A BI-DIMENSIONAL ASSESSMENT OF PUBLISHED ABSTRACTS

Dr. Omar Osman Jabak
Department of Arts and Education,
Community College at King Saud University,
Riyadh, Saudi Arabia
ojabak@ksu.edu.sa

ABSTRACT: *The present study aimed to assess the quality of some abstracts of articles published online. To achieve that objective, the researcher employed observation as the main data collection tool. He read some articles published in different journals and noticed that the research elements which should be present in the abstracts were either missing or stated vaguely and the language of the abstracts was conspicuously poor. The findings revealed that the abstracts did not include the basic elements of research abstracts and had many serious linguistic errors. This led the researcher to conclude that the journals did not do much editorial work to improve the quality of articles which they accepted for publication probably because they cared about increasing their financial revenues more than following academic standards. The researcher recommends that more large-scale research be conducted on this topic to exert some pressure on journals to raise their academic standards.*

KEYWORDS: abstracts, academic journals, abstract elements, linguistic errors

INTRODUCTION

The number of academic journals has been on the increase ever since the advent of digital technology (Fenwick, et al, 2016). There seems to be a cut-throat competition among journals (Garcia, et al, 2018) as most of them seek to attract as many research articles as possible. Invitation emails from various journals flood the inboxes and spam folders of researchers' official emails (Kebede, et al, 2017) as these emails are easy to find and locate on the Internet. This has made publication easier but suspicious. Many journals have been branded as predatory or fake journals (Cobey, et al, 2018) which rob researchers of their money and render their research as both poor quality and academically scrupulous.

In general, low-ranked journals and predatory journals accept any paper for publication in any discipline or field and charge reasonable fees (Xia, 2015). They also process and publish papers very fast, probably in less than a week. They can be described as money-wise businesses which aim to publish as many articles as possible for fairly low fees, and in this way, they make lots of money and turn into giant money-spinners. Whether these journals conduct peer review which they claim they do or they do not remains uncertain and questionable as the articles they publish do not conform to basic research standards and exhibit so many linguistic errors, to say the least!

Given the fact that academics have increased substantially all over the world and have also covered almost all academic fields and disciplines, journals have realized that there

is a pressing need for academics, especially the most nascent ones, to publish research studies for either getting a good job offer at a prestigious university or climbing up the promotion ladder in their current positions. As the high-ranked and most prestigious journals take a long time to review articles (Currie, et al, 2019) and issue their final decisions on either accepting or rejecting articles not submitted by well-known academics or researchers, budding researchers are more likely to fall prey to predatory journals which accept any mediocre articles (Sorokowski, et al, 2017) for publication for the sole sake of making money. Sometimes, these so-called fake journals overcharge nascent researchers for promises of fast processing and publication.

The researcher of the present study himself was about to publish an article with a predatory journal without realizing that. He got his article accepted for publication with that predatory journal, but before he paid the processing fee, which was 120 US dollars, he searched for the term 'Predatory Journals' just to make sure his article would be published in an academically recognizable journal. Much to his surprise and dismay, he learned that the journal was classified as a predatory journal. His search for predatory journals led him to download a PDF file from a website containing a long list of predatory or suspicious journals (https://predatoryjournals.com/journals/). As the researcher believes in disseminating knowledge and awareness, he shared that file with almost all his colleagues and friends in the academic world so that fake, predatory journals will be exposed and avoided.

What really motivated the researcher to write the present study was not his discovery of the availability of so many predatory journals which publish any articles or research studies regardless of their compliance with common research standards, but it was the bitter fact that some high-ranked journals also publish articles and studies which do not conform to research standards and contain plenty of linguistic errors. In fact, there seems to be a general consensus among scholars and researchers on the elements of research that should be included in an abstract. A good abstract should clearly state the purpose of the study (objectives), how the study is carried out (methodology), its major findings and recommendations or suggestions for future relevant research (Weissberg, et al, 1990; Wilkins, 1958; Hartley, et al, 2003; Hall, 2003; Creswell, 2009; Sauperl, et al, 2009; Swales, et al, 2009; Ketcham et al, 2010; Blaxter et al, 2010; Leedy, et al, 2018 and others).

The objectives of the study
The present study aims to achieve the following objectives:
1- To measure the abstracts under study against the common structure of academic abstracts;
2- To identify linguistic errors in the abstracts under examination;
3- To provide an assessment of the quality of journals which published the abstracts under study;
4- To spread awareness of the lack of editorial work and responsibility on the part of academic journals.

The statement of the problem
The present research study seeks to answer the following questions:

1.   What research elements are missing in the selected abstracts?
2.   What linguistic errors can be detected in the selected abstracts?
3.   What are some possible explanations for the publication of such abstracts?

LITERATURE REVIEW

Almost all reference books dealing with academic research and how to write it discuss abstracts, their importance to any article or research study, their basic components or elements and how to produce good ones (e.g. Wilkins, 1958; Hartley, et al, 2003; Creswell, 2009; Blaxter et al, 2010; Leedy, et al, 2018). There have been few research studies on the evaluation of the quality of abstracts within an academic context based on the researcher's exhaustive search. However, there has not been any study that sheds light on the poor quality of abstracts and lack of editorial work which have been observed recently in low-ranked and high-ranked journals to the best of the researcher's search and knowledge. The present study will examine ten recent abstracts and check them against two major criteria; the adherence to the major components or elements of well-structured abstracts and the linguistic soundness or correctness of the academic language used in research studies. The paragraphs which follow will provide a review of the relevant literature available on the topic of the present study.

To begin with, Stephenson et al (2017) conducted a comparative study on evaluating the quality of abstracts and research articles in medical education research. They examined abstracts submitted to a medical annual meeting in 2009 which were published later on as full-length articles in peer-reviewed medical journals. They used an evaluation instrument which they developed and included thirteen domains or criteria in the instrument to evaluate the quality of abstracts and research articles. These domains were 'study design, sampling, number of institutions, response rate, type of data, validity, internal structure, content, relationships to variables, data analysis, appropriateness, complexity, and outcomes' (ibid: 4). They found that research articles scored higher than abstracts on that evaluation instrument. Another interesting finding which is partly in line with the major findings of the present study is related to 'missing information in abstracts, including validity evidence, response rate, data type, and data analysis' (ibid: 5).

Ufnaska et al (2009) wrote a short essay on how to evaluate the quality of abstracts with an eye to allowing the reader or researcher to decide if an abstract is good or bad. The writers of the above essay used three methods to help tell a good abstract from a bad one. These methods are rating scales, checklists and readability measures. The writers applied these methods to three abstracts. The people who evaluated the abstracts were "two highly experienced scientists (ecologists), native speakers of English. The solid circles show the mean ratings of 33 postgraduate students (all non-native English speakers)" (Ufnaska, et al, 2009: 70).

The major criteria in the rating scales were "understandability, grammar, spelling, structure, selection of information, brevity, suitability for international readers" (ibid, 69). It is worth mentioning here that the rating scales of this study are broadly similar to the error analysis table developed by the researcher of the present study which helped

him classify the linguistic errors detected in the abstracts which he examined. The third evaluation method used in the above essay was a readability measure on a scale from 0 to 100. This has to do with the level of difficulty which readers experienced when they read the articles.

With regard to the second evaluation method followed in the above essay, this was a checklist that included five features against which the evaluators would check the three abstracts. These elements or features were "background, aim, methods, results and conclusions" (ibid, 70). This checklist is very much similar to the checklist developed by the researcher of the present study to help identify the presence or absence of a research element in the abstracts under study.

The above essay concluded that "there is no ideal way of assessing the quality of abstracts: different methods have different strengths and weaknesses" (ibid, 71). This general finding calls on experienced, well-established researchers and research authorities to produce common assessment criteria for the good quality of abstracts which should be followed by all academic journals. Another important conclusion was that "Linguistic data suggest that some problems with scientific abstracts written in English may be characteristic of authors who are non-native speakers of English" (ibid). This conclusion is in line with one of the assumptions made by the researcher of the present study with regard to the existence of many grammatical errors in the abstracts examined which might have been the result of the translation of the abstracts and articles from the researchers' native language into English.

David (2004) wrote an article on how to write a good abstract in which he tried to give a recipe for writing a good abstract and the elements to include in the abstract. He also provided three model abstracts for researchers to follow when they write their own abstracts. David's own definition of an abstract is not different from most researchers' definitions of an abstract. He believes that "An abstract is a condensed version of a full scientific paper. It describes a study and its results. It is a means of conveying to one's peers what was done and why, what was found, and what the implications are" (David, 2004: 1207).

The article ends with some practical advice on how to produce a good quality abstract. To use David's own words, "In the writing process, clear, direct communication, strict adherence to published specifications and format requirements, and careful proofreading will increase the likelihood of producing a high-quality abstract" (Ibid, 1212). David's final comment is in general agreement with the two considerations which must be taken into account when assessing the quality of an abstract. These are the basic components of an abstract and the language used in writing the abstract provided in the present study.

Trakas et al (1997) carried out a painstaking research study with an eye to evaluating the quality of pharmacoeconomic abstracts of 51 original research articles published in selected medical journals and relevant journals between 1990 and 1994. The researchers came to the conclusion that in general the quality of the abstracts examined was poor, with no considerable improvement in quality over the time span covered in the study.

This general finding is in line with the findings of the present study regarding the poor quality of abstracts published in academic journals. The other interesting finding of the above study was that the quality of abstracts published in medical journals was quite better than the quality of abstracts published in other relevant journals as the former were more structured and better organised.

METHODS

Data collection tools
The present qualitative study examines a select number of abstracts whose full articles were published in scientific journals of different rankings in 2019. These journals are Computer Networks, International Journal of Computer Applications, Cluster Computing: The Journal of Networks, Software Tools and Applications, Circuits, Systems, and Signal Processing, Neural Computing and Applications, Journal of Ambient Intelligence and Humanized Computing and Measurement. Ethical considerations were taken into account so as not to reveal or mention the titles or authors of the research studies to which the abstracts examined belong.

The main data collection tool employed in the present study was observation. The researcher has been reading many articles in different disciplines and has been translating articles from English into Arabic for the past few years. He has come across quite many articles written in English and published in various journals of different rankings. To the researcher's astonishment, he has found many linguistic issues in a large number of abstracts as well as missing research elements in such abstracts. Besides, he has been receiving floods of invitation emails from different journals to publish articles with them. Upon close inspection, he found that a large number of such journals were either fake or predatory with one sole aim: to rob researchers and academics of money, effort and reputation.

Data collection procedure
Since the researcher is himself interested in sharing his research interests with other scholars and researchers through publishing his research studies and articles in academic journals, and given the fact that he also works as a freelance translator of the language pairs English/Arabic and Arabic/English, he has had access to numerous articles and research studies in different academic disciplines and fields. This has provided him with the opportunity to observe the articles he reads for his own research interests or translate articles from English into Arabic for some Arab scholars and academics. The more he has read and translated articles, the clearer and more interesting his observation has become. Finally, he decided to put his observations on paper. To that effect, the researcher chose ten articles randomly and examined their abstracts very carefully to see if the abstracts were written in good English and whether or not they included the basic elements of well-written abstracts.

Data analysis consisted of two phases. In the first phase, the researcher checked the elements of the abstracts under study against the common elements of abstracts. So, after selecting the articles whose abstracts would be examined thoroughly, the researcher read the abstracts carefully a number of times and was able to identify some technical defects in the elements of well-structured abstracts such as the omission of the

objective(s) of the study, research population and other research related elements whose inclusion in any abstract is of paramount importance. To better understand these components of research abstracts, the researcher developed an analytical table to present the findings on the elements of well-structured abstracts.

The second phase of data analysis involved examining the language used in these abstracts. Upon close investigation, the researcher spotted many grammatical or linguistic mistakes, so he developed another analytical table in which he summarized the linguistic errors identified in the abstracts. These errors represent the other major findings of the study. Both tables display the core findings of the present study. The existence and persistence of these methodological errors and linguistic errors provide a logical account of the researchers' assumption that little or no editorial work was done to the abstracts under investigation.

Data analysis

The data of the present study are abstracts of ten articles which were published in scientific journals of different rankings in 2019. These journals are Computer Networks, International Journal of Computer Applications, Cluster Computing: The Journal of Networks, Software Tools and Applications, Circuits, Systems, and Signal Processing, Neural Computing and Applications, Journal of Ambient Intelligence and Humanized Computing and Measurement. The choice of the specific articles was made after the researcher read their abstracts online and found that there were blatant errors in the contents of the abstracts as well as linguistic errors which led the researcher to conclude that editorial work was not done adequately and the journals above-mentioned did not care much about the quality of articles they usually publish so long as the publication and processing fees are paid.

So, after collecting the data for the present research study, the researcher began analysing the contents and language of the abstracts in order to provide answers to the questions of the study and arrive at important findings. The close examination of the data led the researcher to develop two tables in which he presented his findings. The first table was developed to present the elements which should be included in abstracts so that abstracts sound satisfactory and acceptable. The second table provided a list of the linguistic errors which the researcher spotted after scrutinising the abstracts linguistically.

RESULTS AND DISCUSSION

Essential elements of abstracts

Table 3.1 below is a checklist of the elements which should be provided in an abstract of any research paper or article. This checklist was developed by the researcher to help categorize the major findings on this methodological aspect of abstracts. The table examines the availability of five major elements in any given abstract. These are the objective(s) of the study, the methodology followed in carrying out the study, the data collection tool(s), the findings of the study and the suggestions or recommendations for future research.

The table also lists the ten abstracts which were closely examined and analysed (A1, A2, A3, etc.,) and checked these abstracts against the five abstract elements or components. If an abstract provides any of the above-mentioned elements, the letter "P", which stands for the adjective "present" is used. If the abstract does not provide an element, the letter "M", which stands for the adjective "missing" is used, and finally if the element is provided in an abstract but it is not stated clearly, the letter "V" which stands for the adjective "vague" is used. The following subsections provide an elaborate discussion of the findings of the present study on the elements of abstracts.

Table 3.1 Checklist of abstract elements

Abstract elements	*A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Objectives of the study	V	P	V	V	V	V	V	V	V	V
Methodology	V	M	M	M	M	M	M	M	M	M
Data collection tool	M	M	M	M	M	M	M	M	V	M
Findings	M	M	V	V	M	M	M	M	V	V
Suggestions	M	M	M	M	M	M	M	M	V	V

*Note: (A1) means Abstract 1, (A2) means Abstract 2 and so on and so forth. (P) stands for Present and means the element is present in the abstract, (M) stands for Missing and means the element is missing in the abstract and (V) stands for Vague and means the element is vague.

Objectives of the study
Since this is supposed to be the first element to begin an abstract, it is the also the first element displayed in Table 3.1. In fact, the objective or objectives of any study tell reviewers and readers what the study is about and why it is worth carrying out and publishing at all (Hall, 2003; Bohannon, 2013). A close look at the above table shows that only one abstract of the ten examined abstracts provided the objective(s) of the study, whereas the remaining nine abstracts did not state the objective(s) of their studies clearly. One wonders how such a thing escaped the attention of the editors and the editorial teams of the journals in which the abstracts and their full-length articles were published! The omission of this key element in the majority of the abstracts under study is a significant finding of the current study.

METHODOLOGY

The second element which was examined in the abstracts under study was methodology. This element simply answers the question "How was the study conducted?" This also implies an explanation of the subjects or population of the research study along with their different characteristics, data collection tools, data analysis and data coding and the use of any theoretical framework (Hartley, et al, 2003; Bornmann, 2014). Table 3.1 above shows that only one abstract of the ten abstracts under examination stated this element vaguely, whereas the other nine abstracts made no mention of methodology at all. Again, the omission or negligence of this important element casts doubt on the editorial work and the review process which every academic journal should undertake

before it accepts articles for publication. The exclusion of this essential element from most abstracts under study is another striking finding of the present study.

Data collection tools
Although this element is considered part of methodology, it is important to also refer to it in the abstract so that reviewers and readers alike learn about the tool(s) used in collecting data. It is also important to researchers working in an area similar to the area highlighted in the abstract as it may help them compare the data collection tool to theirs or adopt it for collecting the data of their research study. By referring to Table 3.1 to check on this element, we find that the element was present just in one abstract but was expressed somehow vaguely. However, data collection tools were missing in the other abstracts. The absence of this crucial element from the majority of abstracts under investigation is another surprising finding which reflects negatively on the credibility and reputation of academic journals which accept such articles for publication with them.

Findings
A good abstract is the one which mentions the major findings of its article or research study (Hall, 2003; Creswell, 2009; Blaxter, et al, 2010). Reviewers, scholars and readers in general would like, and expect, to see some of the findings of the study in the abstract so that they know that the study arrived at some significant results. This may also encourage them to read the whole study. If no mention of the findings is made in the abstract, one gets the impression that the whole study is meaningless or futile. Table 3.1 shows that four abstracts did have this element but stated it vaguely. The remaining six abstracts, however, did not mention any findings at all. This is another important finding of the present study which also questions the seriousness of the editorial work of the academic journals where the abstracts under study featured.

Suggestions
Suggestions or recommendations for further or future research are also an important element of a good abstract (Leedy, et al, 2015). This element does not only refer to the limitations of the study conducted, but it also leaves room for other research to either confirm its findings or challenge them. A close examination of the abstracts under examination revealed that eight abstracts did not include this element, whereas two abstracts stated it vaguely. The absence of this important element from the majority of the abstracts examined in the present study represents another significant finding and raises many questions about the criteria followed by the academic journals which publish such articles.

Linguistic errors
The other major findings of the current study with regard to the language used in the abstracts under study are summarized in Table 3.2 below. The table presents the findings of the study with reference to the linguistic mistakes spotted in the abstracts under investigation. A close examination of the abstracts resulted in identifying nine major error types. These are subject-verb agreement, wrong word choice, punctuation, prepositions, parts of speech, run-on sentences, tense, articles, and plural/singular. There were other errors in spelling, and conjunctions, but the researcher ignored them

because they were not as frequent and common as the ones listed in Table 3.2. The following subsections provide an elaborate discussion of the findings of the present study on linguistic errors detected in the abstracts under examination.

Subject-verb agreement
A close examination of the abstracts under study showed that five of the ten abstracts exhibited errors in subject-verb agreement. This grammatical or linguistic aspect is important in English because it accounts for users' command of English. Subjects in English must agree with verbs; if subjects are singular, so should verbs be, and if subjects are plural, so should verbs be. However, by breaking this grammatical rule, especially in a highly academic context, the impression one gets about the quality of research and the journal in which it is published is not a favourable one. This also leads readers in general to question the academic standards of the journals where such articles are published and the validity and credibility of the editorial team's work. One can imagine the number of errors one will get if the full articles were to be examined. This finding is important because this error impairs the quality of research and impacts scholars' and journals' reputation negatively.

Table 3.2 Error analysis of select abstracts

	Type of error	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
1	Subject-verb agreement	√		√	√	√				√	
2	Wrong word choice	√	√			√	√		√	√	√
3	Punctuation		√	√		√	√	√	√		
4	Prepositions		√	√		√	√				√
5	Parts of speech	√	√	√		√	√			√	√
6	Run-on sentences			√		√				√	√
7	Tense			√	√	√	√	√	√		√
8	Articles	√	√	√	√	√	√	√	√	√	
9	Plural/ singular	√			√		√	√			√

Wrong word choice
With regard to this grammatical aspect, a close examination of the ten abstracts under study showed that seven of these abstracts contained errors in the use of words. Some, for example, used 'manuscript' instead of 'study', some used 'other' instead of 'rather', some used 'excellence' instead of 'advantage' and so on and so forth. Most of these errors come from either literal translation from the scholars' native language into English or their unfamiliarity with English collocations. Regardless of their cause, the editors of the journals where these abstracts along with their full-length articles were published should have examined the abstracts carefully before accepting them for publication. Besides, the editorial teams and reviewers should have spotted these errors and either corrected them or asked the scholars to edit their manuscripts before accepting them for publication with their journals. This is an important finding of the

current study as it makes the language used in the abstracts sound unnatural and damages the reputation of the journals where such articles are published.

Punctuation
As table 3.2 above shows, six abstracts had punctuation errors which obviously affect the overall academic quality of the abstracts. Punctuation errors detected in the abstracts are another important finding of the present study. What distinguishes academic writing from any other writing is its adherence to the grammar rules of the language used in communicating any academic work and its findings. Some abstracts did not end a sentence with a full stop or any other punctuation mark! Some other abstracts did not use a comma where one was needed, and some other abstracts used a comma unnecessarily where a comma was not required. One can imagine the number of punctuation errors in the full articles of the abstracts examined in the present study.
These glaring punctuation errors right in the abstracts of research studies leave much to imagination with reference to the academic standards of the journals where these abstracts appeared and the truthfulness and usefulness of their editorial work. Another ethical implication may also arise from the hefty fees such journals charge and the poor editorial work they really do to at least justify charging such exorbitant fees!

Prepositions
A close examination of the abstracts under study revealed the presence of errors in the use of prepositions. In fact, five abstracts had problems in the use of prepositions. Some abstracts used one preposition in place of another, and some did not use a preposition where one was required. These errors in the use of prepositions represent a new finding of the present study with regard to the language used in abstracts. The logical assumption which readers and researchers alike can make is that there was no real editorial work done to help improve the language used in these abstracts. Another reasonable assumption which can also be made is that such journals cared only about the money which they make from charging researchers for publishing their research studies and articles.

Parts of speech
Table 3.2 above shows that seven abstracts had errors in the use of correct parts of speech. A close inspection of the abstracts revealed that most of them used an adjective in place of a noun or a noun in place of an adjective, hence making a mistake in parts of speech. This linguistic mistake is another finding of the current study as it recurs in seven abstracts. One can also imagine the number of mistakes one can find in the full articles of the abstracts under investigation. If editorial work was ever done the way it should, such obvious errors would have easily been avoided. This also supports the assumption that the journals where the abstracts were published did not care about the quality of articles they publish; all they probably cared about was the money they would get from publishing articles and research papers.

Run-on sentences
Run-on sentences were found in four abstracts of the ten abstracts examined in the present study. These types of poorly structured sentences not only affect the grammaticality and meaning of sentences, but they also cause confusion to readers.

Sometimes a dandling participle or a remote pronoun makes readers unable to relate it to its intended referent. It is in such situations and cases that editorial work is desperately needed and reasonably required. It is indeed the academic and ethical duty of editors and reviewers to highlight such language inconsistencies and demand that researchers revise their abstracts and articles before they are considered for potential publication.

Tense
Another finding on the linguistic errors in the abstracts under study was tense. Seven abstracts had errors in tense. Some abstracts, for example, used progressive aspects of either past or present. Some other abstracts had errors in forming the correct tense. For instance, they used the present participle form of the verb where they had to use the past form of the verb. These errors in tense give readers the impression that neither the editors nor the reviewers of the journals where these abstracts were published read the abstracts at all, let alone the articles! One can also imagine the number of errors in tense if the full articles of the abstracts have to be checked and examined.

Articles
Errors in the use of articles were the most common ones in the abstracts under investigation. In fact, nine abstracts had errors in the use of articles. Some abstracts used 'the', the definite article, in place of 'a or an', some used 'a or an' in place of 'the', and some did not use any article where one was required. It is true that articles in general pose a great challenge to most writers (Master, 1994), but if proofreading and editing are properly conducted, there will definitely be fewer, if any, errors in the use of articles. In this respect, it can be concluded that the editors and reviewers of the journals where the abstracts under study were published did not read the abstracts thoroughly or critically. One might wonder why such journals charge any processing or publication fees if no editing or reviewing is carried out seriously!

Plural/singular
The last finding on the linguistic errors detected in the abstracts was the incorrect use of plural and singular nouns. A close examination of the abstracts showed that five abstracts had errors in the use of plural or singular nouns. For example, some abstracts used a plural noun after an indefinite article 'a or an', some other abstracts used a singular noun followed by a plural verb and some other abstracts used uncountable nouns in the plural form. The presence of such errors not only made the abstracts sound non-academic, but it also gave readers the impression that no editorial work was ever done. If the editors and reviewers of the journals where the abstracts were published just skimmed through, they could have easily spotted such errors and avoided publishing abstracts and articles with so obvious errors!

CONCLUSION AND RECOMMENDATIONS

The present study has provided a two-dimensional assessment of ten abstracts and has concluded that the journals where the abstracts were published made very little effort in their editorial and peer-review work. In terms of the basic components that should go into any well-structured abstract, the examination of the abstracts of the present study

revealed that most components, i.e., objectives of the study, methodology, data collection tools, findings and suggestions for further research, were missing. With reference to language, which is the medium of communicating research and research findings, a close scrutiny showed that most abstracts examined in the present study had serious grammatical errors in subject-verb agreement, word choice, punctuation, prepositions, parts of speech, sentence structures, tense, articles, and plural/singular, spelling, and conjunctions.

Based on the findings of the present study, the researcher suggests that common guidelines for what to include in an abstract and the quality of the language used in the abstract must be made very clear to academic journals, editors, reviewers and researchers wishing to publish their articles or research studies. These guidelines should be unified so as to form common criteria followed by all academic journals. This may guarantee the publication of quality abstracts and articles to a large extent. It is also the academic and ethical responsibility of editors and their teams to ensure that abstracts and full-length articles adhere to common research criteria before they accept them for publication. Further large-scale research into this important topic is recommended so that high research standards are followed and more serious editorial work is carried out by academic journals.

References

1. Blaxter, L., Hughes, C. & Tight, M. (2010). How to research. Maidenhead: Open University Press/McGraw-Hill Education.

2. Bohannon, J. (2013). Who's afraid of peer review? *Science, 342*, 60-65.

3. Bornmann, L. (2014). Book review: Gould, T.H.P. (2013). Do we still need peer review? An argument for change. Scarecrow Press: Plymouth, UK. *Journal of the American Society for Information Science and Technology, 65*(1), 209-213.

4. Cobey KD, Lalu MM, Skidmore B et al. (2018). What is a predatory journal? A scoping review [version 2; peer review: 3 approved]. *F1000 Research*, **7**:1001.

5. Creswell, J. W. (2009). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 3rd Edition. Los Angeles: Sage Publications, Inc.

6. Currie, R. R., & Pandher, G. S. (2019). Finance Journal Rankings: Active Scholar Assessment Revisited. *Journal of Banking & Finance*, 105717.

7. David, J. P. (2004). How to Write an Abstract That Will Be Accepted for Presentation at a National Meeting. *Respiratory Care*. 49 (10), 1206-1212.

8. Fenwick, T., & Edwards, R. (2016). Exploring the impact of digital technologies on professional responsibilities and education. *European Educational Research Journal*, *15*(1), 117–131.

9. García, J. A., Rosa Rodriguez-Sánchez, J., & Fdez-Valdivia. (2018). Competition between academic journals for scholars' attention: the `Nature effect' in scholarly communication, *Scientometrics*, 115 (3),1413-1432.

10. Hall, G., M. (2003). How to Write a Paper. 3rd Edition. London: BMJ Publishing Group.

11. Hartley J, Pennebaker JW., & Fox C. (2003). Abstracts, introductions and discussions: How far do they differ in style. *Scientometrics,* 57(3), 389–398.

12.   https://predatoryjournals.com/journals.

13.   Kebede, M., Schmaus-Klughammer, A. E., & Tekle, B. T. (2017). Manuscript Submission Invitations from 'Predatory Journals': What Should Authors Do? *Journal of Korean medical science*, *32*(5), 709–712.

14.   Ketcham, C., Hardy, R., Rubin, B. et al. (2010). What editors want in an abstract. Lab Invest 90, 4–5.

15.   Leedy, P, D., & Ormrod, J, E. (2015). Practical research. Planning and design. Boston, MA: Pearson.

16.   Master, P. (1994). Effect of Instruction on Learning the English Article System in T. Odlin (1994). Perspectives in Pedagogical Grammar (229.252). Cambridge: Cambridge University Press.

17.   Sauperl S, Klasinc J, & Luzar S. (2008). Components of abstracts: Logical structure of scholarly abstracts in pharmacology, sociology, and linguistics and literature. *Journal of the American Society for Information Science and Technology,* 59(9),1420–1432.

18.   Sorokowski, P., Kulczycki, E., Sorokowska, A., & Pisanski, K. (2017). Predatory journals recruit fake editor. *Nature*, 543(7646), 481-483.

19.   Stephenson, C.R., Vaa, B.E., Wang, A.T. et al. (2017). Conference presentation to publication: a retrospective study evaluating quality of abstracts and journal articles in medical education research. *BMC Med Educ,* 17**,** 193.

20.   Swales JM, & Feak CB. (2009). *Abstracts and the writing of abstracts*. Michigan: University of Michigan Press.

21.   Trakas, K., Addis, A., Kruk, D., Buczek, Y., Iskedjian, M., & Einarson, T. R. (1997). Quality Assessment of Pharmacoeconomic Abstracts of Original Research Articles in Selected Journals. *Annals of Pharmacotherapy*, *31*(4), 423–428.

22.   Ufnalska, S. & Hartley, J. (2009). How can we evaluate the quality of abstracts?. *European Science Editing*. 35. 69-71.

23.   Weissberg, R & Buker, S. (1990). *Writing Up Research*. Prentice-Hall: New Jersey.

24.   Wilkins, R., W. (1958). How to Write an Abstract. "Editorial". *Circulation*, 17(5), p. 841.

25.   XIA, J. (2015). Predatory journals and their article publishing charges. *Learned Publishing*, 28: 69–74.

Acknowledgment