Communicating Scholarly Contributions in Informatics Education: A Structured Manuscript Demonstration

Abstract. **Problem and aim:** Readers of informatics education research need to identify what a paper establishes and why it matters without reconstructing its argument from a long manuscript. This instructional demonstration shows how coordinated front matter can make those distinctions explicit.

Approach: The demonstration organises the title, abstract, keywords and contribution statements as connected reporting elements. It separates the inquiry summary from reader-facing accounts of knowledge contribution, educational and community value, and implications, while retaining the need to support every substantive statement in the article.

Findings: The example uses four labelled abstract parts and three labelled contribution bullets. It distinguishes empirical findings, conceptual arguments and synthesis through controlled alternatives for the third abstract heading. It also distinguishes word counting for abstract text from counting for labelled bullets, without changing the manuscript's substantive claims or prescribed article-length guidance.

Conclusions: The resulting structure is an authoring aid for communicating an existing, warranted contribution and its educational significance. Authors can use it to organise summaries and identify where explanation is needed. It does not establish that labels increase citations, improve manuscript quality or produce educational benefits; those outcomes would require separate evaluation.

Key words: informatics education, academic writing, structured abstracts, scholarly contribution, educational implications.

Contribution and implications for informatics education

- **Knowledge contribution:** The demonstration distinguishes the knowledge contribution, educational and community value, and implications for informatics education as connected but different reporting functions.
- **Educational and community value:** Authors and readers can use this distinction to recognise educational significance without treating methodological sophistication or unsupported benefit claims as a contribution.
- **Implications for CS education:** Researchers can use the three questions to explain how findings or arguments inform understanding, professional judgement, teaching, design or further inquiry.

Instructional example, not a research report. Replace all example text. Use an informative title; a four-part structured abstract of 150–250 words excluding its labels; 4–6 keywords; and 3–5 labelled contribution bullets with a maximum of 150 words including their labels. The required abstract labels are Problem and aim; Approach; Findings; Conclusions.

Main argument or Synthesis may replace Findings for the allowed manuscript types. The required bullet labels are Knowledge contribution; Educational and community value; Implications for CS education. Conditions and limits is optional as a separate final bullet. A further substantive bullet may repeat a required label. Keep the core contribution, educational significance and principal warranted implication in the abstract itself. The bullets explain significance and use, not a duplicated study summary. Preserve claims and qualification; do not invent findings, benefits or applications merely to fill labels. Delete this preparation note before submission.

1. Introduction

The purpose of this file is to demonstrate the *structure* of a paper and show idiomatic LaTeX usage that compiles cleanly under the INFEDU class.

Use narrative citations in a sentence, for example Lamport (1994). Use parenthetical citations for supporting references (Knuth, 1984).

1.1. *Submission stage and final publication length*

INFEDU does not impose a formal word limit at initial submission. For the final publication version, most full-length articles should aim for 6,000–8,000 words and should generally not exceed 10,000 words. This is guidance, not an absolute ceiling; longer articles may be appropriate when the evidence, scope, contextual detail, synthesis or argument requires additional space. Shorter articles are welcome when adequately reported. Exceeding 10,000 words at initial submission does not require advance permission or a separate length justification. Remove avoidable repetition, but retain information essential to evaluating the work.

Counting convention. Count the article body from the introduction through the conclusion, including headings, in-text citations, quotations, footnotes/endnotes, text in tables, and table and figure captions. Also count appendices retained within the article, regardless of position. Exclude the title page, abstract, keywords, contribution-and-implications section, references, acknowledgements, declarations and separate online supplementary files. Report this count on the separate Title Page and update it for the final publication version.

Current author instructions: INFEDU Instructions for authors.

2. Document structure

2.1. *Sections, subsections, and subsubsections*

Use standard sectioning commands (`\section`, `\subsection`, `\subsubsection`) to create a clear hierarchy.

Table 1
Example table with aligned columns.

Item	Count	Score
A	12	0.80
B	5	0.35
C	9	0.62

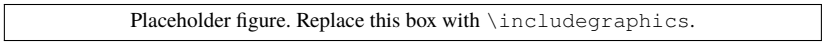


Figure 1. Example figure caption. Describe what the figure shows.

2.1.1. *Do not force layout*

Avoid manual spacing commands (`\vspace`, `\hspace`) and avoid using `\\` to break lines inside paragraphs. Let the journal class handle layout.

2.2. *Cross-references*

Use `\label` and `\ref` for cross-references. For example, Table 1 is an example table and Figure 1 is a placeholder figure. Cross-references update automatically when numbering changes.

3. Tables

Table 1 demonstrates a basic table with booktabs.

4. Figures

Figures can be external graphics (PDF/PNG) or simple placeholders while writing. The example below needs no external image files.

5. Mathematics

The INFEDU class loads `amsmath`. Inline math looks like $f(x) = x^2$. Displayed equations are typically left-aligned in INFEDU (the class loads `fleqn`).

$$E = mc^2. \tag{1}$$

Equation 1 is a single-line example. For multi-line displays, use `align`:

$$\hat{\beta} = (X^\top X)^{-1} X^\top y, \tag{2}$$

$$\hat{y} = X\hat{\beta}. \tag{3}$$

6. Lists

Use lists to present steps or grouped items.

6.1. *Bulleted list*

- Use itemize for unordered points.
- Keep items parallel in grammar and structure.
- Avoid overly long list items when possible.

6.2. *Numbered list*

1. Write the manuscript.
2. Run the correct compilation sequence.
3. Check cross-references and the reference list.

7. Citations and references

This BibTeX route is retained for compatibility. The included `infedu-apa.bst` repairs the main defects of the former 1992 style for the demonstrated entry types, but it is not a complete implementation of all APA seventh-edition edge cases. The biblatex/Biber package is the preferred route for automated APA seventh-edition formatting. Check every reference.

Narrative examples: Wing (2006) and Mayer (2005). Parenthetical examples: (American Psychological Association, 2020; Wing, 2006). A webpage entry is illustrated by (Informatics in Education, n.d.). For a page locator use, for example, (Wing, 2006, p. 33). Do not put another pair of parentheses around `\citep`.

8. Conclusion

This template illustrates common constructs needed for INFEDU submissions. Replace the placeholder text with your own content while keeping the structure and the reference workflow.

Preparation note on declarations

Complete the confidential Title Page statements. Do not put author identities, funding identifiers, acknowledgements or biographies into the review PDF. Preserve the methodological, ethical and contextual information needed for assessment in an anonymised form. Delete this instructional note before submission.

A. Appendix: A longer table (example)

If you have supplemental material, place it in an appendix.

Table 2
Example appendix long table.

What this row demonstrates	Notes
Cross-page tables	Long tables may span pages.
Fixed-width columns	Use `p{}` for wrapping text.
References in appendices	An appendix can also contain a citation (American Psychological Association, 2020).

References

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