

The Components of Abstracts in the Areas of Indonesian International Journals

Asbah^{a.1}, Lalu Isnaeni Rahman^{b.2}

^aUniversity of Muhammadiyah Mataram, Indonesia

^bUniversity of Technology Mataram, Indonesia

Email: Asbah@ummat.ac.id

ARTICLE INFO

Article history:

Received: 5/7/2020

Revised : 6/8/2020

Accepted: 7/8/2020

Keywords:

Abstract,

Indonesian Journals indexed by Scopus,
Components or elements of the abstract

ABSTRACT

The readers prefer to read the abstract in order to find out the contents. It has to be short, easily read, and understandable. It consists of complete elements or components. The aimed of this study were to reveal the components of abstract and to find out what were patterns of moves. The researchers used descriptive qualitative approach because this study focused on the analysis or interpretation of the written material in context. Quirkos Application was used to sort, manage, analyzed and understand the data. From the results that already exist, there are thirteen procedures of writing abstracts used by writers in Indonesian International Journals Indexed Scopus. Those were I, IP, IR, IPR, IRD, IMR, PMR, PMD, IMRD, PMRD, IPMR, PIRM, and IPMRD. There are limitations in this research that have to be considered. First, this corpus consists of abstracts in only areas of Indonesia. Second, further research is necessary to determine the variables that affect the writers' model in writing an appropriate abstract. Thirdly, the researchers only analyzed 47 abstracts.

I. Introduction

Andrei, (2007) Writing an abstract means to extract and summarize to think solutely, straightforward, actual data presentation and interpretation. Wong et al (2005) States that a structured abstract has advantages and can include Introduction (or Background and Purpose), Methods, Results and Discussion or Conclusions. Abstracts also ease research by condensing large quantities of data into a more manageable size, improve the efficiency of indexing information, enhance the quality and quantity of data that can be assimilated by a reader, and aid researchers in determining which documents to read, Borko (1975).

According to the coding scheme, the recommended abstracts should have contained the following structural elements: background, purpose/scope, hypothesis, method, results and conclusions. These expectations were, however, not confirmed. In the recommended

abstracts the structural elements I (background, purpose), M (method description, sample), R (direct results) and D (conclusions) were included. The structural elements were coordinated with the IMRAD format (Milas-Bracović, 1987).

Abstracts have to be short, so, unfortunately, many authors think of abstracts as “a simple reduction of the overall length of the text” (Montesi & Owen, 2007, p. 27) that meets the abstract length requirements of the journal. Hartley and Betts (2009) suggest that in social sciences, a good abstract should include a background, aims, methods, participants, place of study, results/findings, and conclusions/implications. Hartley and Cabanac (2017) the

abstract is a crucial component of a research article. Abstracts head the text and sometimes they can appear alone in separate listings (e.g., conference proceedings). The purpose of the abstract is to inform the reader succinctly what the paper is about, why and how the research was carried out, and what conclusions might be drawn. Similarly, in medical or clinical research, out of all abstract components, “conclusions in the abstract likely have the greatest impact on readers” (Shannon, 2000, p. 328). For these abstracts to be accurate and representative of the research, both positive and negative as well as statistically significant and non-significant findings should be included in the abstract (Shannon, 2000).

An abstract represents a short summary of key elements of the manuscript. When published, an abstract usually is the fourth element that the reader sees. The first is the title, the second element is the keywords, the third element is the author(s) information, and the fourth element is the abstract. Therefore, by these few hundred words, the readers judge whether the manuscript fits their interests. Common mistakes in writing the abstract include poor writing, a lack of important details, and misrepresentation of the manuscript (Andrade et al, 2011). Jay (2017) states that an abstract is the ‘mini article’, it provides the background, the context, the purpose of the study. Briefly it describes the methods- where, how the participants were recruited, study design, variables studied, analytical methods and ethical issues. The findings are in line with the objectives and methods and its significance to draw the conclusions.

An abstract outlines your paper. It appears at the start of a document and is often the first thing people read about your research. It is important to make a good first impression with a clear summary. In reading scientific papers, for example, articles, journals, theses and dissertations, the readers prefer to read the abstract in order to find out the contents. Because the readers want to comprehend quickly the contents of scientific work, and elements of abstract such as introduction, methods, results and conclusion. But in the reality, many descriptions of scientific work do not discuss all the points or all elements of the description in the writing. An abstract needs to be made academic and try to look at the rules that have been made. As the result, the readers can learn the science and rules in making an abstract. In this research, the researcher intent to discuss the components of the Indonesian abstract that are indexed by Scopus, which have already passed from local journals to international journals and to find out what other pattern of moves. Researchers do not focus on assessing a journal. But it seems only to reveal what components are in the abstract. And give a definition to all readers to assess for themselves whether the abstract is appropriate or inappropriate according to the rules. (Hyland, 2007). It is a fact that the lack of formal training in abstract writing increases poor writing, misunderstanding, and communication problems in scientific writing. In order to improve quality in the writing of abstracts in English by EFL learners, some training and genre awareness would be beneficial.

Maria (2017) analyzed abstracts written by EFL writers in Argentina. Study shows that all the abstracts in this corpus follow the IMRaD structure (Introduction, Method, result and Discussion). Despite the value of these findings, there are of course limitations in this study to consider. First, this corpus consists of abstracts in only five areas of study. Second, further studies are necessary to determine the variables that affect the writers’ choice of model. Finally, the corpus consists of a convenient sample of 17 abstracts, which is a limitation per se since results cannot be conclusive but orientating.

Harison et al. (2016) attempted to examine whether the abstracts provided in conference proceedings include the essential rhetorical moves and whether the moves are presented in the sequence according to the selected classification. The data for this study were collected using purposive sampling from 23 abstracts of empirical-based studies in nature from the selected conference.

The findings of this study show that approximately 83 percent of the conference proceeding abstract writers have one or more missing rhetorical moves in their abstracts. The majority of the authors (91.3%) began their abstracts with the Purpose move. In terms of the inclusion of the Method move, 82.6% of the abstracts contain the Method move. Nevertheless, there are academics (17.4%) who did not include the Method move in their abstracts. As in the case of the finding of the Purpose move analysis, the majority of the selected abstract (78.3%) consist the Conclusion move. The most prominent moves structure sequence is Purpose-Method-Product-Conclusion (42.1%).

An academic should have the basic knowledge of what an abstract should fundamentally constitute. The absence of such knowledge and skills of academic writing, particularly research report writing is commonly reflected in how the abstract is presented. Therefore, it is recommended that institutions of higher education provide the relevant professional development in order to ensure that academic researchers possess the required academic abstract writing skills, (Harison et al. 2016).

Seden Can et al. (2016) examined move structures in AL abstracts and compare the results with previous studies both synchronically and diachronically. Fifty research articles were randomly selected from the ESP journal, with abstracts from recent issues published between 2011 and 2013 preferred to reflect current writing practices.

Only 17 (34%) of the abstracts contained all five move types, the number of abstracts lacking at least one move was 33 (66%). The most frequent category in the present study was M, which was present in 100% of the abstracts. Overall, the results indicate that M is a conventional move in AL articles. The second most frequent move in our sample was P at (96%). P was the second most frequent move (91%) found by previous studies. In fact, in six of the nine studies, this move occurred in more than 90% of the abstracts. This high percentage indicates that P is also a conventional move for AL writers. R was the third most frequent in the present study at 92%. The D move, the last move in our framework, was the fourth most frequent category. Of the 50 abstracts, 84% included this move.

Jamar et al. (2014) analysed the components of abstracts published in selected scientific journals and also investigated whether the components of the abstracts were in accordance with guidelines. The abstracts were published from 2003 to 2009 in the above mentioned journals. The research was conducted from August 2010 to October 2010. The results of this research showed that most often three structural elements from our coding scheme were present in the abstracts, and these three structural elements were background, method and results. If we compare the data that show the presence of structural elements in the abstracts from library and information science and materials science and technology noticeable differences were only found in the presence of the structural elements purpose/scope (54% and 8%) and conclusions (67% and 22%).

II. Method

Participants of this study were the researchers from Indonesia and overseas who sent their Journal to Indonesian International Journal. The purpose of the this study was to examine whether the abstracts provided all the components of Structural abstracts: (I) Introduction, (P) Purpose, (M) Methodology, (R) Result and (D) Discussion or conclusion. Therefore, the study pursued the following research question: Do the abstracts in Indonesian International Journals indexed by Scopus contain all the components of abstract? And are there any patterns of moves?

In this research, the researchers used descriptive qualitative approach because this study focused on the analysis or interpretation of the written material in context, Creswell (2014). The material of this study focused on selected the journal for all fields included theoretical, practical and empirical paper in all areas. After searching the data. The researchers decided to take 47 journals and take one abstract in each journal. The journals taken by the researchers were journals published in 2019. Ary (2010:424) states that the qualitative inquirer deals with data that are in the form of words or pictures rather than numbers and statistics. And also, Bogdan and Biklen (2007) state that qualitative research is descriptive which the data is collected in the form of words or pictures rather than numbers.

Moreover, Endraswara (2011) gives the important features of qualitative research in investigating the literature, such as the researcher is the key of instrument that reads the literature thrifty, the research is done descriptively which elaborated in the form of words or pictures than numbers, and the process is more priority than result, because literature establishes interpretations. In this study, the writer used document as the sources of data, because it is written material. Thereby the data of this study are words, sentences or utterances. The source of data in the study is subjects from which the data can be obtained (Arikunto, 2010: 129).

In data collection, the selected abstracts for this study were Indonesian International Journals indexed by Scopus. The researchers selected the journal for all fields included theoretical, practical and empirical paper in all areas. After searching the data, the researchers decided to take 47 journals and take one abstract in each journal. The journals taken by the researchers are journals published in 2019. For consideration, the researchers believe that the journals published in 2019 are very high-quality journal. These are lists of journal names that have been indexed by Scopus: Acta Medica Indonesiana, Agrivita, Al-Jami'ah, ASEAN Journal of Chemical Engineering, Atom Indonesia, Biodiversitas, Biotropia, Bulletin of Chemical Reaction Engineering and Catalysis, Bulletin of Electrical Engineering and Informatics, Cakrawala Pendidikan, Critical Care and Shock, Electronic Journal of Graph Theory and Applications, Gadjah Mada International Journal of Business, HAYATI Journal of Biosciences, IAES International Journal of Artificial Intelligence, Indonesian Biomedical Journal, Indonesian Journal of Applied Linguistics, Indonesian Journal of Chemistry, Indonesian Journal of Electrical Engineering and Computer Science, Indonesian Journal of Electrical Engineering and Informatics, Indonesian Journal of Geography, Indonesian Journal of Islam and Muslim Societies, Indonesian Journal of Pharmacy, Indonesian Journal of Science and Technology, Indonesian Journal on Geoscience, International Journal of Advances in Intelligent Informatics, Internasional Journal of Electrical and Computer Engineering, Internasional Journal of Power Electronics and Drive Systems, Internasional Journal of Technology, Internasional Journal

on Advance Science, Egeingering and Information Tecnology, Internasional Journal on Electrical Engineering and Informatic, Journal of Engineering and Technological Sciences, Journal of ICT Research and Applications, Journal of Indonesian Islam, Journal of Mathematical and Fundamental Sciences, Journal of Regional and City Planning, Journal of The Indonesian Tropical Animal Agriculture, Journal on Mathematics Education, Jurnal Pendidikan IPA Indonesia, Kukila, Medical Journal of Indonesia, Operations and Supply Chain Management, Qudus International Journal of Islamic Studies, Studia Islamika, Teflin Journal, Telkomnika, and Tropical Animal Science Journal.

Data analysis was the review process, sorting, and grouping data in order to formulate working hypotheses and lifted it into conclusion or theories in the research findings, (Bakri, 2003: 162). To gain easiness of this study and to answer the research problem, after the data have been collected, then the writer analyzed them systematically. In order to make it systematic, the researchers conducted the analysis through some steps as follow: the first; reading and understanding the abstract, the second; finding out the components or the element of the abstract, the third; making conclusion based on the analyzed data and use the Quirkos application. Quirkos Application helps researchers sort, manage and understand large amounts of text. Users can tag or code relevant sections of text, and collate and compare themes across dozens of different sources. Quirkos helps people doing qualitative research to understand and analyse sources of data such as interview transcripts, surveys, focus groups and articles.

III. Results and Discussion

The researchers in this study set the elements that will be used in analyzing an abstract. The researchers made their own elements and made their own code in accordance with existing standards. It can be seen in table 1 and table 2

Table 1. Structural elements that was used in the research

The structure element	Description
Introduction	Background, sentences that indicate the context of the research at hand, previous research, or underlying theories.
Purpose/Objective	Research question, sentences describing the reasons for engaging in the study, the goals of the study, or the reasons for writing the paper.
Method	Approaching (and attempting to close) the gap in literature: methods, study design, and data analysis (e.g. coding, statistical analysis).
Result	Theoretical or empirical findings, data, relationships, effects, influences, reliability levels, quantity of data, and events.
Discussion	nterpretation of results: limitations and weaknesses, practical implications, suggestions for future research, discussion of theoretical aspects, etc.

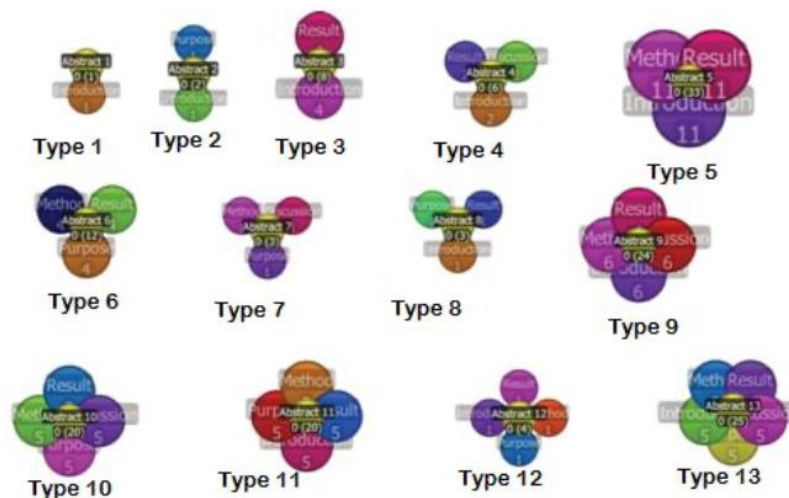
Table 2. Structural elements that was used in the research

Abstract move	Coding
Introduction	I
Purpose/Objective	P
Method	M
Result	R
Discussion	D

From the results that have been done, the researchers tried to read 47 abstracts several times to get the elements in the abstract. After obtaining the data, the researchers analyzed using Quirkos Analysis. All data transferred to the application and researchers processed

the data. This application was very helpful for researchers in processing data, easier and more accurate. The results of the analysis can be seen in figure 1

Figure 1. The data obtained from Quirkos Application



From the results that already exist, there are thirteen ways of writing abstracts used by writers in Indonesian International Journals Indexed Scopus. The researchers tried to provide information about the results found that were obtained from 47 Journals International. The first findings; the writer only provided background, general information without providing steps that have been taken in the research (I). The second findings; the writer gives a general explanation about the research and as an addition the writer revealed the purpose of the study

(I, P). The third findings; in writing abstracts, the writer explained the theme of the journal and directly provide results from the research (I, R). The fourth finding; the writer gave an introduction, the purpose of the study and results of the study (I, P, R). The fifth finding; the writer gave an introduction, the results of research and direct discussion (I, R, D). The sixth findings; the writer gave an introduction, research methods and direct results of research (I, M, R). The seventh findings; the writer provided the research objectives, research methods and directly the results of the study (P, M, R). The eighth findings; the writer provided research objectives, research methods and direct discussion of the research (P, M, D). The ninth finding; the writer gave a background or introduction, research methods, research results and Discussion (I, M, R, D). The tenth findings; the writer provided research objectives, research methods, results of research and discussion (P, M, R, D). The eleventh findings; the writer provides background or introduction, research objectives, research methods and results of research (I, P, M, R). Twelfth findings; the writer directly provide the research objectives, then followed by an introduction, the results of the study and finally the research method (P, I, R, M). Thirteenth findings; the writer provided background or introduction, research objectives, research methods, results of research and discussion (I, P, M, R, D).

The seventh type, the ninth type and the thirteenth type of abstract are the appropriate abstracts that can be found in the research. In this study, researchers tried to give 3 examples of abstracts that meet the criteria used by the authors according to existing

theories. The Abstracts were taken from data that had been analyzed by researchers in this study.

The researchers' coding scheme (IPMRD) (the thirteenth type)

(Introduction): In pediatric cardiac surgery, high blood lactate levels during cardiopulmonary bypass (CPB) are associated with tissue hypoperfusion and contribute to postoperative complications. Studies indicate that blood lactate level is proportional to tissue oxygen debt. (Purpose): The objective of this study was to evaluate the change in blood lactate levels and perioperative morbidity and mortality. (Methods): We conducted a retrospective analysis of 81 pediatric patients who have undergone cardiac surgery with continuous monitoring of serial measurement of blood lactate in Integrated Cardiac Service Unit, Dr. Cipto Mangunkusumo Hospital, Jakarta. Arterial blood samples were taken before, during CPB, and on admission to the Intensive Care Unit (ICU) and every 6 hours afterward. Duration of CPB, hemodynamic parameters, inotrope dosage and perioperative outcome were documented. (Results): The largest increment in lactate level occurred during CPB and decreased on admission to the ICU. Patients who had complications exhibited higher lactate levels at all time points. Lactate levels were higher in the group with complications at the end of surgery (4.4 vs 2.7 mmol/l; $p=0.000$), immediately after ICU admission (2.9 vs 1.9 mmol/l; $p=0.000$), 6 hours (1.9 vs 1.4 mmol/l; $p<0.003$), and 12 hours after admission (4.6 vs 2.8 mmol/l; $p=0.000$). Increased lactate concentration was reliably associated with patient length of ICU stay, liver function parameter and anion gap. Logistic regression analysis revealed that peak blood lactate levels of 3.5 mmol/l or higher during CPB were strongly associated with postoperative mortality and morbidity. (Discussion): Hyperlactatemia occurs during CPB may become an early indicator/predictive index for postoperative morbidity and mortality in pediatric patients. This study generates the hypothesis that strategies aimed to preserve oxygen delivery during CPB may reduce the occurrence of elevated lactate levels.

Hyland's (2004) model, which consists of a five-move pattern (IMRAD OR IMRaD) (The ninth type).

(Introduction) *This paper reports on a study looking at the reading and writing proficiency and vocabulary knowledge of Indonesian EFL teachers, the relationship between proficiency and years of service, and the teachers' own perceptions of their proficiency in English. (Method) Three proficiency tests (Vocabulary Levels Test/VLT, Reading and Writing Tests), questionnaire, and interview were used to collect data. (Result) The results point to mixed levels of English language proficiency, negative correlations between years of service and vocabulary, reading and writing test results, and that teachers themselves had difficulties in judging their own English language proficiency. Factors that inhibit the capacity of teachers to focus on their English proficiency are presented. (Discussion) Limitations of the study as well as implications for EFL teachers' professional development (PD) and future research are also discussed.*

The components of abstracts proposed by Weil et al. (1963 b) (the seventh type) (Purpose) The aim of this study was to identify the variation of 5'UTR CAPN1 gene and its association to growth traits in Bali cattle. (Method) DNA samples were obtained from 80 heads of Bali cattle originated from BPTU-HPT Denpasar. The average of Bali cattle age was 784 days (631 days-1098 days). Bali cattle were divided into 3 age groups namely, the first group (1.5 years to 2 years), the second group (2 years to 2.5 years), and the third group (2.5 years to 3 years). The observed growth traits were birth weight (kg), live weights (kg), average daily gain (kg), body length (cm), chest depth (cm), withers height (cm), hip height (cm), and heart girth (cm). Polymorphism identification of 5'UTR CAPN1 gene was conducted by Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR- RFLP) with BglIII as the restriction enzyme. Growth traits data association were analyzed using the General Linear Model (GLM) analysis. The 5'UTR CAPN1 gene|BglIII was polymorphic in Bali cattle (GG, GT, and TT). Genotype frequencies for Bali cattle were 0.30 (GG), 0.66 (GT), and 0.04 (TT). The allele frequencies of G and T allele were 0.63 and 0.37, respectively. The G allele was the most frequent allele and GT genotype was the most frequent genotype among the cattle. (Result) The CAPN1|BglIII had a significant effect ($p<0.05$) on growth traits in Bali cattle. Animal carrier of GG genotype had higher live weight and average daily gain than those with GT genotype, while the lowest values were associated with TT genotype.

IV. Conclusion

Despite the value of these findings, there are limitations in this research to be considered. First, this corpus consists of abstracts in only areas of Indonesia. Second, further research is necessary to determine the variables that affect the writers' model in writing an appropriate abstract. Thirdly, the researchers only analyzed 47 abstracts, so that, the result of this study cannot be used to determine what good abstract is for the international standard.

References

- [1] Andrade, C. (2011). How to write a good abstract for a scientific paper or conference presentation. *Indian Journal of Psychiatry*, 53(2), 172-175.

- [2] Andrei V. Alexandrov, Michael G. Hennerici. 2007. Writing Good Abstracts. S. Karger AG, Basel 1015–9770/07/0234–0256\$23.50/0. Stroke Research and Neurosonology Program, Barrow Neurological Institute Suite 300 Neurology, 500 West Thomas Rd Phoenix, AZ 85013 (USA). E-Mail avalexandrov@att.net
- [3] Arikunto, S. 2010. Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta. Atanassova, I., Bertin, M., & Larivière, V. (2016). On the composition of scientific abstracts.
- [4] Journal of Documentation, 72(4), 636 – 647. doi: 10.1108/JD-09-2015-0111 Bogdan, R., C., & Biklen, S., K. (2007). Qualitative research for education. An introduction
- [5] to theories and methods, (5th e.d.) Boston. MA: Pearson Education Inc. Borko, H. and Bernier, C. L. (1975), Abstracting concepts and methods, Academic Press, New York, NY.
- [6] Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage
- [7] Harison M. Sidek, Noor Saazai Mat Saad, Hazleena Baharun, and Mohamad Muzhafar Idris, 2016. An analysis of rhetorical moves in abstracts for conference proceeding. IJASOS- International E-Journal of Advances in Social Sciences, Vol.II, Issue 4, April 2016. <http://ijasos.ocerintjournals.org>
- [8] Hartley, J., & Betts, L. (2009). Common weaknesses in traditional abstracts in the social sciences. Journal of the American Society for Information Science and Technology, 60(10), 2010–2018. doi: 10.1002/asi.21102
- [9] Hartley, J and Cabanac, G. 2017. Thirteen Ways to Write an Abstract. School of Psychology, Keele University, Keele, Staffordshire ST5 5BG, UK. Licensee MDPI, Basel, Switzerland. Publications 2017, 5, 11. doi:10.3390/publications5020011.
- [10] Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. Journal of second language writing, 16(3), 148-164.
- [11] Jamar, N., Šauperl, A. and Bawden, D. (2014). The components of abstracts: The logical structure of abstracts in the areas of materials science and technology and of library and information science. New Library World, 115(1-2), pp. 15-33. doi: 10.1108/NLW-09-2013- 0069
- [12] Jay N Shah, 2017. How to write abstract for a scientific journal article. Journal of Patan Academy of Health Sciences. 2017 Jun;4(1):1-2. ISSN: 2091-2749. Journal of Patan Academy of Health Sciences, Lalitpur, Kathmandu, Nepal. <https://www.researchgate.net/publication/319501358>
- [13] Maria Soledad Loutayf, 2017. Analysis of abstracts in English: A study of abstracts written by EFL writers in Argentina. Argentinian Journal of Applied Linguistics Vol. 5, No. 1, May 2017, 15-36. Universidad Nacional de Salta, Universidad Catolica de Salta, Profesorado Superior de Lenguas Vivas de Salta. soleloutayf@gmail.com, soleloutayf@exa.unsa.edu.ar
- [14] Milas-Bracović, M. (1987), "Struktura znanstvenog članka i njegovog autorskog sažetka = The structure of scientific papers and their author abstracts", Informatologia Yugoslavica, Vol. 19 No. 1/2, pp. 51-67.
- [15] Montesi, M., & Owen, J. M. (2007). Revision of author abstracts: How it is carried out by LISA editors. Aslib Proceedings, 59(1), 26-45.
- [16] Seden Can, Erkan Karabacak and Jingjing Qin, 2016. Structure of Moves in Research Article Abstracts in Applied Linguistics. Published: 18 July 2016, 4, 23; doi:10.3390/publications4030023. www.mdpi.com/journal/publications
- [17] Shannon, S. (2000). Writing a structured abstract. Canadian Association of Radiologists Journal, 51(6), 328-329.
- [18] Weil B. H. et al. (1963 b), "Technical abstracting fundamentals. II. Writing principles and practices", Journal of Chemical Documentation, Vol. 3 No. 3, pp. 125-132. DOI: 10.1021/c160010a001.
- [19] Wong HL, Truong D, Mahamed A, Davidian C, Rana Z, Einarson TR. 2005. Quality of structured abstracts of original research articles in the British Medical Journal, the Canadian Medical Association Journal and the Journal of the American Medical Association: a 10- year follow-up study. Curr Med Res Opin 2005; 21: 467–473.