive forcing functions for academic research. Every prompt that asks “where am I wrong?” or “am I even asking the right question?” is a forcing function I designed to prevent the intellectual passivity that critics rightly worry about.

The evidence suggests not that AI should be avoided, but that outcomes depend in part on how it is used, what the task requires, and what judgment the person retains. This is the foundation of the AI Engagement Model described in the next section.

### 1.3 The AI Engagement Model: A Framework for Retained Scholarly Judgment

The AI Engagement Model (AIEM) explains engagement as a pattern co-produced by a person, an AI tool, a task, and a context (Keith, 2026). The model includes five parts: the co-production mechanism; five dispositions that make wise engagement easier or harder; six principles for sound choices; eight observable engagement behaviors; and the outcomes of Learning, Judgment, Agency, Voice, and the carefully bounded long-run idea of Flourishing. Its developmental loop, Becoming, explains how repeated behavior and reflection may strengthen future habits and dispositions. A single prompt, mode count, or artifact score cannot establish that development.



*The AI Engagement Model formation tree. The behavior modes are one part of the model, not its complete definition.*

### The Eight Modes of AI Engagement

| Mode | Name                         | Description                                                        | Research Example                                                      |
|------|------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|
| 1    | Oracle                       | AI as authoritative answer source; user accepts without evaluation | Asking Claude for a theory and using it without questioning           |
| 2    | Production Assistant         | AI as efficiency tool for drafting and editing                     | Having Claude write a first draft you lightly edit                    |
| 3    | Tutor                        | AI as personalized instructor; user seeks understanding            | Asking Claude to explain a statistical technique                      |
| 4    | Collaborative Problem-Solver | AI as thinking partner; user contributes reasoning at each step    | Working through a theoretical argument step-by-step with Claude       |
| 5    | Verification Agent           | AI output is checked, questioned, and cross-referenced             | Asking Claude to verify its own citations using Consensus             |
| 6    | Creative Expander            | AI generates novel possibilities user wouldn't have considered     | Using Claude to brainstorm alternative theoretical framings           |
| 7    | Critical Challenger          | AI is used to attack, stress-test, and strengthen reasoning        | Asking Claude to find every weakness in your argument                 |
| 8    | Problem Setter               | AI helps reframe what the problem actually is                      | Asking Claude whether you're even asking the right research questions |

### Three Behavioral Groupings

Modes 1-2: Passivity patterns. Oracle requests a direct answer and Production Assistant produces or transforms an artifact. Both can be appropriate for bounded, low-stakes work when the researcher recognizes their limits and retains responsibility for claims, evidence, and disclosure.

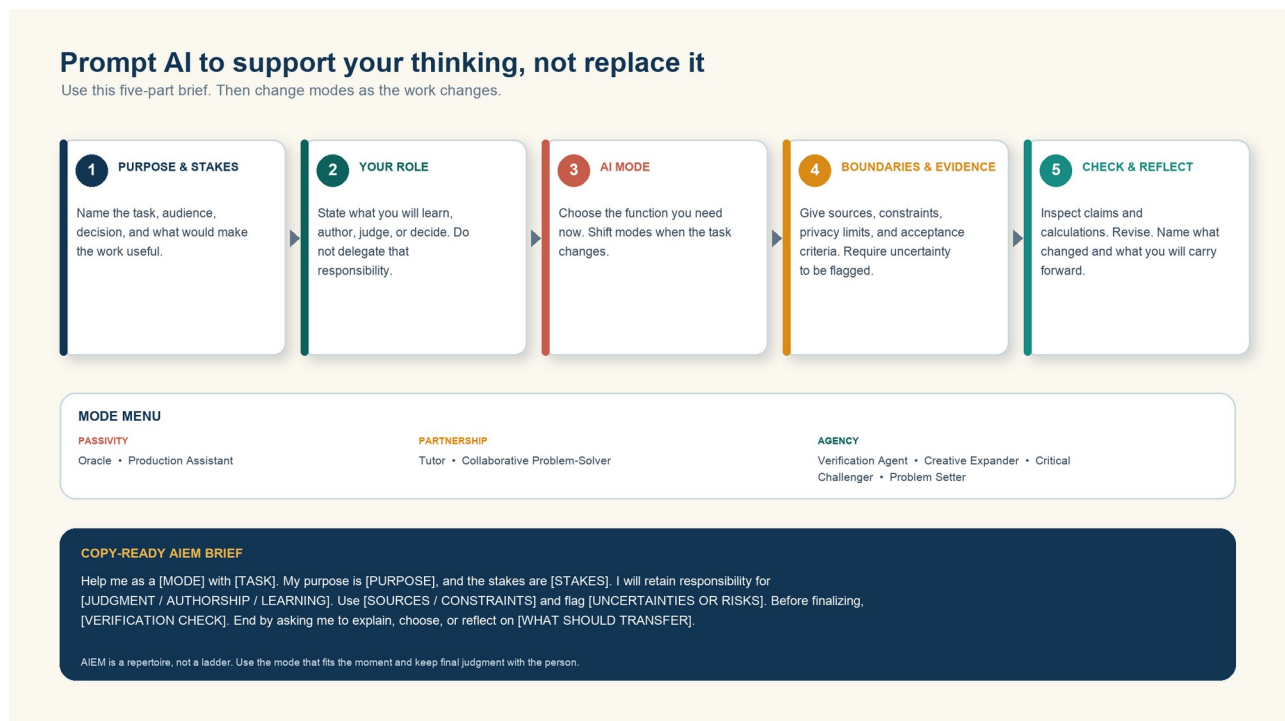
Modes 3-4: Partnership patterns. Tutor builds understanding through explanation and questioning. Collaborative Problem-Solver works through a problem with the researcher as an active contributor. These labels describe the function of an interaction, not the quality of the scholar.

Modes 5-8: Agency patterns. Verification Agent checks claims and consistency. Creative Expander generates alternatives. Critical Challenger tests reasoning. Problem Setter improves the question, objective, constraints, and success criteria. These modes are useful only when the researcher keeps final judgment and checks the evidence.

Key message: AIEM is a repertoire, not a ladder. Use the mode that fits the current research task and change modes when the task changes. A Production Assistant can format a table after the analysis is settled. A Critical Challenger can test a contribution. A Verification Agent can reconcile a result against code and source data. No mode transfers authorship or scholarly accountability to the AI.

## Prompt AI to Use the Model

A vague request such as 'use AIEM' invites the assistant to invent its own version of the model. Give the assistant a task brief that names your purpose, preserves scholarly responsibility, selects the function needed now, sets evidence boundaries, and requires a check and reflection.



### *AIEM prompting quick reference for research work.*

Copy-ready research brief: Work as my [MODE] on [RESEARCH STAGE OR TASK]. The purpose is [PURPOSE], the intended contribution or decision is [CONTRIBUTION], and the stakes are [STAKES]. I retain responsibility for the research question, theoretical choices, methods, interpretation, authorship, and final claims. Use only [SUPPLIED OR VERIFIED SOURCES] and follow [METHOD, JOURNAL, ETHICS, CONFIDENTIALITY, AND DISCLOSURE CONSTRAINTS]. Do not invent citations, evidence, participants, analyses, or results. Flag uncertainty and missing evidence. Before finalizing, act as both a Verification Agent and Critical Challenger: reconcile claims with sources or code, identify the strongest alternative explanation, and list what still requires independent human checking. End with a decision log that records what changed and what I decided.

## 1.4 Who This Guide Is For

I wrote this primarily for business school faculty and doctoral students, though it is applicable to any empirical research discipline. I have tried to address a mixed audience: there is a “Getting Started” section for those completely new to AI, the main content is written at an intermediate level, and experienced researchers can skip directly to the Workflow Map in Section 3. If you are completely new to AI and Claude, start with Section 2. If you have prior experience with AI tools, you can skip ahead to the workflow sections.

## 1.5 How to Use This Guide as a Cowork Research Protocol

This document is designed to be uploaded directly into your Claude Cowork project folder. When you do this, Claude reads the entire guide and can:

- Guide you through each stage step by step
- Track where you are and suggest what comes next
- Adapt the prompts to your specific project
- Remind you of best practices at each stage

**To activate:** Upload this document to your project folder and tell Claude: “I’ve uploaded the AI-Assisted Research Workflow guide. I’m starting from [Entry Point: Idea Only / Idea + Dataset / Dataset + Draft]. I’m currently at [Stage X]. Please guide me through the process.”

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## Section 2: Getting Started

### 2.1 Setting Up a Cowork Project

Create a dedicated Cowork project for each research paper. In the project folder, upload:

- Your complete dataset (CSV, Excel, SPSS format)
- Any existing drafts or manuscripts
- Target journal’s author guidelines and formatting requirements
- Exemplar papers (3-5 papers from your target journal representing the quality/contribution you aim for)
- This complete guide (AI\_Assisted\_Research\_Workflow.md)
- Any prior analyses, code, or methods documentation

Each project is a self-contained research workspace. Claude can access all these files across sessions, which means your research context persists even when you end a conversation and return later.

## Why This Guide Recommends Claude Cowork

I developed this entire workflow within Claude Cowork, and every recommendation has been validated exclusively against that platform. Cowork provides several capabilities that are essential to this workflow: persistent file access across sessions through project folders, the ability to read and write documents directly, execution of code and data analysis through integrated tools, and connection to academic databases through MCP plugins like Consensus and Scholar Gateway. These capabilities are not incidental — they are load-bearing elements of the workflow. Without persistent file access, the Project Context File and markdown planning approach would not work. Without code execution, the data analysis and Jupyter notebook stages would require external tools. Without MCP plugins, the literature review and reference verification stages would be dramatically less effective.

I cannot recommend this specific workflow for other AI tools (such as ChatGPT, Gemini, or Copilot) because I have not tested it against them. Those platforms have different capabilities, different context window behaviors, and different strengths. Some steps may transfer well; others may not. If you choose to use a different tool, treat what I share here as a set of principles rather than exact instructions, and expect to adapt the workflow to your platform's capabilities.

That said, other AI tools can play a valuable supporting role even within a Claude-centered workflow — see Section 2.6 for how to use multiple AI tools strategically.

## 2.2 Connecting Literature Review Tools

### Consensus.ai

Consensus is an AI-powered research platform that searches across 200+ million peer-reviewed papers and provides AI-synthesized answers to research questions with direct evidence from the academic literature.

#### Setup instructions:

1. Open Claude desktop app or Claude Code
2. Go to Settings → Plugins/Integrations (labeling varies by interface)
3. Search for “Consensus”
4. Click Install/Connect
5. Verify connection: Ask Claude “Search Consensus for recent papers on [your topic]”

**What it does:** Consensus searches academic databases and returns papers with relevance scores and evidence from abstracts. When you ask Claude to find literature on your topic, Consensus retrieves current papers directly.

### Scholar Gateway

Scholar Gateway provides access to detailed bibliographic metadata, full citation information, and paper abstracts across academic databases.

### Setup instructions:

1. Same path: Settings → Plugins/Integrations
2. Search for “Scholar Gateway”
3. Click Install/Connect
4. Verify: Ask Claude “Look up the paper [specific paper title] on Scholar Gateway”

**What it does:** Scholar Gateway retrieves complete bibliographic information and helps verify citations. When Claude cites a paper, you can have it verify the exact authors, year, journal, volume, pages, and DOI through Scholar Gateway.

**Why both?** Consensus provides AI-synthesized answers from the literature — it helps you understand the state of knowledge on your topic. Scholar Gateway provides detailed bibliographic metadata — it ensures you cite papers correctly and helps you find the full texts of papers Claude identifies. Together they enable comprehensive, accurate literature reviews and reference verification.

## 2.3 Understanding Claude’s Working Memory

Claude has a large but finite working memory — think of it as a very long document that Claude can see all at once. When a conversation grows beyond that limit, the oldest parts fade from view, even though they’re still in the conversation history. Claude can reference them if needed, but they’re no longer in its active working context.

This is why:

- **Break tasks into smaller pieces.** Draft one section of your paper at a time, not the entire paper at once. When Claude’s working memory is overloaded, the quality of reasoning on each task degrades.
- **Create a Project Context File to re-orient Claude in new sessions.** When you start a new session, have Claude read your Project Context File (a markdown file tracking all decisions and their rationale). This re-establishes context without requiring you to re-explain everything.
- **Use Cowork projects, which give Claude persistent file access.** Files in your project remain accessible across sessions, not just during active conversations.

Understanding these constraints is not a limitation — it’s a guide to using Claude most effectively.

## 2.4 Why Plans and Context Should Live in Markdown Files

Throughout this workflow, I will ask you to create plans, outlines, literature summaries, decision logs, and other working documents. **Always store these as markdown (.md) files in your Cowork project folder — not as Word documents, not as PDFs, and not only in conversation.**

There are several reasons for this, and they matter fundamentally.

**Markdown is Claude's native format.** Claude reads, writes, and reasons in markdown more fluently than any other format. When you store a plan as a .md file, Claude can parse it instantly and completely — every heading, bullet, sub-point, and note is structurally unambiguous. By contrast, a Word document must be converted before Claude can read it, and that conversion sometimes loses formatting nuances. A PDF is even harder to parse. Markdown eliminates friction between you and Claude.

**Markdown survives across sessions.** Conversations with Claude eventually end — either you close them or they hit context limits. But a markdown file in your project folder persists indefinitely. When you start a new session, Claude can read your PROJECT\_CONTEXT.md, REVISION\_PLAN.md, or LITERATURE\_OUTLINE.md and immediately re-establish full context. Without these files, you would need to re-explain everything from scratch in each new session. This is especially critical for longer papers or projects that span weeks or months.

**Markdown is human-readable too.** Unlike XML or JSON, markdown is as easy for humans to read as it is for machines. You can open any .md file in a text editor and review it. Your coauthors can read it. It requires no special software. You can print it. It's a genuinely universal format.

**Markdown enables incremental building.** Claude can append to, revise, and restructure a markdown file across multiple interactions. Your paper plan starts as a rough outline and grows into a detailed blueprint, all within the same file. This incremental approach mirrors how good research plans actually develop.

#### **Recommended markdown files for every project:**

- PROJECT\_CONTEXT.md — Master context document tracking all decisions, their rationale, and current status
- OUTLINE.md — Detailed paper outline that evolves throughout the project
- REVISION\_PLAN.md — Diagnostic report and fix plan for each revision round
- LITERATURE\_MAP.md — Thematic organization of all relevant literature
- TONE\_CARD.md — Writing style guide for the target journal
- REVIEWER\_RESPONSE.md — Response matrix and strategy for revise-and-resubmit

When Claude asks you to create a plan or outline, it should produce a markdown file. When you want to record a decision, append it to the Project Context File. This file-based approach means your entire research process is documented, portable, and instantly accessible to Claude in any session.

## **2.5 The Project Context File**

The Project Context File is a markdown file (PROJECT\_CONTEXT.md) that serves as the master context document for your research project. It tracks:

- **Research questions and hypotheses** — with rationale for any changes
- **Key theoretical positioning decisions** — and why you chose this framing over alternatives

- **Analysis choices and justifications** — which analyses you're running and why
- **Reviewer feedback and response decisions** — from previous submissions
- **Every major decision point and why** — the complete intellectual history of the project

The Project Context File serves two critical purposes:

**First, it re-orientes Claude quickly in new sessions.** Instead of re-explaining your entire project from scratch, you can say: "I'm starting a new session. Please read PROJECT\_CONTEXT.md to understand where we are." Claude reads the file and has full context within seconds.

**Second, it creates an audit trail of your research process.** When you eventually submit the paper, you have a complete record of all decisions and their rationales. If a reviewer asks "why did you measure construct X that way?", you can reference the Project Context File entry where you explained that decision. If you're accused of HARKing (hypothesizing after results are known), the Project Context File shows your original hypotheses, when they were formulated, and any changes made post-hoc (with clear explanation of why). This documentation is invaluable for demonstrating intellectual integrity and the extent of human contribution to the research.

Create the Project Context File as a markdown file from your first session. Update it whenever you make a significant decision. Treat it as your project's institutional memory.

## 2.6 Using Multiple AI Tools Strategically

While my workflow centers on Claude Cowork, one useful technique is to use multiple AI tools to support deliberate challenge and verification. The principle is simple: use a second AI as an independent critic of the first.

Here is how it works. At any planning or drafting stage, export your current plan or draft (the markdown file or document section) and provide it to a different AI tool — ChatGPT, Gemini, or another capable model. Ask that tool to critique the work: identify weaknesses, challenge assumptions, suggest alternatives, and point out what Claude may have missed. Then bring those critiques back to Claude and ask it to evaluate them, respond to them, and integrate the valid ones.

This cross-tool workflow applies the AI Engagement Model. Sending work to another model for independent critique uses Critical Challenger. Bringing those critiques back to Claude and asking it to evaluate their merit uses Verification Agent. You remain the arbiter who accepts, rejects, or modifies each critique. A second model is another source of claims, not independent proof, so important conclusions still require source, data, code, or expert verification.

This approach is particularly valuable at three points in the workflow:

First, during Stage 1 (Ideation), after Claude has helped expand and critique your idea. A second AI may identify blind spots that Claude missed, particularly if the models have different training data strengths.

Second, during Stage 4 (Planning), after Claude has produced a detailed outline. A second model reviewing the outline can catch structural problems or suggest alternative organizations that Claude did not consider.

Third, during Stage 6 (Revision), as one of your deep-dive review passes. Instead of asking Claude to review its own work from a different angle, export the draft to another model entirely. A genuinely different model will catch genuinely different issues.

A practical note: do not try to run the entire workflow across multiple tools. The persistent context, file access, and tool integration that Claude Cowork provides are essential to the workflow's continuity. Use other tools as targeted consultants, not as co-drivers.

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## Section 3: The Workflow Map

### 3.1 Overview

I designed this workflow with three entry points that converge into a shared nine-stage pipeline. Choose your entry point based on where your project currently stands:

The complete workflow consists of nine sequential stages, with three possible entry points depending on where you begin:

---

### 3.2 Three Entry Points

I built the workflow to accommodate three different starting positions:

**Entry Point A: Idea Only.** You have a research concept, but no data yet. You might be developing a grant proposal, designing a new study, or exploring a theoretical question. You begin at Stage 1 (Ideation & Research Design). Work through all nine stages sequentially.

**Entry Point B: Idea + Dataset.** You already have both a research concept and collected data (perhaps from a prior study, a secondary data source, or data you collected independently). You skip Stage 1 and begin at Stage 3 (Data Analysis & Interpretation). You still complete Stages 2 (Literature & Theory Development) and 4-9, but you do them with data already in hand.

**Entry Point C: Dataset + Draft.** You have data and you've already drafted a paper (perhaps without Claude, or in a prior collaboration). You need revision. You begin at Stage 6 (Revision & Refinement). You may still move through earlier stages as needed to strengthen weak sections or reconsider theoretical framing.

**All paths converge.** No matter which entry point you use, from your starting stage forward you move through the same remaining stages in sequence, converging into a unified pipeline through Stages 9, 13 (Revise & Resubmit), and 14-15 (IRB and high-level principles).

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## Section 4: Stage 1 — Ideation & Research Design

*Entry Point A begins here*

### 4.1 Overview

In Stage 1, you take a rough research idea and develop it into a rigorous, defensible research design. This stage uses epistemic modes 4-8: you're thinking collaboratively with Claude, not just having it execute tasks. The goal is not to have Claude tell you what to research, but to use Claude's broad knowledge and analytical ability to strengthen your own thinking about the research problem.

This stage is critical and should not be rushed. Time invested here prevents wasted effort in later stages. In my experience across multiple projects, Claude's questioning in Stage 1 has identified superior theoretical positioning, revealed unstated assumptions, and suggested research questions that substantially changed the direction of the final paper.

In terms of the AI Engagement Model (Section 1.3), this stage uses Creative Expander, Critical Challenger, and Problem Setter. If you find yourself simply asking Claude for answers and accepting them through Oracle, stop and reframe your approach.

### 4.2 Step 1: Present Your Idea and Ask for Creative Expansion

Use this prompt to introduce your core research idea to Claude:

#### PROMPT

***I have a research idea that I'd like to develop for [target journal]. Here's my initial concept:***

***[Describe your idea in 2-3 paragraphs]***

***Before we develop this further, I want you to think deeply about this idea. Please: 1. Identify the most interesting and novel aspects of this idea 2. Suggest 3-5 ways to expand or refine the research design, including research questions I haven't considered 3. Tell me honestly: am I even asking the right questions? Are there better questions hiding inside this idea that I'm not seeing? 4. What assumptions am I making that I should question?***

***Take your time. I want your genuine intellectual engagement, not a polished summary.***

**Why This Prompt Works:** This prompt activates Modes 6 (Creative Expander) and 8 (Problem Setter). By explicitly asking Claude to question assumptions and reframe the problem, you avoid confirmation bias where AI simply validates your existing thinking. The instruction "take your time" is not filler — it encourages Claude to engage more deeply rather than producing a quick

surface-level response. When you read the response, look for three things: (1) aspects of your idea you hadn't fully considered, (2) research questions you should be asking but aren't, (3) fundamental assumptions that might be worth questioning.

### 4.3 Step 2: Identify Weaknesses and Vulnerabilities

Once you've explored expansions, shift to critique:

#### PROMPT

*Now I want you to be my toughest critic. Look at this idea from every angle and tell me:*

1. **Where is this idea wrong, weak, or naive?**
2. **What are the strongest criticisms a skeptical reviewer would make?**
3. **What methodological vulnerabilities exist?**
4. **Are there competing explanations that would undermine the contribution?**
5. **What has been published that might make this idea less novel than I think?**

*Don't hold back. I need to know the weaknesses before I invest months in this project.*

**Why This Prompt Works:** This prompt activates Mode 7 (Critical Challenger). Getting critique early saves enormous time. In my own projects, this step has identified fundamental problems that would have taken me months to discover through peer review. The instruction "don't hold back" matters — Claude tends toward diplomacy by default, and explicit permission to be harsh produces more useful and more honest critique.

### 4.4 Step 3: Explore the Theoretical Landscape

With your core idea and its vulnerabilities identified, explore the theoretical frameworks that could guide your research:

#### PROMPT

*Let's explore the theoretical positioning for this research. I'm currently thinking about grounding it in [your initial theory/theories]. But I want to make sure I'm not missing something better.*

*Please: 1. Identify ALL relevant theories that could frame this research — including ones I haven't mentioned 2. For each theory, explain how it would change the framing, research questions, and expected contributions 3. Which theoretical positioning would make the strongest contribution to [target journal]? 4. Are there theories from adjacent disciplines that researchers in my field rarely use but that would provide a fresh lens? 5. I've found that you often identify a better theoretical positioning than my initial instinct. So think carefully about this.*

**Why This Prompt Works:** Claude has broad knowledge across disciplines and can identify theoretical frameworks that I, embedded in my own field, would have missed. In several of my projects, this step identified a better theoretical positioning than my original choice, significantly strengthening the paper’s contribution. The final sentence is intentional — it sets an expectation of high performance that Claude tends to meet.

## 4.5 Step 4: Compare with Exemplar Papers

Before finalizing your research design, ground it in the standards of your target journal:

### PROMPT

*I’m targeting [journal name] for this paper. I’ve uploaded [3-5] exemplar papers from this journal that represent the kind of contribution and quality I’m aiming for. Please read them carefully and then:*

1. What structural patterns do these papers share? (Introduction flow, theory development approach, methodology standards)
2. How does my research idea compare in terms of novelty and rigor?
3. What can I learn from these papers about how to frame my contribution?
4. What standards of evidence do these papers set that I need to meet or exceed?
5. What’s the typical length, citation density, and methodology depth?

**Why This Prompt Works:** Exemplar papers give Claude a concrete standard to measure against. Without them, Claude defaults to generic “good academic writing” advice. With them, it can give journal-specific guidance that matches reviewer expectations. The exemplars also help you understand what this particular journal values, which is invaluable information for framing your research contribution.

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## Section 5: Stage 2 — Literature & Theory Development

### 5.1 Overview

In Stage 2, you develop a comprehensive understanding of the literature in your domain and refine your theoretical positioning. This stage is highly iterative and knowledge-intensive. The goal is to move from “I think I have a novel idea” to “I can articulate exactly what gap my research fills and why it matters.” This stage benefits enormously from the Consensus and Scholar Gateway tools.

An important note on epistemological diversity: Disciplines vary significantly in their views on the relationship between theory and data. In strictly positivist, confirmatory research — particularly fields that value pre-registration — hypotheses must be specified before data analysis. Revising hypotheses after seeing results (HARKing: Hypothesizing After Results are

Known; Kerr, 1998) is considered a serious methodological concern. Other traditions, including grounded theory, abductive reasoning, and exploratory research, are comfortable with iterative movement between data and theory. Design science, interpretivist, and critical realist approaches each have their own conventions. I do not advocate for any particular epistemological position in this workflow. Adapt the sequencing of this stage to your discipline's expectations and always be transparent about your approach.

This stage primarily uses Collaborative Problem-Solver and Verification Agent from the AI Engagement Model. You and Claude are building theoretical arguments together, and you are verifying the accuracy and relevance of everything Claude produces.

## 5.2 Step 1: Conduct a Systematic Literature Review

Begin with a comprehensive search of the relevant literature:

### PROMPT

*I need a thorough literature review on [topic]. Please use Consensus and Scholar Gateway to search for:*

1. **Seminal/foundational papers on [topic] — the works everyone cites**
2. **Recent papers (last 3-5 years) that represent the current state of knowledge**
3. **Papers that specifically address [your specific angle/gap]**
4. **Methodological papers relevant to our approach**
5. **Any meta-analyses or review papers that synthesize the field**

*For each important paper you find, give me: authors, year, journal, key finding, and why it matters for our research. Organize these thematically rather than chronologically.*

**Setup Note:** To use Consensus and Scholar Gateway, you must have them connected as MCP plugins in your Claude settings. See Section 2.2 for setup instructions. Once connected, Claude can search academic databases directly within your conversation and will provide current, verified bibliographic information.

### Broad Search vs. Discipline-Specific Search

One of the most important distinctions I've learned to make is between searching broadly across all research outlets and searching within your discipline's core journals. These are fundamentally different activities with different purposes, and confusing them will hurt your paper.

**Search broadly when you are discovering.** Early in Stage 2, you want Claude to cast a wide net. The most interesting theoretical frameworks for your research may come from psychology, economics, computer science, sociology, or a field you have never read. Some of my best papers have used theories that no one in my discipline had applied to the problem. When you ask Claude to search for "all relevant theories" or "frameworks from adjacent disciplines," you

want it searching everywhere — not just your home journals. This is the time for Consensus searches with broad keywords and no journal filters.

**Search your discipline's journals when you are grounding.** Once you have identified your theoretical positioning, you need to anchor your literature review in the conversations happening in your target journal and its peer outlets. Reviewers expect to see that you know the discipline's literature — not just the topic's literature. A paper submitted to MIS Quarterly that cites only psychology and management journals will raise red flags, even if every citation is relevant. You need to show fluency in your discipline's own treatment of the topic. This is the time to explicitly tell Claude which journals matter:

#### PROMPT

***Now I need you to search specifically within my discipline's core journals: [list your top 5-8 target journals, e.g., "MIS Quarterly, Information Systems Research, Journal of MIS, Journal of the AIS, European Journal of Information Systems"]. For the topic of [your topic], find: 1. How has this topic been studied in these specific journals? 2. What theoretical frameworks do these journals' authors tend to use for this type of research? 3. Which papers in these journals are the most-cited on this topic? 4. Are there recent special issues or editorial statements that signal where the field is heading? I need to demonstrate deep familiarity with how MY discipline discusses this topic, not just how it is studied in general.***

The practical workflow is: broad search first to find the best ideas, then discipline-specific search to ground those ideas in the conversations your reviewers are having. I think of it as "discover widely, cite wisely." Your theory can come from anywhere, but your literature review must show you belong in the room.

### 5.3 Step 2: Build a Narrative Storyline from the Literature

Once you have the literature mapped, organize it into a compelling narrative that builds toward your research contribution:

#### PROMPT

***Based on the literature review, I need you to build a coherent storyline that:***

1. ***Begins at a logical starting point that a reader in [discipline] would naturally relate to***
2. ***Progresses through the key themes and findings in the literature***
3. ***Identifies tensions, contradictions, or unresolved questions in the existing research***
4. ***Ends with a clear, compelling gap that our research directly addresses***

***The storyline should make a reader think: "Yes, this research is clearly needed — I can't believe no one has done this yet." Don't just list what papers found. Weave them into a narrative that builds toward our contribution.***

**Why This Step Matters:** Many literature reviews are collections of summaries — “Smith (2020) found X, Jones (2021) found Y.” The best literature reviews are narratives that show the reader how thinking about a topic has evolved, where the gaps are, and why your research is the natural next step. This prompt asks Claude to weave literature into a coherent story that makes your contribution inevitable.

## 5.4 Step 3: Develop Theory and Hypotheses

With the literature mapped and the gap articulated, develop your theoretical framework and hypotheses:

### PROMPT

*Now let's develop the theoretical framework and hypotheses. Based on our chosen theoretical positioning in [theory name]:*

1. Walk me through the logical argument for each hypothesis, step by step
2. For each hypothesis, identify the strongest theoretical support AND the strongest counterargument
3. Are there competing hypotheses we should acknowledge?
4. Recommend additional theoretical support I may not have thought of for each hypothesis

*Remember: we're still in planning mode. Let's get the logic right before we draft anything. Add all of this to our outline/plan.*

**Why “Still in Planning Mode” Matters:** The temptation is to start drafting too early. Resist it. The plan needs to be thorough before any prose is written. Every hour spent planning saves three hours of revision. I learned this through repeated, painful experience. Write everything out: the logical chain for each hypothesis, the theoretical support, the counterarguments. This becomes the backbone of your Methods and Discussion sections.

*Skill shortcut: if you have the Faculty Research Toolkit installed, invoke theory-builder (to build a new framework), theory-integrator (to merge two existing theories), or theory-tester (to derive formal hypotheses from a framework) instead of typing the full prompt. See Section 16 for install instructions.*

## 5.5 Step 4: Check Epistemological Consistency

Before moving forward, verify that your approach is internally coherent:

#### PROMPT

***Before we proceed, let's check our epistemological consistency. My discipline generally follows a [positivist / interpretivist / design science / critical realist] approach. Given this:***

- 1. Are our research questions properly framed for this epistemology?**
- 2. Are our hypotheses (or propositions, if qualitative) correctly structured?**
- 3. Is the relationship between theory and data appropriate for our epistemological commitments?**
- 4. Will a reviewer in my discipline see any epistemological inconsistencies?**

***I want to make sure our approach is internally consistent and defensible.***

**Why This Matters:** Many papers receive critical reviews because they mix epistemological approaches without justification. They might set up a positivist hypothesis-testing framework but then reason qualitatively about results. They might claim grounded theory but begin with a theory-driven codebook. This step ensures your entire approach is coherent and defensible to reviewers steeped in your discipline's traditions.

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## Section 6: Stage 3 — Data Analysis & Interpretation

*Entry Point B (Idea + Dataset) begins here*

### 6.1 Overview

In Stage 3, you load your data, verify its quality, and begin analysis. This is where you transition from planning to execution. The work here determines the integrity of everything that follows. Poor data quality, inadequate verification, or rushed analysis will undermine even the best theoretical framework and writing. Take time in this stage.

This stage operates in Mode 4 (Collaborative Problem-Solver) for analysis replication and Mode 6 (Creative Expander) for discovering new storylines. The quality checks function as Mode 5 (Verification Agent) — you are systematically validating Claude's analytical work.

### 6.2 Step 1: Provide Context and Replicate Analyses

Start by giving Claude complete context about your data and establishing baseline analyses:

#### PROMPT

*I'm uploading my dataset and [Qualtrics .qsf file / methodology description / instruments]. Here's what I need:*

1. First, read the [.qsf file / methodology document] to understand all constructs and their measurement items
2. Load and explore the dataset — give me descriptive statistics, missing data patterns, and any immediate quality concerns
3. Replicate the following analyses: [list your analyses]
4. Create a Jupyter notebook that contains ALL code required to reproduce every result
5. Document every step clearly so another researcher could follow it

*Important: If you're working from a Qualtrics .qsf file, also cross-reference it with a clean list of constructs and items that I'll provide, since .qsf files can sometimes be misread due to their complex nested JSON structure.*

**Why the .qsf caveat exists:** Claude can parse Qualtrics .qsf files, but they are deeply nested JSON structures with embedded logic, branching, and sometimes JavaScript. Complex surveys can be misinterpreted. Providing a backup list of constructs and items gives Claude redundant information to cross-validate. I learned this the hard way when Claude misread a branching logic pattern in one of my .qsf files and produced incorrect item assignments, which would have resulted in invalid reliability calculations. Always provide both the .qsf and a simple list.

### 6.3 Step 2: Run Comprehensive Quality Checks

Data quality is the foundation of everything. Run exhaustive checks before proceeding:

#### PROMPT

*Now I need a complete set of data quality checks. Please create sections in the Jupyter notebook for each of the following:*

1. Reliability: Cronbach's alpha for all multi-item constructs
2. Convergent validity: Factor loadings (CFA), AVE values (target:  $\geq 0.50$ )
3. Discriminant validity: HTMT ratios, Fornell-Larcker criterion, cross-loadings
4. Multicollinearity: VIF values for all regression/SEM models (flag anything  $> 5$ )
5. Common method bias: Harman's single-factor test, marker variable if available
6. Normality: Skewness, kurtosis, Q-Q plots for key variables
7. Outliers: Mahalanobis distance, Cook's distance, leverage values
8. Missing data: MCAR test (Little's test), pattern analysis, imputation recommendations if needed

*Flag any issues and recommend solutions. These will form the basis of our appendices and results section.*

**Why This Comprehensive:** Every check listed here has revealed critical issues in real research projects. Failing to check multicollinearity results in inflated standard errors and unreliable conclusions. Missing discriminant validity checks lead to reviewers questioning whether you're actually measuring distinct constructs. Common method bias goes unexamined and reviewers flag it during review. This comprehensive approach upfront saves you from embarrassment in the review process.

## 6.4 Step 3: Discover New Storylines

Once you've verified data quality, look beyond your original hypotheses:

### PROMPT

*Now that you've thoroughly explored the data and completed the quality checks, I want you to look at this data with fresh eyes.*

1. Are there interesting patterns, relationships, or storylines in this data that I haven't asked about?
2. Any unexpected moderating or mediating effects worth exploring?
3. Are there subgroup differences that tell a compelling story?
4. What would you investigate if this were your dataset and you had no preconceptions?

*I'm not asking you to run every possible test. I'm asking you to think creatively about what stories this data might tell beyond what I initially hypothesized.*

**Why This Matters:** Data often tells stories the researcher didn't anticipate. This prompt activates Mode 6 (Creative Expander) and Mode 8 (Problem Setter). You get Claude's fresh analytical perspective on what the data actually contains, not just whether it supports your hypotheses. This often yields the most interesting and publishable findings.

## 6.5 Step 4: Reconcile Results with Expectations

Now compare actual results with what you predicted:

#### PROMPT

*Let's compare the actual results with our original hypotheses/expectations:*

1. Which hypotheses were supported? Which were not?
2. For unsupported hypotheses, what might explain the unexpected results?
3. Given our epistemological approach, how should we handle unsupported hypotheses?
4. Do the new storylines from the previous step suggest we should adjust our paper's narrative?

*Let's update our plan/outline based on this analysis.*

## 6.6 Step 5: Robustness Checks

Robustness checks are the difference between results that survive peer review and results that collapse under scrutiny. I cannot overstate how important this step is. Reviewers will ask “what if you did it differently?” and you need to already have the answers. I've had papers where the robustness checks were the single most convincing element to reviewers — they demonstrated that my findings were not artifacts of a particular analytical choice.

The key principle is this: for every major analytical decision you made, ask whether a reasonable alternative exists, and then test it. Claude is exceptionally useful here because it can identify analytical choices you made unconsciously — decisions that felt natural to you but that a reviewer might question.

#### PROMPT

*I need to run robustness checks on my analysis. Please review the analytical decisions I've made so far and identify every place where I made a choice that could reasonably have gone differently. For each one, suggest an alternative specification I should test. Specifically consider: 1. Alternative variable operationalizations (different measures for the same construct, different ways to code categorical variables, different transformations) 2. Alternative model specifications (adding or removing control variables, different functional forms, interaction terms I haven't tested) 3. Alternative estimation methods (OLS vs. robust regression, different link functions, Bayesian alternatives) 4. Sample restrictions (excluding outliers, subgroup analyses, different inclusion/exclusion criteria) 5. Alternative treatments of missing data (listwise deletion vs. imputation, different imputation methods) 6. Endogeneity concerns (instrumental variables, propensity score matching, difference-in-differences, Heckman correction) For each robustness check, explain: what analytical choice it tests, why a reviewer might question the original choice, and what it would mean if results change substantially.*

After Claude identifies the checks, run them systematically and document the results. I recommend creating a robustness check log in your Project Context File:

#### PROMPT

*Here are the results of my robustness checks: [paste results]. For each check, please help me: 1. Interpret whether the results are substantively consistent with my main analysis (not just statistically significant — I mean whether the story changes) 2. Identify any checks where results diverge meaningfully and suggest how to address this in the paper 3. Draft a robustness check summary table I can include in the paper or appendix 4. Suggest language for discussing the robustness checks in the methodology or results section. If any check reveals a genuine vulnerability in my main results, tell me directly. I would rather address it now than have a reviewer discover it.*

**A lesson I learned the hard way:** Do not run robustness checks as an afterthought during revision. Run them now, while you are still in the analysis stage. If a robustness check reveals that your results depend on a particular analytical choice, you need to know that before you write the paper — not after a reviewer points it out. I have had to substantially rewrite papers because a robustness check I should have run earlier revealed that my primary finding was sensitive to how I operationalized a key variable. Catching that early would have saved me months.

This step uses Critical Challenger and Verification Agent from the AI Engagement Model. You are deliberately asking Claude to challenge your analytical choices, and then verifying whether your results hold up under alternative specifications.

### 6.7 Step 6: Build Appendix Materials

This is the step most researchers skip entirely until a reviewer asks for it — and then they scramble. Right now, while your data quality checks, analytical output, and robustness results are fresh, is the ideal time to have Claude help you build out appendix materials. Appendices are where you demonstrate the rigor that the main text summarizes. Reviewers increasingly expect them, and having them ready before you draft the paper means you can reference them naturally in the text rather than retrofitting them later.

#### PROMPT

*Based on everything we have done so far — the data quality checks, the main analysis, and the robustness checks — help me identify what appendix materials I should prepare for this paper. Consider what is standard for [target journal] and what reviewers in [discipline] typically expect. For each appendix, tell me: 1. What it should contain and why a reviewer would want to see it 2. Whether it belongs in an online supplement vs. an in-paper appendix 3. A suggested structure or outline. Common appendix materials to consider include: detailed measurement items and their sources, full survey instruments, data cleaning and preprocessing steps, additional descriptive statistics or correlation matrices, robustness check results tables, alternative model specifications, sensitivity analyses, supplementary figures, IRB approval documentation, power analysis details, and coding schemes or qualitative analysis protocols. Which of these are relevant to our study, and are there others I should include?*

Once Claude identifies the relevant appendices, have it draft each one:

#### PROMPT

*Please draft [Appendix A: Measurement Items / Appendix B: Robustness Checks / etc.]. Use the data and results we have already generated. For any tables, format them in markdown so I can transfer them to the manuscript. Include: the appendix title and label, a brief introductory sentence explaining what the appendix contains and why, the content itself (tables, descriptions, figures as needed), and any notes or clarifications a reader would need. Remember that appendix content should be detailed enough to stand alone — a reviewer should be able to understand it without reading the main text.*

Building appendices now has a secondary benefit I did not appreciate until I started doing it: it forces you to organize your analytical work before drafting. The process of creating a clean robustness check table or a detailed measurement appendix often reveals gaps or inconsistencies in your analysis that are much easier to fix now than after you have written around them. I now treat appendix preparation as a form of quality assurance for the analysis itself.

This step engages Mode 2 (Production Assistant) for generating the appendix content and Mode 5 (Verification Agent) for ensuring accuracy against your actual data and results. As always, verify every number Claude produces against your statistical output.

**Epistemological Note:** How you handle unsupported hypotheses depends entirely on your discipline's norms. In strictly confirmatory research, hypotheses must be reported as stated and not revised after seeing data — doing so is HARKing (Kerr, 1998) and is a serious methodological concern. Other traditions accept and even encourage iterative theory-data movement. Grounded theory, design science, and abductive approaches expect you to let data guide theoretical development. I do not advocate for either position. Know your discipline's

expectations and be transparent about your approach. Document in your Project Context File whether your hypotheses were specified pre-hoc or post-hoc.

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## Section 7: Stage 4 — Planning the Paper

### 7.1 Overview

This is the most important stage, and it's the one I see researchers skip most often. DO NOT begin drafting until you have a complete, detailed outline. This cannot be overstated. The quality difference between papers written from detailed outlines versus papers where the author "figures it out while writing" is stark. Outlines take time but save enormous revision effort later.

Planning is the backbone of epistemic agency. This stage uses Mode 4 (Collaborative Problem-Solver) as you build the outline together, and Mode 7 (Critical Challenger) when you ask Claude to identify limitations and weaknesses before drafting begins.

### 7.2 Step 1: Build the Master Outline

Create your complete paper outline before writing any prose:

#### PROMPT

***Before we draft anything, I need a complete, detailed outline for the entire paper. This should include:***

- 1. Introduction:** Opening hook, problem statement, research questions, contributions (numbered), paper roadmap
- 2. Literature Review / Theoretical Background:** Each subsection with key arguments, citations to include, and logical flow
- 3. Hypotheses / Propositions:** Each one with its supporting logic chain
- 4. Methodology:** Research design, sample, measures, analysis approach — in detail
- 5. Results:** Order of analyses, what each table/figure will show, key findings to highlight
- 6. Discussion:** Theoretical implications (connected back to each hypothesis), practical implications, limitations, future research
- 7. Conclusion:** Key takeaways, final statement

***For each section, note: - The key argument or purpose - Specific citations that should be referenced - How it connects to the section before and after it - Approximate length target***

***This outline should be detailed enough that a knowledgeable reader could understand the entire paper from the outline alone.***

**What You're Creating:** The outline should be so thorough that someone could skim it and understand exactly what the paper will say, the order of arguments, which citations will support each claim, and how it all fits together. This level of detail seems time-consuming, but every hour spent on the outline saves three hours of later revision.

### 7.3 Step 2: Plan the Introduction Hook

The introduction must make a compelling case for why this research matters:

#### PROMPT

*Let's plan the introduction in detail. I want to build a compelling problem that hooks the reader into thinking we cannot go on any longer without the exact research found in this paper.*

*Start with: 1. A practical motivation — a real-world problem or trend that makes this research timely and important 2. A theoretical motivation — a gap or tension in existing theory that needs resolution 3. A methodological motivation (if relevant) — a limitation in how prior research has approached this*

*Then articulate the specific contributions — numbered, clear, and compelling. Each contribution should answer the implicit question: "So what? Why should I care?"*

**What You're Building:** A strong introduction does three things: (1) it makes the reader care about the problem (practical motivation), (2) it situates the problem in theory (theoretical motivation), (3) it articulates what unique contribution this paper makes (contributions). Don't skim this step. A weak introduction weakens the entire paper.

*Skill shortcut: invoke intro-hook-designer from the Faculty Research Toolkit to generate and critique candidate hooks across the six hook types (practical urgency, theoretical tension, methodological gap, empirical puzzle, phenomenon-novelty, policy/practice) and stress-test each against the 'so what?' challenge. See Section 16.*

### 7.4 Step 3: Plan the Discussion

The discussion is where you demonstrate the value of your research. Plan it carefully:

#### PROMPT

*Now let's plan the Discussion section. This is where we show the paper's value.*

1. **Theoretical implications:** How does each finding advance, extend, or challenge existing theory? Connect each back to specific results.
2. **Practical implications:** What should practitioners, managers, policymakers, or designers do differently based on our findings? Be specific and actionable. Think creatively here — you often come up with practical implications I hadn't considered.
3. **How our findings relate to prior work:** Where do our results agree or disagree with existing studies? Why?

*Don't draft prose yet. Outline the key points for each subsection.*

**Why This Matters:** The discussion is where I've seen my own writing become vague or overgeneralized. By planning it in detail before writing, you ensure every claim is grounded in results and connected to theory. You also ensure you're not making claims the data doesn't support.

## 7.5 Step 4: Plan Limitations, Future Research, Conclusion, and Abstract

Address the remaining key sections:

#### PROMPT

*Let's do a thorough pre-mortem on the paper:*

1. **All limitations** — logical inconsistencies, methodological weaknesses, generalizability concerns, anything else
2. **For each:** Can it be fixed? If yes, plan the fix. If not, plan how to acknowledge it honestly.
3. **Based on unfixable limitations,** what future research would address them?
4. **Tie existing research into each future research suggestion** to make them more compelling
5. **Look for interesting tangential questions** our research raises that could become standalone papers

**And for the conclusion and abstract:**

*Plan the conclusion and abstract:*

**Conclusion:** Brief, impactful, no new information. 3-4 key takeaways. Forward-looking closing statement.

**Abstract:** Plan key elements — problem (1-2 sentences), method (1-2 sentences), findings (2-3 sentences), implications (1-2 sentences). Target: [journal word limit].

**Why This Approach:** Limitations are often written defensively — I know I’ve been guilty of minimizing them. This prompt asks you to identify all limitations, determine what’s fixable, and then figure out how to acknowledge unfixable ones honestly. Strong papers acknowledge limitations clearly. The abstract and conclusion come at the end because you can’t write them well until you know exactly what the paper says.

## 7.6 Step 5: Brainstorm Titles

Finally, develop potential titles:

### PROMPT

*Let’s brainstorm titles. My current working title is: “[your title]”*

*Please suggest 10-15 alternatives that: 1. Clearly communicate the paper’s contribution 2. Match [target journal]’s style 3. Include a mix of: descriptive, colon/subtitle, and curiosity-provoking 4. Avoid being too clever or too generic*

*Which are strongest and why?*

**Why This Matters:** The title is the first thing readers see and the most likely thing they’ll remember. A strong title increases citation rate and discoverability. Spend time on this. Claude has consistently come up with titles stronger than my initial instincts.

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## Section 8: Stage 5 — Drafting

### 8.1 Overview

Critical principle: draft ONE SECTION AT A TIME. Do not attempt to draft the entire paper at once. When tasks are overloaded, quality degrades on every component. Single-section drafting maintains higher quality and makes revision easier because you’re not managing changes across an enormous document.

Drafting is where the risk of slipping into Mode 2 (Production Assistant) is highest. To maintain epistemic agency, review each section critically rather than accepting it as-is. Ask questions. Push back. The prompts in this stage are designed to keep you in Mode 4 (Collaborative Problem-Solver).

### 8.2 Step 1: Let Claude Choose the Drafting Order

Before starting, ask Claude to propose the optimal drafting sequence:

#### PROMPT

*We have a complete outline. Now I want to draft the paper one section at a time.*

*Based on our outline, which section should we draft first for the best logical consistency and accuracy? I'd like you to choose the order — you have a sense of what needs to be established first for later sections to reference accurately.*

*Please propose the complete drafting order with your reasoning.*

**Why Letting Claude Choose Matters:** Claude typically gravitates toward: Theory/Literature Review → Hypotheses → Methodology → Results → Discussion → Introduction → Conclusion → Abstract. This ordering works because each section builds on what came before. The Introduction comes late because it's a framing document — easier to write a compelling hook once you know exactly what the paper says. I've found that this ordering produces fewer internal inconsistencies than writing in the order sections appear in the final paper.

### 8.3 Step 2: Draft Each Section

For each section, use this basic prompt structure:

#### PROMPT

*Let's draft the [Section Name] now. Requirements:*

1. Follow the outline exactly
2. Write in a scholarly tone appropriate for [target journal]
3. Target approximately [X] pages / [X] words
4. Include placeholder citations like (Author, Year) — we'll verify later
5. Flag anything you're uncertain about or where you made judgment calls I should review

*Draft only this section. Do not draft ahead into other sections.*

**Why These Requirements:** The outline is your contract — follow it exactly. Each section must match your target journal's tone. Page/word targets keep you disciplined. Placeholder citations let you focus on argument flow; you'll verify details later. Flagging uncertainties ensures you review Claude's judgment calls rather than accepting them uncritically.

### 8.4 Step 3: Between-Section Review

After drafting each section, you have two approaches:

**Approach 1: Review each section before proceeding.** Read Claude's draft, provide feedback, have Claude revise, then move to the next section. This approach builds confidence incrementally and catches problems early before they propagate to later sections.

**Approach 2: Draft all sections, then do comprehensive review.** Faster once you're experienced, but riskier because problems in early sections might affect later ones.

Both approaches work. Choose based on your comfort level and timeline. Single-section review is recommended for first-time users or complex papers.

## 8.4 Tables, Figures, and Visual Elements

Once your draft is taking shape, look for opportunities where tables and figures will strengthen the manuscript. I've found that visual elements are most effective when you plan them during or immediately after drafting — not as an afterthought during revision. Ask Claude to help you identify where visual elements would improve clarity:

### PROMPT

*Review the current draft and identify every location where a table, figure, or diagram would strengthen the manuscript. For each one, specify: 1. What type of visual element (table, flowchart, conceptual model, comparison matrix, process diagram, etc.) 2. Exactly where it should appear in the manuscript 3. What content or data it should contain 4. Why a visual element is better than prose at this point 5. A suggested caption. Think about the reader's experience. Where will they struggle to follow a textual explanation that a figure could make immediately clear? Where are there comparisons or processes that readers would naturally want to see in tabular or diagrammatic form?*

### Generating Figures with Claude (SVG Workflow)

One of the most underused capabilities in my workflow is asking Claude to generate figures directly as SVG (Scalable Vector Graphics) files. Claude can produce flowcharts, conceptual models, process diagrams, and framework visualizations as SVG code that you can then refine in a professional tool like LucidChart, draw.io, or Figma. I have found this dramatically faster than building diagrams from scratch — Claude gets the structure and content about 80–90% right, and you spend your time refining rather than creating.

Here is the workflow I recommend:

**Step 1: Describe the figure in detail.** Tell Claude exactly what you want — the components, the relationships, the flow direction, what connects to what. The more specific you are, the better the output.

### PROMPT

*Please create an SVG diagram showing [describe the figure]. The diagram should include: [list all components, nodes, or elements]. The relationships are: [describe what connects to what, direction of arrows, groupings]. Use a clean, professional style suitable for an academic journal. Use a consistent color scheme. Make text large enough to read when the figure is printed at half-page width.*

**Step 2: Review and identify errors.** Open the SVG in a browser or viewer. Claude’s SVG output will almost always have minor issues — arrows pointing to the wrong object or to empty space, overlapping labels, misaligned elements, or missing connections. This is normal and expected. The key is that the structural content is correct even when the visual rendering has problems.

**Step 3: Ask Claude to clarify intent.** This is a step I discovered through trial and error and it has saved me considerable frustration. When you see a visual error — an arrow pointing to the wrong box, for example — do not just try to fix it yourself in a drawing tool. First, ask Claude what it intended. Often what looks like a rendering mistake is actually a conceptual issue that Claude can explain and correct:

**PROMPT**

*I’m looking at the SVG you generated. I see a few issues: 1. The arrow from [Component A] appears to point to [Component C] instead of [Component B]. Was that intentional? If so, explain the reasoning. If not, what was your intended connection? 2. [Component D] and [Component E] are overlapping. How should they be positioned relative to each other? 3. There’s an arrow that seems to point to empty space near the bottom-right. What was it supposed to connect to? Please describe exactly what every arrow and connection in the diagram is supposed to represent, so I can recreate it accurately in my diagramming tool.*

**Step 4: Recreate in a professional diagramming tool.** Take Claude’s corrected description and rebuild the figure in LucidChart, draw.io, Visio, or your preferred tool. You now have the correct structure, labels, and relationships — you are just making it visually polished. This is dramatically faster than designing from scratch because all the conceptual work is done.

**Step 5: Generate table content.** For tables, Claude can generate clean, well-structured content that you format in Word or LaTeX. This is especially useful for comparison tables, summary-of-findings tables, and measurement-item tables:

**PROMPT**

*Based on our analysis, please create a summary table for [describe purpose — e.g., “comparing theoretical frameworks,” “summarizing measurement items and their sources,” “presenting key findings by hypothesis”]. The table should include columns for: [list columns]. Format it in markdown so I can easily transfer it to my document. Include a suggested table title and any notes that should appear below the table.*

**A word of caution:** Always verify the data in Claude-generated tables against your actual results. Claude will sometimes fill in plausible-looking numbers that are not your real data, especially if it does not have direct access to your statistical output. I learned this the hard way when a beautifully formatted table contained regression coefficients that were close to but not exactly my results. Treat Claude’s table output as a structural template, and always populate the actual numbers yourself from your statistical software.

This step primarily engages Mode 2 (Production Assistant) for initial generation, Mode 4 (Collaborative Problem-Solver) when you and Claude iterate on design, and Mode 5 (Verification Agent) when checking that visual elements accurately represent your data and arguments.

---

## Section 9: Stage 6 — Revision & Refinement

*Entry Point C (Dataset + Draft) begins here*

### 9.1 Overview

Revision is where rough drafts become publishable papers. This stage is highly iterative and uses different critical lenses to catch different classes of problems. You will likely go through this stage multiple times — that's normal and expected.

Revision is Mode 7 (Critical Challenger) at its purest. Every deep-dive review asks Claude to attack your paper from a different angle. This is where the cross-tool workflow (Section 2.6) can be especially valuable.

### 9.2 Step 1: Deep-Dive Review #1 — Structural Integrity

Begin with a comprehensive structural review:

#### PROMPT

***Please do a thorough deep-dive read through the entire paper from start to finish. Identify:***

1. **Logical inconsistencies:** Arguments that contradict each other or don't follow
2. **Redundancies:** Content repeated or needing consolidation
3. **Story flow:** Where the narrative stumbles or takes unnecessary detours
4. **Missing connections:** Claims not adequately supported
5. **Structural problems:** Sections too long, too short, or in wrong order
6. **Overconfident claims:** Statements that overstate what the evidence supports — words like “proves,” “clearly demonstrates,” “definitively establishes,” or sweeping generalizations that go beyond what your data can actually show (see the note on AI-generated confident tone below)
7. **Excessive forward references:** Claude has a tendency to write phrases like “as we will see in the results section,” “this will be discussed further below,” or “the implications of this will become clear later.” While forward references are occasionally appropriate — for example, previewing the structure of an argument in the introduction — Claude uses them far more often than most academic writing warrants. They can make the paper feel like it is constantly promising rather than delivering. In most cases, either present the information now or simply let the reader encounter it when they reach that section.

***Don't fix anything yet. Give me a complete diagnostic report with specific locations and explanations. Then draft a plan for addressing each issue, organized by priority (critical → important → minor).***

**Why “Don't Fix Yet”:** Diagnosing before treating prevents cascading changes that introduce new problems. The plan-then-execute approach lets you review proposed changes before they're made. I learned this after my early attempts at “fix as you go” created papers that needed additional rounds of revision to fix the fixes.

### 9.3 Step 2: Execute the Revision Plan

Once you've reviewed Claude's diagnostic and plan, proceed with execution:

#### PROMPT

***I've reviewed your diagnostic report and revision plan. Let's proceed with these changes: [list approved changes, note modifications or skips].***

***Execute one section at a time. After each section, summarize what changed and why.***

**Why One Section at a Time:** Even during revision, limiting scope prevents errors. Revising one section keeps the change clear and manageable.

## 9.4 Step 3: Deep-Dive Review #2 — Different Analytical Lens

After structural revision, do another review using a different analytical frame:

### PROMPT

*Now do another thorough review using a completely different analytical lens. The first review focused on structural integrity. This time:*

1. Read the paper as if you were Reviewer 2 at [target journal] — the tough, skeptical one. What would they criticize?
2. Check every claim against the evidence presented. Anything overstated or understated?
3. Look for implicit assumptions we never explicitly justified
4. Check methodology description for replication-level detail
5. Verify discussion doesn't introduce unsupported claims
6. Check for jargon or unclear writing

*Diagnose first, then plan. Let me review before you make changes.*

**Why Different Lenses Work:** Claude has distinct modes of critical analysis. The first review catches structural/logical issues. The second, by shifting the frame (e.g., “skeptical reviewer”), catches a different class: overstatements, unsupported claims, implicit assumptions. You can also try additional frames: “methodologist reviewing your stats,” “theory expert checking rigor,” “editor checking readability.” Typically 2-3 rounds of different lenses are sufficient.

## 9.5 Step 4: Iterate as Needed

Continue with different review frames until Claude's reviews return only minor suggestions. Consider additional analytical lenses:

- **Methodologist's lens:** Are all analyses described with sufficient detail for replication? Are statistical assumptions met? Are effect sizes and confidence intervals reported?
- **Theory expert's lens:** Is the theoretical argument internally consistent? Are hypotheses properly grounded in theory? Do findings advance or complicate the theory?
- **Editor's lens:** Is the writing clear? Is the organization logical? Does the paper hold the reader's attention? Is there unnecessary jargon?
- **Reader's lens:** Could someone unfamiliar with this exact research topic follow the argument? Are there gaps in explanation?

Rotate through these lenses until you're satisfied with the paper's quality.

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## Section 10: Stage 7 — Literature Integration & Citation Quality

### 10.1 Overview

If you drafted a new paper with Claude, it likely used fewer citations than expected. This stage embeds it deeply in your discipline's literature. You'll also verify that every citation is correct — errors in references are among the most embarrassing problems that can appear in published work.

This stage combines Mode 5 (Verification Agent) for reference checking with Mode 6 (Creative Expander) for identifying literature you may have missed.

**Critical distinction — discipline-specific grounding:** In Stage 2, I encouraged you to search broadly for theoretical inspiration. Now the emphasis reverses. At this point, your goal is to ensure that your paper is deeply embedded in your discipline's specific literature. Reviewers will expect to see the canonical papers from your field's top journals, the recent work published in your target venue, and the methodological norms your community follows. When you ask Claude to find additional citations in this stage, always specify your discipline's core journals. A paper that borrows an exciting theory from psychology but fails to cite how information systems researchers have already engaged with that theory will frustrate reviewers. You want every section of your literature review to demonstrate that you are an insider to the scholarly conversation you are entering.

#### PROMPT

*Review the current draft and identify every claim, argument, or assertion that is not yet supported by a citation. For each one, search specifically within these journals: [list your discipline's top 5–8 journals]. I need citations from MY discipline's literature, not just any relevant paper. Where no discipline-specific citation exists, note that explicitly so I can decide whether to add a cross-disciplinary reference or reframe the argument.*

### 10.2 Step 1: Identify Citation Opportunities

Deepen your literature integration:

#### PROMPT

*Now that we have a complete draft, it's time to deeply embed this paper in the literature. Please:*

1. Read through the entire paper and identify every statement that could benefit from additional citation support
2. Identify topics that could draw greater support from:
  - a. [Target journal name] specifically
  - b. [List 3-5 top journals in your discipline]
3. Use Consensus and Scholar Gateway for a deep review
4. For each suggestion: which statement, what kind of reference, and your recommended paper(s)

*This reduces the likelihood of a reviewer upset that you didn't cite their work or a paper they consider essential.*

### 10.3 Step 2: Plan the Integration

Before making changes, plan them:

#### PROMPT

*Create a detailed integration plan:*

1. Where each new reference will be integrated
2. How surrounding text changes (weave it into the argument, don't just add parentheticals)
3. Whether new references replace weaker existing ones
4. Priority: essential → recommended → optional

*Let me review this plan before changes are made.*

### 10.4 Step 3: Reference Verification

Conduct thorough reference verification:

#### PROMPT

*Thorough reference quality check. For each reference:*

1. **Verify every in-text citation appears in the references list**
2. **Verify every reference list entry is cited in the text**
3. **Using Consensus and Scholar Gateway, verify bibliographic details are fully correct (authors, year, title, journal, volume, pages)**
4. **Check each reference's abstract against our claim. Does it actually support what we say?**
5. **For any reference where you can't determine with certainty from the abstract that it supports our claim, create a separate list with download links so I can get the full text for you to read in detail**

*Come up with a plan for addressing issues. Let me review before changes.*

**Why This Matters:** Reference errors are among the most common and embarrassing problems in published research. This process catches: ghost references (cited but not listed), orphan references (listed but never cited), incorrect bibliographic details, and misattributed findings. Many papers are desk-rejected or receive harsh reviews because of reference errors that make reviewers question the authors' care and attention to detail.

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## Section 11: Stage 8 — Tone, Style & Formatting

### 11.1 Overview

Why save stylistic work for the end? Because Claude drifts from style guidelines during long sessions. Even with clear upfront instructions, cumulative back-and-forth across dozens of exchanges causes subtle inconsistencies in tone, terminology, and voice. End-stage application of the tone card ensures consistency throughout.

Even at the formatting stage, maintain epistemic agency. Review Claude's tone adjustments critically — does the revised text still say what you meant it to say? Mode 5 (Verification Agent) applies here.

### 11.2 Step 1: Create the Tone Card

Create a comprehensive style guide for your paper:

#### PROMPT

*I need to create a tone card (TONE\_CARD.md) for this paper. I've uploaded [the journal's author guidelines / style guide]. Please read it and create a markdown file capturing:*

1. **Voice and tone:** Formal vs. accessible, active vs. passive, hedging conventions
2. **Structural conventions:** Section organization, subheading usage
3. **Citation style:** APA, Chicago, journal-specific variations
4. **Terminology preferences:** Discipline-specific term usage
5. **What to avoid:** Common stylistic mistakes for this journal

*Additionally, minimize stylistic markers that might suggest AI-assisted writing. This is NOT about hiding AI use — I will properly disclose AI assistance as required by the journal. But some anonymous reviewers have unconscious bias against AI-assisted work, and the journal's policy allows AI with proper disclosure. So: 6. Remove common AI writing patterns: Overly formal transitions, unnecessary hedging, formulaic structures, repetitive openers, excessive em dashes, and other distinctly AI-generated patterns*

*[Optional: Upload samples of your previous published work for voice extraction]*

**Why end-stage tone card:** During long drafting sessions, Claude gradually drifts from style guidelines. Even with clear upfront instructions, subtle inconsistencies accumulate. Applying the tone card as a final pass ensures uniform quality. Think of it as a final coat of paint that makes the paper shine.

**A note on AI-generated confident tone:** In my experience, the tone card and AI-assisted drafting typically produce prose that is more confident than what I would have written on my own. I want to be transparent about this because the effect is real and it cuts both ways. On one hand, I actually like it. When Claude helps me build a tighter argument with better-organized evidence, I genuinely feel more confident in the paper — and the writing reflects that. The result is often clearer, more direct prose that avoids the hedging and self-doubt that can weaken academic writing.

On the other hand, confident tone can tip into overconfidence. Claude does not naturally hedge. It will write “our results demonstrate” when “our results suggest” is more appropriate. It will make sweeping claims about generalizability that your single-study design cannot support. It will occasionally use language like “clearly establishes” or “definitively shows” when the evidence warrants more caution. This is not malicious — it is a feature of how language models generate fluent, assertive prose.

The solution is not to eliminate the confident tone — that would throw away one of the real benefits. The solution is to do a targeted overconfidence pass during revision (which I included in Stage 6, Step 1). During this pass, look specifically for claims that outrun your evidence. Ask yourself: “Would I be comfortable defending this exact wording to a skeptical reviewer?” If not, soften it. Replace “proves” with “suggests,” “clearly demonstrates” with “provides evidence

that,” and “all” with “most” where appropriate. Keep the confident structure and directness. Just make sure every strong claim is earned by equally strong evidence.

#### **PROMPT**

*Review the entire paper for overconfident language. For each instance, tell me: 1. The exact sentence or phrase 2. Why you think the current language overstates what the evidence supports 3. A suggested revision that maintains the confident, direct tone but accurately reflects the strength of the evidence. I do NOT want you to make the paper timid or hedge everything. I like the confident tone. I just want to make sure every strong claim is backed by equally strong evidence. The goal is confident but honest.*

### **11.3 Step 2: Apply the Tone Card**

Now apply the style guide systematically:

#### **PROMPT**

*Read TONE\_CARD.md and apply it to the entire paper section by section:*

1. Adjust voice, tone, and formality to match journal conventions
2. Fix any AI-sounding language patterns
3. Ensure consistent terminology throughout
4. Check natural-sounding transitions between sections
5. Verify writing level matches the journal’s audience

*Show me a summary of changes for each section.*

### **11.4 Step 3: Apply Journal Formatting**

Complete the formatting requirements:

#### **PROMPT**

*Read the journal’s author instructions and apply all required formatting:*

1. Section heading styles and numbering
2. Table and figure formatting
3. Citation and reference format
4. Font, spacing, margins
5. Page numbers, headers/footers
6. Journal-specific requirements (word count, abstract format, keywords)

**Why formatting is hard for Claude:** Claude generates content programmatically rather than working within an existing Word template. Journal-specific styles (exact fonts, table borders,

heading numbering) require precision that's difficult to achieve generatively. Workaround: provide published papers from the journal as visual references. For complex formatting, you may need to apply Claude's content to a Word template manually, or use a tool like pandoc to convert markdown to properly formatted Word documents.

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## Section 12: Stage 9 — Pre-Submission Quality Assurance

### 12.1 Final Quality Checklist

Before you submit, verify everything:

The final quality check is the ultimate expression of Mode 5 (Verification Agent). Every claim is checked against evidence, every reference against reality.

#### PROMPT

***Pre-submission checklist — please verify each:***

1. **All in-text citations appear in the reference list**
2. **All reference list entries are cited in the text**
3. **All references verified for accuracy**
4. **No logical inconsistencies remain**
5. **No redundant content**
6. **All tables and figures referenced in text**
7. **All tables and figures have descriptive titles and notes**
8. **Methodology detailed enough for replication**
9. **Results match tables/figures**
10. **Discussion doesn't exceed what results support**
11. **Limitations honestly acknowledged**
12. **Future research suggestions are specific and compelling**
13. **Abstract accurately summarizes the paper**
14. **Word count meets journal requirements**
15. **Formatting matches journal guidelines**
16. **AI use properly disclosed per journal policy**

***Flag any unsatisfied items.***

**What You're Verifying:** Before sending a paper out, it must pass these 16 checks. Many papers that seem “done” actually have subtle problems — citations that don't match, claims not supported by results, formatting that doesn't match guidelines. This checklist catches those problems before they reach reviewers.

## 12.2 AI Disclosure

Check your target journal's AI disclosure policy. Most journals now have explicit policies. Disclose AI use in the cover letter and in the manuscript (typically in a footnote or in acknowledgments). The Project Context File and Jupyter notebooks provide evidence of meaningful human intellectual contribution at every stage.

Your disclosure might read: "This paper was developed with AI assistance from Claude (Anthropic). Claude contributed to ideation, literature review, data analysis suggestions, and initial draft generation. All substantive decisions, theoretical framing, interpretation of results, and revision were conducted by the author, with Claude serving as a collaborative reasoning partner and quality-checking agent."

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## Section 13: Handling Revise & Resubmit

### 13.1 Overview

When you receive a Revise & Resubmit decision, you have reviewer feedback to address. Claude is invaluable in this process, helping you understand reviewer concerns, plan revisions, and draft responses.

### 13.2 Step 1: Process the Reviews

Begin by understanding all reviewer feedback:

#### PROMPT

*I've received reviewer comments from [journal]. I'm uploading the decision letter and all reviews. Please:*

1. **Read everything carefully**
2. **Categorize each comment: (a) Major vs. minor, (b) New analysis vs. rewriting vs. additional literature**
3. **Identify contradictory comments (Reviewer 1 wants X, Reviewer 2 wants opposite)**
4. **Flag comments based on misunderstanding (meaning our writing needs clarity)**
5. **Create a response matrix: Comment | Category | Proposed Response | Section Affected**

### 13.3 Step 2: Plan the Response Strategy

Once you understand all comments, develop your strategy:

#### PROMPT

***Based on the response matrix:***

1. Which comments require the most significant changes?
2. Any comments we should respectfully push back on? What's our argument?
3. Most efficient order to address comments (some changes affect others)?
4. Do any comments require new analyses or additional data?

***Draft a plan. I'll review before we execute.***

### 13.4 Step 3: Draft the Response Letter

Finally, draft your response:

#### PROMPT

***Draft the response letter point by point. For each comment:***

1. Quote or paraphrase the reviewer's comment
2. Thank them for the insight (when genuine)
3. Explain what we changed and why — or explain respectful disagreement with evidence
4. Reference specific page/line numbers in the revised manuscript

***Tone: respectful, thorough, confident but not arrogant.***

Then loop back to Stage 6 for revision execution.

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## Section 14: Using AI for IRB Applications

### 14.1 Overview

IRB applications are essential but time-consuming. Claude can accelerate the process while improving quality through rigorous thinking about research design, participant safety, and ethical considerations. This section teaches a comprehensive workflow where Claude reviews your existing research documentation, identifies what information it can extract, asks you only for what's missing, generates all required upload documents, fills out the entire application through a browser, and then critically reviews its own work.

This workflow uses Claude in Chrome (or another supported browser) to interact directly with your institution's IRB submission system. At BYU, this is the OneAegis platform at [byu.oneaegis.com](https://byu.oneaegis.com), which replaced the former iRIS system. The OneAegis application is a dynamic "smart form" with conditional logic — pages and fields appear or disappear based on

your answers. Depending on your study type, the application may span anywhere from 3 to 15+ pages.

## 14.2 The AI-Assisted IRB Workflow

The complete AI-assisted IRB workflow follows six phases. Rather than asking you to type out every detail from scratch, Claude works from your existing research materials — your research outline, survey instruments, data files, and any other documentation in your project folder — to pre-fill as much as possible before asking you for the rest.

**Phase 1: Document Review.** Claude reads everything in your research folder — outlines, literature reviews, methodology notes, survey instruments (.qsf files), data dictionaries, and sample data. It maps each piece of information to the specific IRB application fields it can answer.

**Phase 2: Gap Analysis.** Claude presents you with a list of remaining questions it cannot answer from your existing documents. You answer these directly, and Claude incorporates your responses with the information it already extracted.

**Phase 3: Document Generation.** Before filling out the form, Claude generates all required upload documents — informed consent forms, recruitment materials, debriefing scripts, and more — using your institution's templates and the information gathered in Phases 1 and 2.

**Phase 4: Form Completion.** Using Claude in Chrome, Claude navigates your institution's IRB submission system and fills in every field, uploading documents as it reaches the relevant sections.

**Phase 5: Critical Review.** Claude reviews the completed application as a critical IRB reviewer, checking for internal consistency, completeness, and common rejection triggers.

**Phase 6: Revision and Submission.** You review Claude's suggestions, make any final changes, and submit the application yourself.

## 14.3 Phase 1: Document Review and Question Mapping

Begin by giving Claude access to your complete project folder. The more documentation you have, the fewer questions Claude will need to ask. Useful documents include your research outline or proposal (with literature review, theory, methodology), your survey instrument or interview protocol (.qsf exports from Qualtrics, .docx questionnaires, etc.), any sample or pilot data files, prior IRB applications for related studies, and institutional templates for consent forms or recruitment materials.

Use the following prompt to initiate the review process:

#### PROMPT

***I need to submit an IRB application through [institution's system, e.g., BYU's OneAegis]. Please review all the files in this folder — especially my research outline, survey instrument, and any data files.***

***Map out every question on the IRB application, then tell me:***

- 1. Which questions you can already answer from my existing documents***
- 2. Which questions you still need me to answer***

***Don't start filling anything out yet — just give me the organized list of remaining questions first.***

Claude will read through your materials and produce a comprehensive list organized by the IRB application's page structure. For a typical BYU OneAegis application, this includes: Study Information (PI details, department, personnel, conflict of interest, lay summary), Determination of Review, Exempt Categories, Funding, Data Collection, Research Procedures, Subject Enrollment, Vulnerable Populations, Compensation, Benefits of Participation, Consent Documentation, Confidentiality of Data, Privacy of Participants, and Other Attachments.

***Setup Note:*** *If Claude has access to a reference copy of your institution's IRB application form (such as a PDF), it can use that as a field-by-field guide even without browser access. Include one in your project folder if available.*

## 14.4 Phase 2: Answering Remaining Questions

After reviewing your documents, Claude will present a list of questions it could not find answers to. These typically fall into several categories that are difficult to infer from research documentation alone.

Common remaining questions include PI logistics (exact qualifications, training completion dates, CITI certification status), conflict of interest declarations, specific funding details (grant numbers, sponsor names, budget amounts), data storage specifics (which servers, what encryption, who has access, retention period), compensation logistics (payment method, timing, platform), whether any vulnerable populations are involved (minors, prisoners, pregnant individuals, cognitively impaired, economically disadvantaged), specific consent process details (how consent will be obtained, whether waivers are needed), and any site-specific requirements (research site approval letters, external investigator forms).

Answer each question directly in the conversation. Claude will incorporate your answers with the information it already extracted from your documents. If you are unsure about any answer, say so — Claude can help you think through the appropriate response or flag it for later follow-up.

## 14.5 Phase 3: Generating Required Documents

Before filling out the application, ask Claude to generate all documents you will need to upload. This is critical because the consent form language must match exactly what you describe in the application itself — inconsistencies are one of the most common reasons IRB applications are returned for revision.

### PROMPT

***Based on my research outline, survey instrument, and the answers I just provided, please create the following documents for my IRB application:***

- 1. An informed consent form using [institution's] standard template***
- 2. A recruitment advertisement or message***
- 3. A debriefing form (if my study involves any deception)***
- 4. Any other documents required for my specific study type***

***Save each as a separate file. Make sure the consent form language matches exactly what we will put in the IRB application.***

Claude will generate properly formatted documents drawing on your research outline for study details, risks, benefits, and procedures, your survey instrument for consent language, survey duration estimates, and data collection details, and your institution's required templates and formatting standards.

**Setup Note:** *BYU provides official consent form templates at [irb.byu.edu/forms](http://irb.byu.edu/forms), including Standard Consent, Implied Consent (for anonymous surveys), Focus Group Consent, Verbal Consent Script, and specialized templates for minors (Parental Permission, Child Assent, Youth Assent). Ask Claude to use the template that matches your study design.*

## 14.6 Phase 4: Filling Out the Application with Claude in Chrome

This phase uses Claude in Chrome to interact directly with your institution's IRB submission system. Before starting, you must install the Claude in Chrome extension and log into your institution's system yourself (Claude cannot enter passwords on your behalf).

#### PROMPT

*Now please open Chrome and navigate to [your IRB system URL, e.g., byu.oneaegis.com]. Create a new IRB application and fill it out completely using everything we have discussed. Go page by page and tell me what you are entering so I can verify as we go.*

*Important reminders:*

- *When searching for the PI, use the format “Last name, First name”*
- *Upload the documents we created when you reach the relevant sections*
- *For any question where you are unsure, stop and ask me before entering anything*

Claude will navigate the smart form page by page. For BYU's OneAegis system, this means starting with Study Information (project title, PI selection, department, conflict of interest, and the three lay summary fields for hypothesis, literature support, and objectives), then moving through Determination of Review, Exempt Categories selection, and all subsequent sections relevant to your study type.

Because OneAegis uses conditional logic, Claude will encounter different pages depending on your study characteristics. For example, selecting “I know I need IRB review” and indicating the study is not limited to existing data expands the form to include detailed pages for data collection procedures, subject enrollment, vulnerable populations, compensation, consent documentation, and data confidentiality.

**Setup Note:** *Claude in Chrome works by reading the page structure, identifying form fields, and entering data. Rich text editors (like the Lay Summary fields in OneAegis) sometimes require Claude to click directly into the editable area before typing. If a field does not accept input on the first try, Claude will typically retry with a different interaction method.*

### 14.7 Phase 5: Critical IRB Review

After completing the entire application, ask Claude to review it from the perspective of a critical IRB reviewer. This iterative review process catches inconsistencies and common rejection triggers before submission.

#### **PROMPT**

**Now go back to the beginning of the application and review every page as if you were a critical IRB reviewer. For each section, check for:**

- 1. Internal consistency — Do the procedures described match the consent form language? Do participant counts match across sections?**
- 2. Completeness — Are there any fields that should have more detail? Any required uploads missing?**
- 3. Common rejection triggers — Missing risk descriptions, vague procedures, inconsistent participant ages or counts, unclear data storage plans**
- 4. Institution-specific requirements — Anything a [BYU/your institution] IRB reviewer would specifically flag**

**Give me a prioritized list of everything you recommend changing before I submit.**

Common issues Claude catches during review include consent form language that does not match the procedures described in the application, missing or inconsistent participant age ranges across different sections, vague data storage or destruction plans that would prompt reviewer questions, risk descriptions that do not adequately address the actual procedures, mismatches between the stated compensation amount and what the consent form says, and missing attention to institution-specific requirements.

Repeat this review cycle until Claude reports no further issues. For complex studies, two to three review passes are typical.

### **14.8 Phase 6: Revision and Submission**

After Claude's review, you will have a prioritized list of recommended changes. Work through these together:

#### **PROMPT**

**Let's address each of the issues you identified. For each one:**

- 1. Show me the current text in the application**
- 2. Show me the proposed revision**
- 3. Make the change in the form after I approve it**

**Then do one final pass to confirm everything is consistent.**

Once all revisions are complete and the final review pass is clean, you are ready to submit. Claude cannot click the final “Submit” button on your behalf — you should review the completed application one last time and submit it yourself. This final human review is not just a technical limitation; it is an essential part of responsible AI use. You are the PI, and ethical responsibility for the application is ultimately yours.

## 14.9 Important Notes

Every institution’s IRB has different forms, systems, and requirements. The workflow described here uses BYU’s OneAegis system as a concrete example, but the six-phase approach (document review, gap analysis, document generation, form completion, critical review, revision) applies to any IRB submission system.

Some IRBs now ask about AI use in the research process — be transparent about how you used Claude in preparing your application and any other aspect of your research. AI-generated consent documents and application text must always be reviewed by a human before submission. Claude can help you think through ethics rigorously, but ethical responsibility rests with the research team.

For amendments and renewals, include your original approved application in your project folder so Claude can reference what was previously approved. For multi-site studies, each site’s IRB may have different requirements — Claude can help you identify and address site-specific differences.

## Section 15: High-Level Principles

### 15.1 One Thing at a Time

Never ask Claude to do too much in a single prompt. Break every major task into discrete steps. When overloaded, each sub-task gets less attention than it would in isolation. This is not optional advice — it is the single most impactful principle in the entire guide. A carefully scoped prompt with one clear objective will produce better output than an ambitious prompt asking for five things at once.

### 15.2 Always Plan Before Drafting

Cannot be overstated. Every section must be planned in detail before prose is written. The outline should be so detailed that a reader could understand the entire paper from it alone. This investment in planning saves enormous revision time later.

### 15.3 Ask Claude Where You Are Wrong

Don’t just give instructions. Ask where your reasoning is flawed. Ask if you’re asking the right questions. Ask if your assumptions are correct. This produces better ideas than giving Claude a task list to execute. You’re activating Mode 7 (Critical Challenger) and Mode 8 (Problem Setter).

## 15.4 Let Claude Think

When Claude identifies a problem, don't prescribe the solution. Ask how IT thinks the problem should be solved. You'll often get a better solution. This is epistemic partnership — thinking together, not using Claude as a typist. You contribute judgment; Claude contributes perspective and knowledge synthesis.

## 15.5 Maintain a Complete Record

Project Context File + Jupyter notebooks + revision history = complete audit trail. Invaluable for demonstrating human intellectual contribution if questioned. This is a fundamentally new workflow — collaborative and co-creative, with a necessary human in the loop at every stage.

## 15.6 Use Cowork Projects

Every paper gets its own Cowork project. Upload this document, your dataset, drafts, exemplar papers, and journal guidelines. This creates persistent access to all project context.

## 15.7 Context Window Management

Create checkpoints throughout your work. End each session by updating the Project Context File with progress and decisions. Start each new session by having Claude read the Project Context File to re-establish context.

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# Section 16: The Faculty Research Toolkit Plugin

The Faculty Research Toolkit is a Cowork plugin that bundles 47 purpose-built skills covering every stage of the research lifecycle described in this guide. Instead of typing long prompts from memory, you invoke a skill by name and Claude loads the exact workflow, checklist, and quality bar for that task. The toolkit is free, open, and designed to work with the guide you're reading now.

## 16.1 Download and Install

**Download link:** [Download the Faculty Research Toolkit plugin](#)

Installation steps:

1. Open Claude Cowork and click the plugins icon in the sidebar (puzzle-piece icon).
2. Click 'Install from file' (or drag the .plugin file onto the Cowork window).
3. Select the faculty-research-toolkit.plugin file you just downloaded.
4. Review the list of skills and click 'Install.' Cowork will register all 47 skills and make them available in every project.

5. Verify the install: in any Cowork chat, type `/list_skills` and confirm you see the faculty-research-toolkit entries.

*Updates: when a new version of the toolkit is released, re-download the .plugin file and reinstall —Cowork will replace the prior version in place.*

## 16.2 How Skills Work in Cowork

A skill is a small, named workflow that Claude can load on demand. Each skill has a description that tells Claude when to use it and a body that tells Claude how. When you invoke a skill—either explicitly ('use the intro-hook-designer skill') or implicitly (Cowork's skill matcher sees your request matches a description)—Claude follows the skill's procedure step by step.

Why this matters: you don't have to remember the right prompt. You pick the task, Claude loads the workflow. This is the single biggest time-and-token saver in the toolkit. Every time you would have typed a multi-paragraph prompt, you now type one word.

Composing skills: many skills are designed to chain. After theory-builder produces a framework, hand it to theory-tester to convert it into testable hypotheses. After you finish a draft, run overconfidence-detector then reviewer-simulator. The master orchestrator skill, faculty-research, routes you through these chains automatically.

## 16.3 Complete Skill Catalog

All 47 skills, grouped by the research stage each one serves. The bold name is what you type (or say) to invoke the skill; the italic phrase after it is the one-line description. Skills are listed in the order you would typically encounter them in a research project, but all are available at any time.

### Ideation & Research Question

**research-question-sharpener** — Converts a broad topic or vague interest into a publishable research question; walks through scope narrowing and the 'answerable in one study?' check.

**novelty-checker** — Before you invest months, verifies the idea isn't already done by surfacing the 3–5 closest existing papers.

**contribution-articulator** — Forces a \*specific\* knowledge claim—not a vague 'we examine X'—as the 1–2 sentence contribution statement that anchors the paper.

### Theory & Hypothesis Development

**theory-builder** — Builds a new theoretical framework from the ground up: identifies the phenomenon, proposes constructs, specifies relationships, and articulates boundary conditions.

**theory-integrator** — Integrates two or more existing theories into a coherent framework; handles terminology conflicts, assumption mismatches, and complementary mechanisms.

**theory-tester** — Converts a theoretical framework into testable propositions, formal hypotheses, and concrete operationalizations.

**hypothesis-mapper** — Takes a theoretical framework and generates formal H1/H2/H3 statements mapped to specific variable relationships and statistical tests.

## Design & Pre-Data

**study-design-reviewer** — Red-teams the design \*before\* data collection: confounds, missing controls, ambiguous operationalizations, sample-size risks, ethical edge cases.

**manipulation-designer** — For experimental papers: designs the manipulation, manipulation checks, control conditions, and between/within-subjects choice.

**sampling-strategy-designer** — Chooses between convenience, stratified, purposive, and representative sampling; specifies inclusion/exclusion and justifies the sample source.

**power-analyzer** — Runs a priori power analyses for SEM, mediation, and multi-group designs; outputs a justifiable N.

**preregistration-writer** — Generates OSF or AsPredicted preregistration documents from hypotheses, measures, sample plan, and analysis strategy.

**irb-drafter** — Drafts the IRB/ethics application (protocol, consent form, debrief) from study-design parameters.

## Data Collection & Cleaning

**prolific-launcher** — Generates complete Prolific study configuration: cost estimates, eligibility, quotas, embedded data fields, redirects, soft-launch protocol.

**qualtrics-manager** — Manages Qualtrics surveys via REST API: trim matrix questions, add blocks, reorder flow, set export tags, pull data exports.

**attention-check-designer** — Designs and places attention checks, IMCs, and bot-detection in surveys.

**data-cleaner** — Cleans Qualtrics exports: handles multi-row headers, filters completions, applies attention-check exclusions, reverse-codes, flags straightliners, computes composites.

**qualitative-coder** — Assists with thematic coding of interview or open-text data; generates candidate codes, tests inter-rater reliability, produces a defensible coding scheme.

## Analysis

**scale-validator** — Runs CFA, computes CR and AVE, HTMT ratios, and measurement invariance tests for scale-development papers.

**sem-reporter** — Runs structural equation models (lavaan/semopy) and formats results for academic manuscripts: path coefficients, fit indices, bootstrap indirect effects.

**multilevel-modeler** — For nested data (students in classes, employees in firms): specifies the right multilevel model and interprets results.

**robustness-check-planner** — Systematically identifies every analytical choice that could have gone differently and specifies the robustness check for each.

**effect-size-interpreter** — For any reported effect, explains its substantive magnitude—not just 'significant at  $p < .05$ .'

## Writing — Introduction & Contribution

**intro-hook-designer** — Generates and critiques candidate opening hooks (practical urgency, theoretical tension, methodological gap, empirical puzzle, phenomenon-novelty, policy/practice); tests each against the 'so what?' challenge.

**roadmap-writer** — Drafts the paper roadmap paragraph at the end of the introduction ('the remainder of this paper is organized as follows...').

## Writing — Body

**discussion-writer** — Drafts the theoretical-implications and practical-implications subsections—the part researchers struggle with most.

**limitations-drafter** — Writes honest limitations that preempt reviewer objections without undermining the paper.

**transition-smoother** — End-pass review of transitions between sections; kills forward references, strengthens weak pivots.

## Self-Revision & Quality

**overconfidence-detector** — Scans the draft for unsupported claims ('proves,' 'clearly demonstrates') and proposes hedged alternatives that keep a confident tone.

**reviewer-simulator** — Role-plays as Reviewer 2 at the target journal and produces a mock referee report on the draft \*before\* submission.

**self-critique-engine** — Rotates through critical lenses (methodologist, theorist, editor, skeptic) and produces a diagnostic for each.

**abstract-optimizer** — Optimizes an abstract for a specific journal's word limit, style norms, and keyword strategy.

## Citations & Literature

**lit-review-scanner** — Checks whether a set of papers actually supports the specific claims in the manuscript; builds an evidence/support matrix.

**citation-gap-finder** — Identifies claims in the draft that need citation support but don't have one, and recommends specific papers to cite.

**reference-audit** — Audits the paper's references for completeness, accuracy, and prose-citation alignment; prepares the bibliography for submission.

### Pre-Submission

**paper-benchmark** — Compares the draft against the most similar published papers at the target journal on structure, theory density, results framing, and figure strategy.

**journal-fit-decider** — Evaluates fit across 3–5 candidate journals: theoretical fit, methodological fit, style match, recent publication patterns, acceptance-rate realism.

**cover-letter-crafter** — Drafts a journal-specific cover letter that makes the contribution case.

**submission-packager** — Compiles all submission materials: manuscript, supplementary materials, cover letter, figures, data availability statement, author info.

### R&R and Post-Review

**revision-responder** — Parses reviewer feedback from an R&R and generates a structured point-by-point response with proposed manuscript edits.

### Dissemination

**lay-summary-writer** — Generates a plain-language summary for press releases, institutional newsrooms, or social media.

**conference-talk-generator** — Converts a paper into a 15-minute conference-talk outline with slide structure.

**teaching-case-converter** — Turns a published paper into a teaching case study or classroom exercise.

**grant-proposal-seeder** — Identifies how a completed paper could anchor the next grant proposal, including specific funding opportunities.

### Program-Level

**faculty-research** — The master orchestrator skill—routes you through the right stage-specific skills based on where you are in the research lifecycle.

**research-program-mapper** — Takes your CV/paper list and proposes the unifying theoretical program, identifying which next project would most strengthen it.

**coauthor-communicator** — Drafts email updates to coauthors with revision summaries, decision points, and action items.

## 16.4 Using the Toolkit Alongside This Guide

Every section of this guide has one or more matching skills in the toolkit. Here's how they map:

**Section 4 (Ideation & Research Design):** research-question-sharpener, novelty-checker, contribution-articulator, study-design-reviewer

**Section 5 (Literature & Theory):** theory-builder, theory-integrator, theory-tester, hypothesis-mapper, lit-review-scanner

**Section 6 (Data Analysis):** data-cleaner, scale-validator, sem-reporter, multilevel-modeler, robustness-check-planner, effect-size-interpreter

**Section 7 (Planning the Paper):** intro-hook-designer, paper-benchmark, contribution-articulator, roadmap-writer

**Section 8 (Drafting):** discussion-writer, limitations-drafter, transition-smoother

**Section 9 (Revision):** overconfidence-detector, reviewer-simulator, self-critique-engine, abstract-optimizer

**Section 10 (Literature Integration):** citation-gap-finder, reference-audit, lit-review-scanner

**Section 12 (Pre-Submission):** paper-benchmark, journal-fit-decider, cover-letter-crafter, submission-packager

**Section 13 (R&R):** revision-responder

**Section 14 (IRB):** irb-drafter, preregistration-writer

**Pre-data collection:** power-analyzer, prolific-launcher, qualtrics-manager, sampling-strategy-designer, attention-check-designer, manipulation-designer

**Post-publication:** lay-summary-writer, conference-talk-generator, teaching-case-converter, grant-proposal-seeder, research-program-mapper

## 16.5 Philosophy: Skills as Epistemic Scaffolds

These skills are not shortcuts that let you skip thinking. Each one is a scaffold—a structured procedure that keeps you in the driver's seat while making sure the right questions get asked in the right order. The skills are opinionated: they will push back on vague hypotheses, weak theory, or thin limitations. That friction is the point. A good skill is the internalized judgment of an experienced researcher, encoded so you can borrow it on demand.

Suggested workflow: rather than picking skills piecemeal, start every project by invoking the faculty-research orchestrator. It will ask where you are in the lifecycle, which stages you've already completed, and then sequence the stage-specific skills in the right order. If you want to use an individual skill, just name it; Cowork will load it and follow the procedure.

# Appendix A: Tone Card Template

## TONE\_CARD.md Template

When creating your tone card, use this template and adapt to your specific journal:

# TONE\_CARD: [Journal Name]

### ## 1. Voice and Tone

- \*\*Overall Tone:\*\* [Formal/Conversational/Balanced]
- \*\*Audience Level:\*\* [Expert/Mixed/Accessible]
- \*\*Voice Characteristics:\*\*
  - Active vs. Passive voice: [Journal preference]
  - Hedging conventions: [How much tentative language is appropriate?]
  - First person usage: [Allowed/Discouraged/Depends]
  - Contractions: [Avoid/Acceptable/Common]

### ## 2. Structural Conventions

- \*\*Section Organization:\*\*
  - Typical section structure: [List main sections]
  - Subheading usage: [How many levels? What format?]
  - Introduction length: [Typical length as % of paper]
  - Discussion length: [Typical length as % of paper]

### ## 3. Citation Style

- \*\*In-Text Citations:\*\*
  - Format: [APA/Chicago/Other]
  - Multiple citations: [Alphabetical/Chronological]
  - Secondary sources: [Allowed/Discouraged]

- \*\*Reference List:\*\*
  - Format: [Specific requirements]
  - Journal abbreviation style: [Full/Abbreviated]
  - URL handling: [When included?]

### ## 4. Terminology Preferences

- Key discipline terms: [Use consistent terminology]
- Avoid: [Words/phrases that sound non-scholarly for this journal]
- Prefer: [Alternative phrasings more common in this journal]

### ## 5. What to Avoid

- Common mistakes in this journal

- Overused phrases
- Topics that get rejected
- Methodological approaches that don't fit the journal's scope

## 6. AI Writing Patterns to Remove

- Overuse of "it is important to note that"
  - Overly formal transitions ("Furthermore," "In addition")
  - Repetitive paragraph structures
  - Unnecessary hedging
  - Formula openers that sound templated
- 

Appendix B: Quick Reference Prompt Cards

Quick Reference by Stage and Step

| Stage            | Step | Key Prompt (Condensed)                                                        |
|------------------|------|-------------------------------------------------------------------------------|
| 1: Ideation      | 1    | Present idea → ask for creative expansion and assumption-questioning          |
| 1: Ideation      | 2    | Ask Claude to be toughest critic of the research idea                         |
| 1: Ideation      | 3    | Explore theoretical landscape — what theories could frame this?               |
| 1: Ideation      | 4    | Compare research idea with exemplar papers from target journal                |
| 2: Literature    | 1    | Conduct systematic literature review using Consensus + Scholar Gateway        |
| 2: Literature    | 2    | Build narrative storyline from literature that shows the gap                  |
| 2: Literature    | 3    | Develop theoretical framework and hypotheses with logical support             |
| 2: Literature    | 4    | Check epistemological consistency of entire approach                          |
| 3: Data Analysis | 1    | Load data, replicate analyses, create reproducible Jupyter notebook           |
| 3: Data Analysis | 2    | Run comprehensive data quality checks (reliability, validity, outliers, etc.) |
| 3: Data Analysis | 3    | Discover unexpected storylines in the data beyond hypotheses                  |
| 3: Data Analysis | 4    | Reconcile results with original hypotheses and update paper narrative         |
| 4: Planning      | 1    | Build complete, detailed master outline for entire paper                      |

| Stage                     | Step | Key Prompt (Condensed)                                                       |
|---------------------------|------|------------------------------------------------------------------------------|
| 4: Planning               | 2    | Plan introduction hook (practical + theoretical + methodological motivation) |
| 4: Planning               | 3    | Plan discussion section (theoretical + practical implications)               |
| 4: Planning               | 4    | Plan limitations, future research, conclusion, abstract                      |
| 4: Planning               | 5    | Brainstorm 10-15 title alternatives                                          |
| 5: Drafting               | 1    | Ask Claude to choose optimal section drafting order                          |
| 5: Drafting               | 2    | Draft each section following outline exactly, one at a time                  |
| 5: Drafting               | 3    | Review each section before proceeding (or batch review all)                  |
| 6: Revision               | 1    | Deep-dive structural review: inconsistencies, redundancies, flow problems    |
| 6: Revision               | 2    | Execute revision plan based on structural review                             |
| 6: Revision               | 3    | Deep-dive review from skeptical reviewer lens                                |
| 6: Revision               | 4    | Iterate with different analytical lenses until minor issues only             |
| 7: Literature Integration | 1    | Identify citation opportunities using Consensus + Scholar Gateway            |
| 7: Literature Integration | 2    | Plan literature integration: where, how, priority                            |
| 7: Literature Integration | 3    | Verify all references: citations match, details correct, claims supported    |
| 8: Tone & Formatting      | 1    | Create TONE_CARD.md with journal style + remove AI patterns                  |
| 8: Tone & Formatting      | 2    | Apply tone card to entire paper section by section                           |
| 8: Tone & Formatting      | 3    | Apply journal formatting requirements (headings, tables, citations)          |
| 9: QA                     | 1    | Run pre-submission checklist (16 items)                                      |
| 9: QA                     | 2    | Prepare AI disclosure statement per journal policy                           |
| R&R                       | 1    | Process all reviewer comments: categorize, identify contradictions           |
| R&R                       | 2    | Plan response strategy: major changes, pushback items, priorities            |
| R&R                       | 3    | Draft response letter point by point                                         |
| IRB                       | 1    | Draft research description and justification in lay language                 |
| IRB                       | 2    | Complete risk assessment (6 categories)                                      |
| IRB                       | 3    | Draft informed consent document (8th-grade reading level)                    |

| Stage | Step | Key Prompt (Condensed)                          |
|-------|------|-------------------------------------------------|
| IRB   | 4    | Document screening procedures                   |
| IRB   | 5    | Prepare instrument documentation for IRB review |

## Appendix C: Tool Setup Guide

### Complete Tool Setup Instructions

#### 1. Creating a Cowork Project

**What is a Cowork project?** A persistent workspace where Claude can access your files across multiple sessions. Every paper gets its own project.

**How to create:** 1. Open Claude desktop app or Claude.ai website 2. Look for “Projects” or “Cowork” in the interface 3. Click “New Project” or “Create Workspace” 4. Name it: "[YourName]\_[PaperTopic]" (e.g., “KeithM\_AIResearchWorkflow”) 5. Upload your files: - Dataset (CSV, Excel, etc.) - Any existing drafts - Journal guidelines - Exemplar papers (3-5) - This entire guide - Any prior methods documentation

**To use in a session:** Tell Claude “I’m starting from Entry Point [A/B/C]. Please read PROJECT\_CONTEXT.md to understand where we are, then guide me through the next step.”

#### 2. Installing Consensus Plugin

**What is Consensus?** A platform that searches 200+ million peer-reviewed papers and provides AI-synthesized answers with evidence.

**Setup:** 1. Open Claude settings (gear icon or Settings menu) 2. Find “Plugins,” “Integrations,” or “MCP Servers” (naming varies by interface) 3. Search for “Consensus” or “Consensus API” 4. Click “Install” or “Connect” 5. Follow any authentication steps (may require free Consensus account) 6. To verify: Ask Claude “Search Consensus for recent papers on [your topic]”

**What to expect:** Claude will return papers with relevance scores, key findings, and links. Use this for literature reviews and reference verification.

#### 3. Installing Scholar Gateway Plugin

**What is Scholar Gateway?** Bibliographic database access providing detailed citation information, abstracts, and full paper metadata.

**Setup:** 1. Same location as Consensus: Settings → Plugins/Integrations/MCP 2. Search for “Scholar Gateway” 3. Click “Install” or “Connect” 4. To verify: Ask Claude “Look up [specific paper title] on Scholar Gateway”

**What to expect:** Claude returns complete bibliographic information including authors, year, journal, volume, pages, DOI, and abstract.

#### 4. Connecting File Storage

**For desktop Claude:** - Files uploaded to a Cowork project are automatically accessible - No additional setup needed

**For Claude.ai with Cowork:** - Use the “Files” or “Upload” section in your project - Supported formats: PDF, DOCX, TXT, CSV, JSON, and most common formats - Maximum file sizes vary by tier

**Best practice:** Organize your project folder like this:

```
MyProject/
|— PROJECT_CONTEXT.md
|— OUTLINE.md
|— TONE_CARD.md
|— REVISION_PLAN.md
|— dataset.csv
|— exemplar_paper_1.pdf
|— exemplar_paper_2.pdf
|— journal_guidelines.pdf
|— AI_Assisted_Research_Workflow.md
```

#### 5. Basic Cowork Navigation

**Starting a session:** 1. Open the project 2. If starting fresh: tell Claude “I’m beginning work on [topic]. I have [dataset/draft/idea]. Please help me work through the AI-Assisted Research Workflow.” 3. If continuing: tell Claude “I’m returning to this project. Please read PROJECT\_CONTEXT.md to understand where we are, then tell me what comes next.”

**During sessions:** - Upload files to the project (don’t paste content in chat) - Claude can read any file in the project - End session by updating PROJECT\_CONTEXT.md with progress - Start next session with Claude reading the updated PROJECT\_CONTEXT.md

**Tips:** - Keep conversations focused (don’t try to do the entire workflow in one session) - End each session with Claude summarizing what was accomplished - Update PROJECT\_CONTEXT.md with decisions and next steps before ending

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*End of AI-Assisted Research Workflow Document*