

Below is a clear, practice-ready guide for **how to most effectively address the “Steps in the Analysis” section in Chapter 4** of an Applied Research Paper (ARP) or Applied Research Project (ARPP). This aligns with common doctoral and practitioner-research standards (EdD, DBA, DHA, etc.) and ensures clarity, transparency, and replicability.

✓ How to Effectively Address the "Steps in the Analysis" Section in Chapter 4

Chapter 4 tells the *story of what you did with your data and what those procedures produced*. The **Steps in the Analysis** subsection is where you demonstrate *exactly how you moved from raw data → organized data → analyzed results → findings*.

This section must be **methodical, transparent, detailed, and replicable**.

★ Purpose of the Steps in the Analysis Section

This section answers four critical reviewer/committee questions:

1. **Did the researcher follow the approved method?**
2. **Are the steps detailed enough for another researcher to replicate the analysis?**
3. **Are the steps appropriate to answer the RQs?**
4. **Is the flow from data → coding → patterns → themes → findings logically documented?**

If reviewers cannot clearly see how you processed and analyzed your data, they will question the validity of your findings.

📌 General Structure for the Steps in the Analysis Section

A strong Steps in the Analysis section usually includes **6–8 clear, sequenced steps**, written in past tense, tied directly to the approved methodology.

Below is a **template you can adapt**, followed by an example for both quantitative and qualitative studies.

🎯 Template: Steps in the Analysis (For Any Methodology)

Step 1: Prepare and Clean the Data

Describe how you imported, checked, or reviewed the data for quality issues.

Step 2: Organize the Data for Analysis

Explain formatting, grouping, coding, or structuring.

Step 3: Apply the Analysis Procedures Defined in Chapter 3

State explicitly that you followed the approved method.

Step 4: Conduct the Core Analysis

Describe coding cycles (qual), statistical tests (quant), or mixed-methods integration.

Step 5: Validate or Verify the Analysis

Triangulation, inter-coder agreement, assumption testing, reliability checks, etc.

Step 6: Derive Patterns, Results, or Themes

Explain how the analysis produced the findings you present later in Chapter 4.

Step 7: Link Results to Each Research Question

(Usually a concluding sentence or small paragraph.)

Step 8: Prepare Visuals/Tables

Describe how charts, matrices, or tables support transparency.

Each step is written clearly and factually without interpretation or discussion.

■ Example: Steps in the Analysis — Qualitative ARP**Step 1: Data Preparation.**

I transcribed all interviews verbatim and de-identified participant information. I verified each transcript by listening to the audio while reading the transcript.

Step 2: Data Organization.

I uploaded transcripts into NVivo and created initial node categories aligned with the research questions.

Step 3: First-Cycle Coding.

Using in vivo and descriptive coding, I coded each transcript line-by-line. This process yielded 124 initial codes.

Step 4: Second-Cycle Coding.

I applied pattern coding to cluster similar codes into categories. This step reduced the 124 initial codes into 18 categories.

Step 5: Theme Development.

I analyzed categories for recurring patterns and relationships, merging them into five overarching themes that directly address the research questions.

Step 6: Validity Checks.

I conducted a peer debrief with a qualitative researcher, re-coded one transcript for consistency, and reviewed coding discrepancies.

Step 7: Alignment With Research Questions.

I organized the resulting themes under each research question to prepare for reporting the findings in the next section.

1 2 3 4 Example: Steps in the Analysis — Quantitative ARP

Step 1: Data Cleaning.

I imported the dataset into SPSS, inspected missing values, removed 3 incomplete cases, and verified variable labels and measurement scales.

Step 2: Assumption Testing.

I ran tests for normality, multicollinearity, homoscedasticity, and linearity. All values met acceptable thresholds for regression analysis.

Step 3: Variable Construction.

I computed composite scores for the parental involvement scale and SES index according to instrument scoring instructions.

Step 4: Descriptive Statistics.

I calculated means, standard deviations, and frequency distributions for all study variables.

Step 5: Inferential Analysis.

I conducted a multiple linear regression to evaluate whether parental involvement and SES predicted academic achievement.

Step 6: Effect Size and Model Fit.

I examined R^2 , beta coefficients, significance levels, and effect sizes.

Step 7: Organizing Results by Research Question.

I aligned the statistical results with Research Question 1 and prepared tables following APA 7 formatting.

Example: Mixed Methods

Include steps **for each dataset**, then describe the integration:

- Quant steps
 - Qual steps
 - **Integration step** (joint display matrix, merging themes and statistics, explaining convergence/divergence)
-

What Reviewers Look For in This Section

Your committee will expect:

✓ Clarity

Steps should be simple, numbered, sequential, and easy to follow.

✓ Transparency

Show exactly what you did—not what *should* be done.

✓ Alignment

Steps must reflect the methodology described in Chapter 3.

✓ Replicability

Another researcher could reproduce the analysis following your steps.

✓ No Interpretation

Interpretation belongs in **Chapter 5**, not here.

Common Mistakes to Avoid

- Writing vague steps (“I analyzed the data”)
- Mixing Chapter 5 interpretation into Chapter 4
- Adding new methods that were not approved in Chapter 3
- Including literature or theoretical discussion
- Failing to tie the analysis to each RQ

- Missing assumption checks (quantitative)
- Missing coding cycles (qualitative)