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## Constructing an Effective Abstract: Guidelines and New Standards in PAJAIS

James Jiang<sup>1</sup>, Jacob Chia-An Tsai<sup>2</sup>

<sup>1</sup>National Taiwan University, Taiwan, [jjjiang@ntu.edu.tw](mailto:jjjiang@ntu.edu.tw)

<sup>2</sup>National Yunlin University of Science and Technology, Taiwan, [jtsai@yuntech.edu.tw](mailto:jtsai@yuntech.edu.tw)

### Abstract

*In the previous issue, we outlined the considerations that are a necessary part of any submission and described how future submissions will be evaluated. In each paper, the abstract contains a summary of all key information, which can provide the audience a glance at the fundamental aspects of the paper. Mastering the skill of writing an abstract is essential to increase the visibility of a research paper and convince potential readers that research issues they care about have been addressed. In this issue, we continue to provide guidelines and new standards for writing and submitting abstracts for PAJAIS. This practical guide sets out the basic elements in an abstract and the journal's requirements.*

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## The basic elements

Because all articles published in the PAJAIS will be identified and searched via digital libraries and the Internet, the contents of an abstract are critical in helping to promote an author's work. An abstract allows authors to concisely represent the contributions made by their research and engage potential readers at a single glance. Constructing an effective abstract becomes an important step in the research process. An abstract accurately portrays the full manuscript for readers and hopefully grabs their attention. Therefore, the quality of an abstract is often a factor affecting whether scholars read the whole paper (Klein, Jiang, & Saunders, 2006; Pierson, 2004; Rhodes, 2010). A good abstract can increase the visibility of a research paper in the community and successfully disseminate the key findings (Rhodes, 2010). These benefits are most likely to be realized when an abstract is correctly structured.

The word "*abstract*" is defined as "*a summary of the contents of a book, article, or speech*" (Oxford dictionary). The abstract is *not* an opening paragraph of a manuscript; rather, it is a convenient and efficient way to elaborate on each major aspect of a manuscript (Haynes, Mulrow, Huth, Altman, & Gardner, 1990; Klein et al., 2006). The abstract is also *not* a complete version of the manuscript; instead, it is a condensed version of more detailed work. Indeed, the abstract forces the authors of a manuscript to reduce their whole manuscript into an overview. It typically addresses the most important aspects of the objectives, methods, findings, and implications (Haynes et al., 1990).

The abstract should be a concise summary of the research question, how it fits into the context of the study, the research methodologies, the key findings, and the most important implications (Rennie & Glass, 1991). A major obstacle to preparing effective abstracts is when authors confuse descriptive with informative abstracts. We provide advice for PAJAIS future authors to understand which type of abstract should be prepared with your submission, to increase the likelihood that your abstract will be accepted by PAJAIS.

A descriptive abstract indicates the type of information found in the work including the purpose, methods, and scope of the contents (Haynes et al., 1990; Rennie & Glass, 1991). Submissions with descriptive abstracts provide a generic description of the research objectives, fail to provide key points in relation to the importance of the research question, and neglect to describe key concepts or theories relied upon. Descriptive abstracts describe the work that has been conducted in relation to research methodologies and data collection. They are less revealing of key findings and simply repeat what has been done. They fail to provide a comprehensive overview of the work done and instead cover unnecessary details about research or statistical methods. Thus, a descriptive-form abstract is unlikely to convince the PAJAIS editors that the manuscript is worthy of further consideration.

An informative abstract requires the authors to carefully craft "*the abstract to convey the article's importance, accessibility, and applicability.*" (Klein et al., 2006, p. 268). Although both descriptive and informative abstracts have the same structure where readers can find information in terms of objectives, methods, and findings, the informative abstract explicitly locates and examines the *key points* in an article (Haynes et al., 1990; Rennie & Glass, 1991). For example, submissions with an informative abstract will not simply describe the research question as "the purpose of this research is to investigate..." but rather characterize the research objective as an issue in scholarly conversation, and tackle how the manuscript can contribute to such a discussion. Again, submissions with an informative abstract will not outline trivial findings, but will focus on key findings that are closely related to the proposed questions and go on to explain how this new evidence can inform a scholarly conversation (Rennie & Glass, 1991).

We recommend that authors keep in the forefront of their minds that the purpose of their abstract is to make it easy for PAJAIS readers to grasp the *key points* of the manuscript. An

abstract that chronologically describes steps and procedures is inherently vague. It does not give the audience a clear vision because it mistakenly prefers the *how* (topics, methods and scopes) over the *why* (why research question and implication matter).

## Structured abstract

Over the past decade, the abstracts in PAJAIS submissions have been written as unstructured abstracts that consist of one paragraph describing background, methods, results, and conclusions. They have used a narrative form without any labeled sections. The most challenging part of writing an informative abstract, however, is deciding what to include and what to eliminate (Zhang & Liu, 2011). PAJAIS submissions sometimes neglect essential elements of their work when they used an unstructured abstract format. Readers need these missing elements in order to make an informed assessment of whether to continue reading.

Accordingly, PAJAIS is adopting a structured abstract that can help authors to develop more complete abstracts, and thereby assist our readers to quickly understand the major aspects of a study. A structured abstract has distinct, labeled sections that can better guide authors in organizing the *key points* from their manuscripts (Rennie & Glass, 1991; Zhang & Liu, 2011). Therefore, all manuscripts submitted to PAJAIS now must use a structured abstract of no more than 300 words under the following labeled sections: **Background**, **Methods**, **Results**, and **Conclusions**.

Table 1 shows the format of a structured abstract in PAJAIS. We highlight two essential goals, clarity and conciseness, when constructing an abstract (Klein et al., 2006). Clarity and conciseness should proceed in parallel. Because informative abstracts only contain key points from the manuscript, the abstract must be organized around the focal ideas of the study and not stray from the research objectives. A sample of a structured abstract is provided in the Appendix. When writing a structured abstract, by incorporating both clarity and conciseness, the abstracts submitted to PAJAIS in the future will offer even greater help to readers in selecting what to read. It is also hoped that the improved system will also engage a wider readership by providing a clearer representation of the articles selected for publication.

Table 1 - Instructions for structured abstracts		
Labeled sections	Essential aspects	Suggestions
Background	Concise	A brief introduction to reveal the main ideas of the manuscript. The title, abstract and content are consistent with each other and the manuscript. An examination of research objectives and contexts, why the work was done, and what is important.
	Clear	The research questions must be articulated in an explicit sentence. The authors must define what the primary research objective is. State the reason for the name of the study, call attention to the proposed questions that previous scholarly conversation has neglected.
Methods	Concise	The fundamental research design for conducting the study should be reported clearly. All unnecessary methodological details should be omitted.
	Clear	Do not overstate the advancement of research methods. The abstract should state explicitly how the study design has been designed to answer the posed research question(s).
Results	Concise	Only showing the expected and observed results is insufficient. Key findings that explain how and why differences occurred should be organized in summary form to make them easier to understand.

	Clear	Do not report trivial findings, focus exclusively on key findings that reveal insights and develop new avenues of research.
Conclusions	Concise	Elements of the conclusion found in the abstract must be justified and supported by the evidence in the manuscript.
	Clear	Focus on the contribution to existing scholarly conversation. How do the implications revise or extend well-known wisdom?

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## Appendix: An example of a structured abstract

All PAJAIS manuscripts should be submitted in the style of a structured abstract, with no more than 300 words. Write an informative abstract that addresses the key points. The abstract should not include references. The structured abstract has four labelled sections.

**Background:** *In contemporary information systems development (ISD) projects, diverse teams can share knowledge homogeneously or heterogeneously to develop transactive memory systems (TMSs). TMSs are known to enhance team performance, but little is known of how the structure of homogeneous and heterogeneous knowledge sharing networks (KSNs) within diverse teams affect the development of TMSs. This study is the first to investigate the difference in outcomes between organizations using homogeneous and heterogeneous KSNs.*

**Methods:** *A field study of 168 software development teams was conducted, with a focus on the two components of KSN (i) network centrality, and (ii) network density. Shared and differentiated TMSs approaches were used to explain how homogeneous and heterogeneous KSNs affect team performance.*

**Results:** *Results from social network analysis showed that in homogeneous KSNs, both network centrality and density enhanced team effectiveness because it facilitated shared TMSs. In heterogeneous KSNs, network density enhanced team innovation as it created differentiated TMSs, and network centrality jeopardized team innovation due to emergent conflicts.*

**Conclusions:** *Software development teams who shared homogeneous and heterogeneous knowledge are effective and innovative because they develop shared and differentiated TMSs. KSNs should be actively managed in different enterprise structures in order to mobilize knowledge effectively. This study supports extant TMSs research and provides a new interpretation of the relationships between KSN structure, TMSs, and team performance.*