

# Elements of a Research Abstract

Research abstracts typically consist of five elements that respond to specific questions:

- **Element 1: Background/Introduction/Situation:** What do we know about the topic? Why is the topic important?
- **Element 2: Present Research/Purpose:** What is this study about?
- **Element 3: Methods/Materials/Subjects/Procedures:** How was it done?
- **Element 4: Results/Findings:** What was discovered? What do you contend?
- **Element 5: Discussion/Conclusion/Implications/Recommendations:** What do the findings mean?<sup>1</sup>

To see how these elements appear in context, consider the abstract below:<sup>2</sup>

**[ELEMENT 1]:** Graduate students often begin their PhD training with little experience in writing up original research. Amongst the crucial elements of such writing are abstracts. Abstracts provide readers with condensed versions of research results and contributions, and often influence whether (and how) the research will be evaluated. **[ELEMENT 2]:** To determine just how strong an influence abstracts have on the evaluation of graduate student research, this study reviewed a random selection of 500 dissertation abstracts from 25 different disciplines in order to determine the relationship between quality of abstract and subsequent career success. **[ELEMENT 3]:** Each abstract was blindly reviewed and separately rated by three graduate writing instructors according to a strict pre-established rubric. Ratings were cross-referenced for reliability. Abstracts were then linked with their original authors, whose career success was measured according to criteria including: ranking of university where they teach, number of publications, salary, etc. **[ELEMENT 4]:** The results showed a correlation between dissertation abstract quality and subsequent career success. In STEM fields, this correlation was significant ( $p=.07$ ), whereas in the humanities and social sciences, the correlation was present, but not significant ( $p=.038$ ). These results indicate that abstracts do play a role in how research is evaluated, and that role may be linked to a writer's future career success. **[ELEMENT 5]:** We, therefore, conclude by recommending that graduate students be provided more training in the writing of abstracts, particularly before they must write potentially career-defining abstracts such as dissertation abstracts. (233 words)

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<sup>1</sup> Abstract elements adapted from John M. Swales & Christine Feak, *Abstracts and the Writing of Abstracts* (University of Michigan Press, 2009).

<sup>2</sup> Note that this abstract does not summarize real research and was written as a teaching tool for the purposes of this workshop.

In practice, sometimes these elements must be consolidated or combined in order for an abstract to meet a designated word count. When shortening an abstract, consider the following:

- Reduce your background/combine elements 1 & 2
- Reduce your discussion of methodology & sample (element 3)
- Reduce the specificity in your results section (element 4)
- Reduce the specificity in your implication section or consider eliminating (element 5)

Considering these reductions, review the sample abstract again. What could you combine and remove in order to make it shorter?

Graduate students often begin their PhD training with little experience in writing up original research. Amongst the crucial elements of such writing are abstracts. Abstracts provide readers with condensed versions of research results and contributions, and often influence whether (and how) the research will be evaluated. To determine just how strong an influence abstracts have on the evaluation of graduate student research, this study reviewed a random selection of 500 dissertation abstracts from 25 different disciplines in order to determine the relationship between quality of abstract and subsequent career success. Each abstract was blindly reviewed and separately rated by three graduate writing instructors according to a strict pre-established rubric. Ratings were cross-referenced for reliability. Abstracts were then linked with their original authors, whose career success was measured according to criteria including: ranking of university where they teach, number of publications, salary, etc. The results showed a correlation between dissertation abstract quality and subsequent career success. In STEM fields, this correlation was significant ( $p=.07$ ), whereas in the humanities and social sciences, the correlation was present, but not significant ( $p=.038$ ). These results indicate that abstracts do play a role in how research is evaluated, and that role may be linked to a writer's future career success. We, therefore, conclude by recommending that graduate students be provided more training in the writing of abstracts, particularly before they must write potentially career-defining abstracts such as dissertation abstracts. (233 words)

## SAMPLE REVISION AND COMMENTARY

**SAMPLE REVISION:** Providing readers with condensed versions of research results and contributions, abstracts often influence how the research will be evaluated. To determine the relationship between quality of abstract and subsequent career success, we rated a random selection of dissertation abstracts from different disciplines and measured the corresponding career success of each author according to several criteria. The results showed a correlation between dissertation abstract quality and subsequent career success, especially in STEM fields. These results indicate that abstracts influence how research is evaluated, and quality abstracts may be linked to future career success. We, therefore, conclude by recommending that graduate students be provided more training in the writing of abstracts. (Words: 109)

### COMMENTARY ON REVISION:

This revision cuts more than 50% of the words from the previous abstract by:

- Condensing the background section
  - Deleted early sentences that provided context, but were nonessential.
  - Looked closely at what the study focuses on to eliminate even the smallest elements of unnecessary background (e.g., the original “whether (and how)” was here changed to “how,” a revision that not only eliminates words, but also better reflects what the study focused on).
- Significantly reducing discussion of methods and measurement
  - In addition to taking out discussion of specific evaluation techniques, the number of evaluations completed and the number of disciplines was eliminated. Generally, this level of detail is unnecessary in abstracts unless the number is very impressive.
  - The reduction was accompanied by adding more specificity in element 2 to make clear what was done (i.e., “reviewed” replaced with “rated”).
- Removing detail from the results
  - Whether numbers should be reported in results is often a discipline-specific or even journal-specific convention. Look for models before making such a reduction. However, if numbers are used, be sure they are easy to interpret.
  - Though the sentence beginning, “These results indicate...” may seem repetitive, it is retained because a good results section will not merely state results, it will interpret them. (The different verb tenses—past for summary of completed actions and present for the generalizable claim/truth—help signal for the reader that these two sentences are accomplishing different things.)



- Reducing detail in the implication/recommendation section
  - The clause at end of the original implication/suggestion section provides more detail than necessary, and was removed.
  - The implications section is retained (rather than eliminated) in order to highlight the potential use-value of the results. In general, when results have use-value or can be applied, it is especially important for implications to remain in an abstract.
- Evaluating rhetoric and making changes where appropriate
  - In element 2, “this study” was changed to “we.” This not only eliminates a word, but also makes the role of the researchers more active. The use of personal pronouns in abstracts is often discipline- (or journal-) specific. Determine the conventions before choosing to use them.
  - Repetitions in words (e.g., “determine” in the third sentence of the original abstract) were evaluated to see what could be combined/eliminated. (In this case, the second use of determine is more reflective of what the study attempts to measure; therefore the first was eliminated.)

