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Strong Manuscripts. Compelling Publications. Confident Presentations.

Writing a Strong Abstract

An abstract is a succinct yet comprehensive summary of your article. Getting published, presenting at conferences, and getting more people to read your manuscript all require strong abstracts. In this module, you will learn:

1. The two primary types of abstracts
2. What content belongs in an abstract
3. Tips for writing your abstract

1. Types of Abstracts

The type of abstract that you should write for your article depends on your research field and the journal that you submit your manuscript to. There are two primary types of abstracts:

1. **Descriptive Abstract:** Very short (≤ 100 words): Indicates the type of information found in the article but does not include information on the results or a conclusion.
2. **Informative Abstract:** Summary of the entire paper's essential points; typically in 250-350 words. For a conference, journal, or book submission, you will likely write an informative abstract.
 - a. **Structured Informative Abstract:** Summary of introduction, methods, results, discussion, and conclusion, each with section titles for organization.
 - b. Check out this video about abstracts from editage.com.

2. Abstract Contents

1. All abstracts must be able to stand on their own as a representation of your work. First consider the different parts of the abstract that you will need. According to Cargill and O'Connor (2009), there are five parts that you must succinctly cover:
 - a. Background information
 - b. Principal purpose of the study and its scope
 - c. Information on the methods used
 - d. Most important results
 - e. Statement of conclusion and/or recommendation
 - f. Explanation of who should read the article and why; what can they expect to learn from the article and how will it help them?
2. Some of these parts may not be relevant for your manuscript because abstracts vary by field:
 - a. An abstract of a social science or scientific work may contain the scope, purpose, results, and contents of the work.
 - b. An abstract of a humanities work may contain the thesis, background, and conclusion of the larger work.

- Be sure to check with your research advisor and read any specific instructions given by the journal or conference that you are targeting to determine what should and should not be included!
- Read 5-10 abstracts from your target conference or journal. If you switch to a different forum, review abstracts from that target forum.

3. Tips for Writing Your Abstract

1. Summarize the purpose, methods, results, and conclusions from memory. Rereading and reverse outlining your manuscript before this may help organize your thoughts.
2. Follow the **same chronology** as the manuscript.
3. Make sure to include **keywords** so people can find your article in searches on your topic.
4. Use **less technical language** than the rest of your paper because you want it to be accessible to a wide audience.
5. Edit for **conciseness**, cohesion, spelling, and grammar. (See our Writing Direct, Active, and Clear Sentences module for tips on cutting back on word count).

4. Examples of Strong Abstracts

Example 1: Descriptive Abstract

An abstract of this module: [Abstracts for various disciplines are described along with their components. Examples are given of the two primary abstract types, descriptive and informative.](#)

Example 2: Informative Abstract, Humanities

Excerpt from: Kenneth Tait Andrews, “‘Freedom is a constant struggle’: The dynamics and consequences of the Mississippi Civil Rights Movement, 1960-1984” Ph.D. State University of New York at Stony Brook, 1997 DAI-A 59/02, p. 620, Aug 1998.

This dissertation examines the impacts of social movements through a multi-layered study of the Mississippi Civil Rights Movement from its peak in the early 1960s through the early 1980s. By examining this historically important case, I clarify the process by which movements transform social structures and the constraints movements face when they try to do so. **The time period studied includes the expansion of voting rights and gains in black political power, the desegregation of public schools and the emergence of white-flight academies, and the rise and fall of federal anti-poverty programs.** I use two major research strategies: (1) a quantitative analysis of county-level data and (2) three case studies. Data have been collected from archives, interviews, newspapers, and published reports. **This dissertation challenges the argument that movements are inconsequential. Some view federal agencies, courts, political parties, or economic elites as the agents driving institutional change, but typically these groups acted in response to the leverage brought to bear by the civil rights movement. The Mississippi movement attempted to forge independent structures for sustaining challenges to local inequities and injustices. By propelling change in an array of local institutions, movement infrastructures had an enduring legacy in Mississippi.**

Purpose of dissertation

Scope

Methods

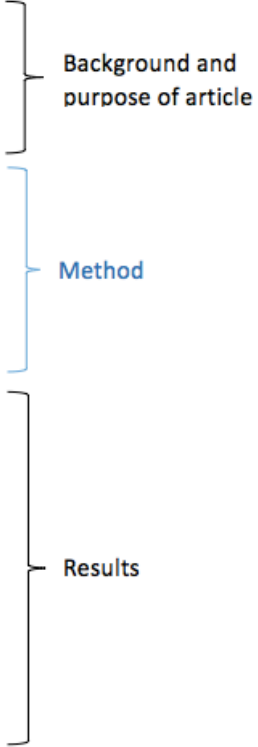
Conclusion

Andrews summarizes his dissertation by explaining its purpose and scope, giving a brief synopsis of his methods for collecting data, and providing a synopsis of the conclusion including the major findings of his dissertation. He keeps his abstract to 197 words, providing just enough key information to convince the audience to read his dissertation. Some key words that he used which potential readers may search for to find his dissertation are social movements, Civil Rights Movement, Mississippi, voting rights, and desegregation.

Example 3: Conceptual Scientific Manuscript, Informative Abstract

Excerpt from: Luis Lehner, “Gravitational radiation from black hole spacetimes” Ph.D.
University of Pittsburgh, 1998 DAI-B 59/06, p. 2797, Dec 1998.

The problem of detecting gravitational radiation is receiving considerable attention with the construction of new detectors in the United States, Europe, and Japan. The theoretical modeling of the wave forms that would be produced in particular systems will expedite the search for and analysis of detected signals. The characteristic formulation of GR is implemented to obtain an algorithm capable of evolving black holes in 3D asymptotically flat spacetimes. Using compactification techniques, future null infinity is included in the evolved region, which enables the unambiguous calculation of the radiation produced by some compact source. A module to calculate the waveforms is constructed and included in the evolution algorithm. This code is shown to be second-order convergent and to handle highly non-linear spacetimes. In particular, we have shown that the code can handle spacetimes whose radiation is equivalent to a galaxy converting its whole mass into gravitational radiation in one second. We further use the characteristic formulation to treat the region close to the singularity in black hole spacetimes. The code carefully excises a region surrounding the singularity and accurately evolves generic black hole spacetimes with apparently unlimited stability.



Background and purpose of article

Method

Results

This abstract is from a more technical document than the last example but it still follows the same general convention of restating the purpose of the study, its methods, and the results. This example focuses less on the conclusion and its significance but goes into more detail about the methods and results and also provides a sentence of background information.

Example 4: Informative Abstract, Social Sciences

Excerpt from: Oberkircher, L., & Hornidge, Anna-Katharina. (2011). "Water is Life"- Farmer rationales and water saving in Khorezm Uzbekistan: A lifeworld analysis. *Rural Sociology*, 76(3), 394-421.

Khorezm Province is located in the Amu Darya lowlands of Uzbekistan, where unsustainable use of irrigation water has led to the Aral Sea crisis. This study deals with the question of how farmers in Khorezm perceive water and its management and how this facilitates or prevents water conservation, or "water saving," in irrigated agriculture. To answer this from the perspective of the water users, we apply Schütz's lifeworld concept to the study of natural-resource management, thereby reconstructing the water lifeworld of Khorezmian farmers. We present the spatial and temporal boundaries of the water lifeworld; the different types of water, people, and land that farmers distinguish; and the institutions water management is based on. The analysis shows that religious values and the risk of being fined for water wasting facilitate water saving. However, the following barriers to water saving dominate farmer practices: (1) storage of saved water is not possible, (2) using much water creates social capital, (3) perceived water needs exceed the geographical realities, (4) the term "water saving" is not in use, and (5) farmers believe that water management is the state's responsibility. We conclude that water saving should be facilitated by environmental education, a strengthening of the water-inspection department Uzsuvmazorat, and the creation of decentralized storage options."

Background and purpose of article

Methods

Results

Conclusion

This abstract also follows the same general convention of restating the purpose of the study, its methods, and the results. However, the authors focus less on the conclusion and its significance and go into more detail about the methods and results. Another difference is that they include a sentence of background information.

Example 5: Informative Abstract, Data-Driven Scientific

Excerpt from: Gorski, I. (2013). *The Use of Water Sensors to Examine Water Chemistry Related to Marcellus Shale Natural Gas Development* (Thesis, Pennsylvania State University).

With conflicting information about Marcellus Shale natural gas activities and resulting water contamination coming from pro versus anti-drilling sources, it can be difficult for Pennsylvania citizens to judge the safety of their water. Even after methane contamination has occurred, it has been difficult to prove whether the source was Marcellus drilling activities or something else such as natural seepage. This paper presents a quantitative analysis of what incidents of contamination have occurred along with what can be done to track future incidents and prove the source of contamination. Three water sensors were also tested for their accuracy and ease of use for scientists and nonscientists around Pennsylvania to collect background geochemical data for their wells and nearby streams. Results show that there have been tens of incidents of contamination to land and water in northern and western Pennsylvania from January 2008 to March 2013 but increased regulation seems to have been decreasing the amount of major incidents of environmental impact since 2008. Also, improvements need to be made on all three sensors to improve their accuracy and handling of harsh Pennsylvania conditions including high sediment loads in streams and freezing winter temperatures. It is recommended that more sensors with the ability to collect data such as total dissolved solids and possibly barium and strontium be tested out to determine their accuracy, ease of use, and ability to track Marcellus related contamination compared to the ones tested in this study. Once the best sensors are found, it is recommended that these be deployed around Pennsylvania with citizens in areas where there is currently natural gas development or it is expected in the future. With public education about these sensors and collection of data from them, incidents could be found faster, background levels around Pennsylvania can be measured, and citizens could get involved in controlling their water's safety hopefully leading to a cleaner natural gas industry in Pennsylvania.

Background

Methods

Results

Recommendations

A large portion of this abstract is focused on recommendations, indicating that the author would like to see the research taken further and implications of the results to reach outside of academia.

Example 6: Structured Informative Abstract, Healthcare

Excerpt from: Abdelmalak, M. J., Ahmed, B. S., & Mehta, K. (2015). Health knowledge and health practices in Makeni, Sierra Leone: a community-based household survey.

International health, ihv059.

Background: We characterize health knowledge and practices in urban and rural Makeni, Sierra Leone, drawing comparisons between areas served by community health workers (CHWs), with those that are not. We also inquire about causes of infant and maternal mortality and how they are understood in the local context. Our objective was to provide a baseline understanding of health knowledge and practices in Makeni during the implementation of a CHW program. We conducted 100 household interviews in Makeni City and rural villages in the surrounding area. We compared data between urban and rural areas to identify differences in health knowledge and practices. **Results:** Our sample size covered 855 individuals. Insecticide treated bednet ownership was lower in urban settings compared to rural populations (58% vs 94%; $p < .001$). With regards to maternal mortality, most respondents indicated 'no clinic' (lack of clinical care or skipped antenatal care visits) as the primary cause ($n=35$), followed by bleeding ($n=17$), 'lack of blood' (anemia) ($n=11$) and 'will of God' ($n=11$). **Conclusions:** This initial survey of health knowledge and practices in rural and urban Makeni, Sierra Leone, highlights some simple opportunities for community health promotion, health education programming and behavioral interventions. Findings will inform future iterations of a CHW training module for community health education.

As you can see, this type of abstract is clearly structured, with a clear indication of what information the manuscript will contain.

Sources and Additional Resources:

1. Columbia University: Writing a Scientific Paper
 2. Ferrero, F. (2015). Writing a scientific paper abstract. *Archivos Argentinos de Pediatría*.
 3. Philip Koopman (1997). How to Write an Abstract. Carnegie Mellon University
 4. Purdue OWL: Writing Report Abstracts
 5. The University of North Carolina at Chapel Hill Writing Center: Abstracts
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