

Structured vs. Unstructured Abstract: A Different Look at Iranian Journals of Library Science

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ABSTRACT: The present study aims to investigate the quality of the structured versus unstructured abstracts in terms of content comprehensiveness and observing the items in APA manual. This survey uses a content analysis method. Data were collected through study of abstracts. Journals included in this study are as follows: Faslname-ye Ketab, Journal of Academic Librarianship and Information Science, Iranian Journal of Information Processing & Management, Library and Information Science Quarterly, Ganjine-ye Asnad, and Research on Information Sciences & Public Libraries. Of each publication, abstracts of 4 recent issues have been studied. Of 245 abstracts, 49.4 percent were structured and 50.6 percent were unstructured. The score mean for structured abstracts was higher than unstructured ones. The most frequent omission from abstracts was information about "conclusions" and the least omission belonged to "purpose". It was revealed that most of Persian journals of LIS use structured abstracts, although the structures used were not the same. Based on findings of the current study, it seems that a structured format increases the quality of abstracts.

Keyword: abstracting, library and information science journals, structured abstract, unstructured abstract.

INTRODUCTION

Structurally, the abstracts are divided into structured and unstructured types. The unstructured abstracts (traditional) are written in a paragraph and they don't have any title specific for different parts of an abstract. It is required that the content, order and sequence of the items in an unstructured abstract are formulated as it is in the structured one. In the structured abstracts, these sections are mentioned separately: aim, population, study method, results and conclusion (Habibi et al., 2008). Based on the items in the structured abstracts, using them as a creative solution can help the effective and efficient development of the results of the study (Hahs-Vaughn & Onwuegbuzie, 2010).

Nowadays, writing a structured abstract is common in most of the scientific fields. It is because the authors of the papers ignore some of the information elements including introduction, method or findings in unstructured abstracts, but the readers need the information (Baniaghbal & Ramezani, 2011). Accordingly, it is required that the submitted abstracts can easily present an exact image of the content of the paper. Uniformity of the structure of the abstracts published in journals besides saving time and energy results into the low confusion of the audience. Therefore, a comprehensive and standard abstract can play an important role in information retrieval. The librarians, as the main experts of information organizations and retrieval should be a role model in terms of abstracting. There is no comprehensive study in Iran about whether the library researchers observe abstracting standards or not. The current study aimed to investigate the comprehensiveness of the content in the structured and unstructured abstracts. As we know, APA¹ manual is one of the being applied abundantly by the researchers of social sciences and behavioral sciences. Most of the journals in Iran oblige the authors to use APA citation style but other items of paper writing such as abstracting are not taken into attention. The current study aimed to take the mentioned as a criterion. It can be said that based on the APA manual, any abstract should have the five following components:

1. Problem/purpose/objective/research question/focus of study,
2. Sample/population size/characteristics,
3. Method (e.g., data-gathering procedures, intervention, research design),
4. Findings, and
5. Conclusions/implications/recommendations.

The similar studies performed in this field are Abdekhoda and Abdollahi (2010) regarding the investigation of the compliance of the abstract of Persian journals published by Tehran Medical Sciences University with ISO 214 and Vancouver group guidelines. The findings showed that the average total compliance of the abstract with the ISO standards was 85.37% and Vancouver group instruction 84.44%. The abstracts had the most compliance in "express findings" and the least compliance in "sub results present" with ISO standards and in "Keyword existence" and "findings" had the highest compliance with Vancouver group instruction and "keywords based on Medical Subject Headings (MESH)" had the lowest compliance. Banieqbal et al. (2011) in their study investigated the existing abstracts in the Journal of Academic Librarianship and Information Science based on structured abstract model. The findings of the content analysis showed that the quality of the structured abstracts were better than unstructured ones. The results of the findings of survey from the audiences via the questionnaire showed that the structured abstract compared to the unstructured abstract in terms of audience preference at meaning difference, ease of information retrieval and readability of the abstracts was better.

Other studies performed by Hartley and Onwuegbuzie showed that they were pioneers in the studies of the abstracts. For example, Hahs-Vaughn and Onwuegbuzie (2010) in a study investigate 2 years of abstracts of empirical research articles submitted to the journal of Research in the Schools and to determine the extent to which the abstracts were underdeveloped, thereby suggesting the need for structured abstracts. Of the 74 articles reviewed, 44.3% contained an underdeveloped abstract. Articles with underdeveloped abstracts were approximately twice more likely to be rejected than were articles with developed abstracts. Hartely (2007) conducted many researches on the effectiveness and benefits of structured abstracts and comparison of them with the unstructured ones. For example, he and Betts (2007) in one of the studies found that the structured abstracts had more details compared to the unstructured abstracts and reading process and finding the data in the abstract are facilitated. There were other researchers in this field including Nakayama et al. (2005) investigating the application of structured abstracts in 30 medical journals. After the analysis of 304 papers, they found that 62% of the papers had structured abstract and 38% lacked structured abstracts. Budgen, Burn and Kitchenham (2011) in a comparative study on structured and unstructured abstracts found that the structured abstracts were more comprehensive and clear than the unstructured one. Only 15.79 % of the unstructured abstracts had comprehensiveness and clarity while 85.00% of the structured abstracts had good condition. They found that using a structured format during abstracting can help the less-experienced researchers.

By the review of the literature, we can find that although the researchers including Iranian researchers considered the importance of high quality abstract in the papers and performed some studies, there is no study about the content comprehensiveness in the structured and unstructured abstracts in Persian Library and Information Science (LIS) journals. In addition, the consistency of the abstracts of APA manual is less considered by the local researchers.

The most important questions dealt with in the current study are as:

1. Which section in the abstracts of information and library sciences had the most and least conformity with APA manual?
2. Which kind of abstract (structured or unstructured) is of high quality?

MATERIALS AND METHODS

The current study design was content analysis method. It aimed to investigate the quality of the structured and unstructured abstracts in terms of content comprehensiveness and observing the items in APA manual. The data were collected via the study of the abstracts. The population of the study includes 6 Persian LOS journals, namely: Faslname-ye Ketab, Journal of Academic Librarianship and Information Science, Iranian Journal of Information Processing & Management, Library and Information Science Quarterly, Ganjine-ye Asnad, and Research on Information Sciences & Public Libraries. Of each journal, the abstract of four recent issues were studied. The data analysis was done by SPSS software. All the abstracts were investigated based on five items in APA manual.

RESULTS

Totally, the abstract of 245 papers were investigated and Iranian Journal of Information Processing & Management with 70 papers had the highest number of the papers. Library and Information Science Quarterly and Faslname-ye Kitab each had 44 papers, Research on Information Sciences & Public Libraries had 31 papers, Journal of Academic Librarianship and Information Science with 29 papers and Ganjine-ye Asnad had 27 papers. Of total studied papers, 124 papers (50.6%) had unstructured abstracts and 121 papers (49.4%) had structured abstracts.

The most frequent omission from abstracts

The findings analysis based on the items in each abstract (purpose, population, method, findings, and conclusions) defined that 99.59% of the abstracts had "purpose". In other words, Iranian LIS researchers considered purpose more than anything in abstracting. The study population and the study method were observed in 82% of the papers. The most important part of the paper "findings" and "conclusion" were expressed in less number of the abstracts. In 49 abstracts (20%), nothing was mentioned about the findings of the study and in 132 abstracts (53.88%) the conclusions of the study were not mentioned (Table 1).

Table 1. Frequency of omissions in abstracts by component (n=245).

Component of abstract	Frequency (%)
Problem/purpose/objective/research question/focus of study	1 (0.41)
Sample/population size/characteristics	43 (17.55)
Method (e.g., data-gathering procedures, intervention, research design)	42 (17.14)
Findings	49 (20)
Conclusions/implications/recommendations.	132 (53.88)

The quality of the structured vs. unstructured abstracts

After the study of all the abstracts and their scoring, the results showed that the mean score of the structured abstracts was 4.42 with condition compared to the unstructured abstracts (mean 3.46). As is shown in Table 2, the papers with structured abstracts averagely observed at least four cases of the five existing cases in APA manual. In other words, the structured abstracts had the conformity of 88.40% with APA manual. However, the unstructured abstracts were only 69.20% based on the mentioned manual.

Table 2. The mean of the quality of the abstracts of papers based on their type

Abstract	Frequency	Scores sum	Mean	Score percent
Unstructured	124	429	3.46	69.20
Structured	121	535	4.42	88.40

The quality of the abstract based on authorship patterns

The data analysis in terms of the total number of the authors showed that totally 529 authors contributed in writing the papers and the mean author number for each paper was 2.16. In terms of authorship patterns, the two-authored model with 112 papers (45.7%) was the most common model among the study researchers and three-authored model with 60 papers (24.5%) was in the next rank. 57 papers (23.3%) had one author. Finally, 12 papers (4.9%) had four writers and 4 papers (1.6%) had five authors.

The investigation of the abstracts showed that three-authored model had the highest score mean and the highest percent (84%) consistent with APA manual. The single author papers lacked a good quality in terms of the abstract and had the least mean score among other writing models (Table 3).

Table 3. The quality of the abstracts in terms of authorship patterns

Writing model	The number of papers	Sum of the scores	Mean	Consistency percent with APA
Single-authored	57	197	3.46	69.20
Two-authored	112	451	4.03	80.60
Three- authored	60	252	4.20	84.00
four- authored and five- authored	16	64	4.00	80.00

DISCUSSION

An abstract, either structured or unstructured, should well define the body of the paper. It is obvious that structured abstracts present organized information of the paper body but in unstructured abstracts, if the

author/librarian cannot define the body of the paper, the results of the study are not presented well. Thus, using the structured abstract can effectively show the results of the study to other researchers and increases the citation capability.

The results of the study showed that the quality of the structured papers (88.40%) was more than the quality of the score of unstructured papers (69.20%). It seems that using a pre-defined structure to present the information in the abstract helps the improvement of the quality of the abstracts. In a structured abstract, the author is obliged to write the required notes below each of the sections while in unstructured abstracts, there is no such a requirement for the writer of the paper and he can omit some parts of the abstract on purpose or accidentally.

The results showed that single-authored papers were not good in terms of abstracting standard and had the least score mean among other writing models. It seems that in a collaborative research, the abstract is reviewed by the authors and then it is well-designed.

Moreover, among the items being incorporated in an abstract based on the APA manual, "purpose" was more and it showed that the authors of the papers considered the purpose more than anything in abstracting. Another important point is that "conclusions" as one of the most important parts had the least consistency with the manual as only 46.12% of the abstracts contained conclusions. It seems that the major problem of the abstracts in Persian LIS journals is the lack of information on conclusion and the researchers should focus on it during abstracting. Finally, in 20% of the abstracts, there were no findings and it is one of the existing drawbacks of the abstracts of Persian LIS journals.

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