

## **PUBLICATION ACTIVITY OF UKRAINIAN HEI ACADEMIC STAFF: A CASE STUDY**

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**Abstract.** *In the Ukrainian education and science systems globalization and European integration processes have raised the issue of visibility for Ukrainian scientists. Having the articles in Scopus and Web of Science indexed journals is becoming of particular significance for scientists' authority rise and universities' prestige. Despite the appropriate state of the educational policy, the publishing activity of the majority of Ukrainian Higher Education Institutions' academic staff still remains insufficient, and to date, a very few empirical research has been carried out to determine reasons for that. The aim of this study was therefore, to investigate how such factors as corporate culture of Borys Grinchenko Kyiv University, academic career, research and language skills, personal development, financial support etc. contribute to and prevent successful publication activity of University's academic staff. Two groups of academicians were interviewed. The results showed that it is necessary to create the conditions for the research culture development, develop the research competence, provide systemic monitoring of publication activity, and improve the mechanisms of financial rewards.*  
**Keywords:** *Higher Education Institutions' academic staff, publication activity, research skills, scientometrics, Scopus, Web of Science.*

### **Introduction**

Research productivity and impact are determined today by a variety of different web tools (for organizations – In Cites based on Web of Science, SciVal based on Scopus; for the researchers – h-index). Scientometric data are considered to be the indicators of competitiveness, success and social impact of the scientific work. The main sources of data are world famous databases – Scopus and Web of Science platforms that help to build ratings of publication activity of academic staff (Comparative research, Pratikno, 2018).

In the field of higher education, this was reflected in the impact on the career of the academic staff who faced the need to increase h-index constantly and the number of scientific articles in journals with a high impact factor; and also playing

role in the formation of university rankings (Shanghai rating (ShanghaiRanking Consultancy, 2020), Times Higher Education, national rankings (Times Higher Education & Thomson Reuters, 2020), which have included scientometric indicators in their methodology.

Such a great influence of scientometric indicators at institutional and individual levels has caused some concerns in the scientific community, which has become particularly acute in recent years. Various studies have repeatedly indicated: how to ensure the correction of numerous errors in the databases, for instance, incorrect indexing of so-called Online-First paper, duplicate publications, and the missing / incorrect indexing of references? (Franceschini, 2016); how to regulate the significant growth of extreme self-citing scientists who want to artificially enhance their performance? (Seebera et al., 2019).

Researchers agree that quantitative information cannot be allowed to turn from a tool into an end in itself: «The best decisions are taken by combining robust statistics with sensitivity to the aim and nature of the research that is evaluated. Both quantitative and qualitative evidence are needed; each is objective in its own way» (Leiden Manifesto for Research Metrics, 2015). According to that, state's policies in science and education spheres are directed to form “coherent systems dedicated to the improvement of publication efficiency – adequate support for individual higher education institutions and scholars” (Jeran, 2017) in order to increase quantitative and qualitative indicators of publishing activity.

### **Scientometrics in Ukraine (literature review)**

Comparing the world and Ukrainian trends in the development of scientometrics it can be said that there is a significant gap in many aspects. It is believed that Ukrainian system for evaluating the effectiveness of research activities corresponds only to the tenth principle of the Leiden Manifesto. Accordingly, the other nine principles need to be rethought and implemented at different level (Kostenko & Symonenko, 2016).

Today's national education policy aims at developing new quantitative and qualitative indicators according to the international standards which include: the average h-index value of researchers that work in higher education institutions; the number of scientific publications in the journals included into the Scopus and Web of Science scientometric databases; the number of scientific journals that are included with a non-zero coefficient of influence into the Scopus, Web of Science scientometric databases.

These indicators affect the development of all subjects of educational and scientific activities. Thus, in the context of an individual research career, such requirement as the publication of articles in Scopus and/or Web of Science indexed journals has become a mandatory requirement for awarding academic

titles of professor and associate professor (order of Ministry of education and Science of Ukraine №13 of January 14, 2016 "On approval of the Procedure for awarding scientific titles to scientific and scientific-pedagogical workers").

Moreover, scientometric indicators are taken into account in the procedure for awarding degrees of Doctor of Philosophy: a scientist who has no indexed articles can neither review nor oppose dissertations and participate in a specialized scientific council that awards PhD (Resolution of the Cabinet Of Ministers of Ukraine №167 of March 6, 2019 "On approval of the Procedure for training applicants for higher education for the degree of Doctor of Philosophy and Doctor of Science in higher education institutions scientific institutions").

At the organization level scientometric indicators are included in the criteria for granting higher education institutions hierarchical status and relevant privileges, including state funding (Resolution of the Cabinet of Ministers of Ukraine of November 22, 2017 № 912 "On approval of the Procedure and criteria for granting higher education status confirmation or deprivation of this status"; Resolution of the Cabinet of Ministers of Ukraine of August 22, 2018 № 652 "Some issues of state certification of higher education institutions in terms of their scientific activities").

At the national level scientometric indicators are taken into account in the methodologies of rating universities, take, for example, Consolidated ranking (Osvita.ua, 2020) of Ukrainian universities that uses indicators of the SciVerse Scopus database.

Such state vector for the approval of scientometric indicators has led to the formation of policies for higher education institutions in order to intensify scientific activity, improving research quality in accordance with international standards and presenting the results of the research in journals indexed in Scopus and/or Web of Science.

## **Methodology**

In order to analyze the experience of stimulating the publishing activity of academic staff in 2016-2020 at the Borys Grinchenko Kyiv University (shorter Grinchenko University) such steps have been done:

1. Legal framework, which was developed at the University for the regulation of scientific activities, has been studied: "The corporate standard of scientific activity (Borys Grinchenko Kyiv University, 2018)", which presents, in particular, quantitative and qualitative indicators for the monitoring of publication activity; "Leader of the Year" (integrated rating assessment of professional activity of academic staff, presented in the e-system), which takes into account the articles included into Scopus, Web of Science; indicators Google's h-index and

- 10-index; h-index Scopus; h-index Web of Science; "Procedure for awarding the academic titles of professors and associate professors", that defines the minimum number of publications in Scopus and/or Web of Science indexed journals which is necessary demand for advancement in a scientific career.
2. Available mechanisms of financial rewards for publishing activity have been analyzed.
  3. The content analysis of Research Competence Development program, which is annually realized in Grinchenko University, has been made.
  4. Data from the Scopus and Web of Science databases has been processed on the number of articles by Grinchenko University`s academic staff, h-indexes, the language of publications, and quartiles of journals in which researchers are mostly published.

It was outlined the *hypothesis*: the study of the factors that have influence on the publication activity of Borys Grinchenko academic staff provides the opportunity for making relevant administrative decisions in this field in order to increase the ability and motivation of academic staff to publish the articles in Scopus and/or Web of Science indexed journals.

To test these hypotheses, the research has been conducted in order to identify objective and subjective factors that contribute to and hinder the successful publication of articles by Grinchenko University`s academic staff in the scientific journals that are indexed in Scopus and Web of Science. Two **questionnaires** were developed (Q1 and Q2): Q1 consists of 12 items for academicians, who have already published at least one article in Scopus and / or Web of Science indexed journals. As at May 2020, 55 such academicians were identified, and 25 people responded to the questionnaire. The analysis was based on the data obtained from the Scopus and Web of Science database. Q2 consists of 9 items for academicians, who have not articles, published in Scopus / Web of Science indexed journals. As at May 2020, there were 755 such academicians, and 287 people responded to the questionnaire. The survey was conducted using the Google Form G Suite service.

The questions of the questionnaires were aimed at solving the following *research tasks* (RT): RT1 – to identify the internal and external factors that motivated / did not motivate to publish the articles in Scopus and/or Web of Science indexed journals; RT2 – to identify the greatest difficulties encountered in preparing of such articles; RT3 – to identify "success factors" that have helped (according to Q1 respondents) / will probably help (according to Q2 respondents) to publish the articles.

These tasks led us to the suggested interlinked *administrative tasks* (AT): AT1 – to improve administrative measures in order to stimulate publishing activity of academic staff, in particular develop the mechanisms for financial awarding; AT2 – to update the Research Competence Development Program in

accordance with the needs and interests of the academic staff; AT3 – to increase the number of publications of Grinchenko University staff in Scopus / Web of Science indexed journals and, due to this, to increase the ranking position of the University in domestic and international rankings.

### Research Results

The list of external factors that could motivate to publish the articles were formed on the basis of requirements represented in the documents that regulate publication activities at the state and University levels (Figure 1):

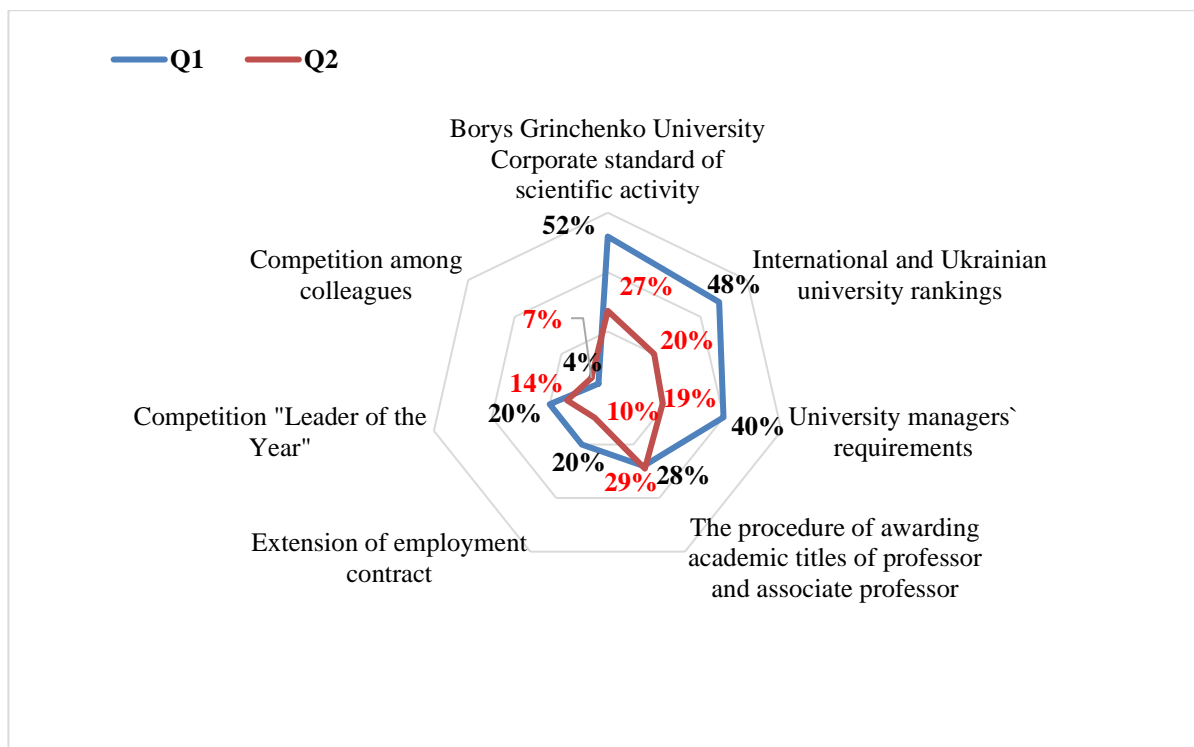


Figure 1 External Factors that Motivated / Did not Motivate to Publish the Articles in Scopus and/or Web of Science Indexed Journals (created by authors)

The results show that Q1 respondents have a greater level of awareness of responsibility for compliance with the Corporate Standard (Borys Grinchenko Kyiv University, 2018) and demonstrate the understanding of the connection between their publication activities and the positive image of University formed by rankings, while for Q2 respondents career growth comes to be much more important. It can be suggested that Q1 respondents more often correlate their aims with the aims of University.

The least motivating factors for the publishing activity for both Q1 and Q2 respondents (competition among colleagues and competition "Leader of the Year") demonstrate low influence of these factors on their professional life. The

analysis of the diagram also indicates that in general for Q1 respondents the values of all indicators (except "competition among colleagues" (-3)) are higher in comparison with Q2 respondents. That indicates a greater motivating effect of external factors on those academic staff who have already published their articles in Scopus and/or Web of Science indexed journals.

The list of internal factors that could motivate to publish the articles were studied on the basis of identifying the main desires connected with the personal and professional development (Figure 2):

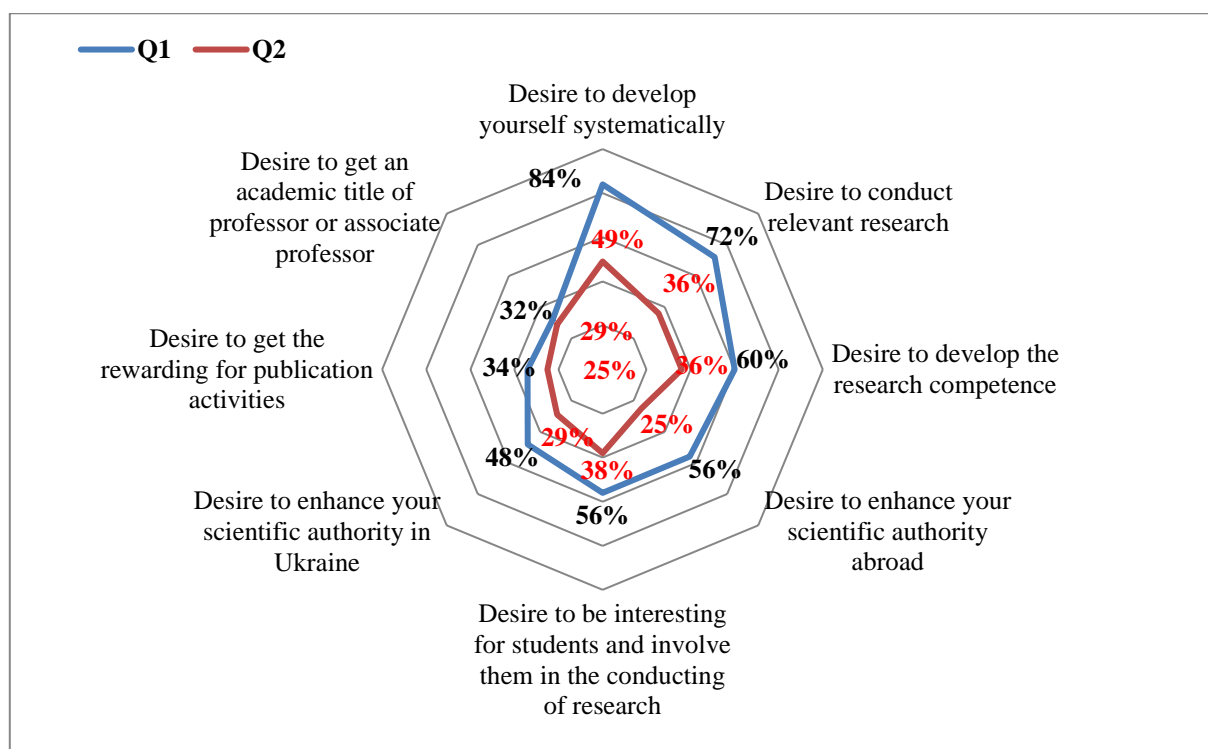


Figure 2 *Internal Factors that Motivated / Did not Motivate to Publish the Articles in Scopus and/or Web of Science Indexed Journals (created by authors)*

According to the identified data, the most motivating internal factors for both Q1 and Q2 respondents are almost the same.

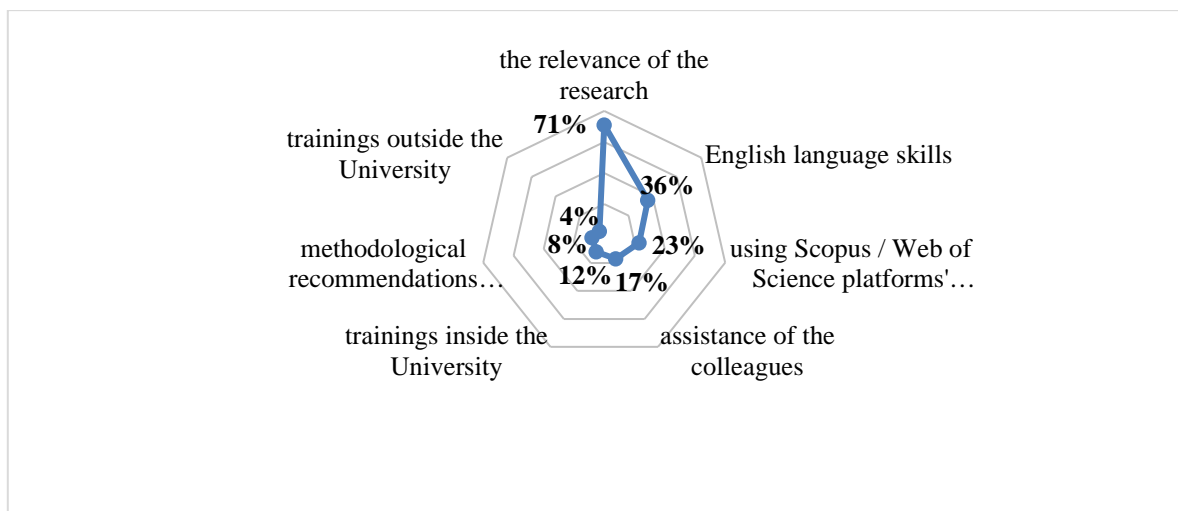
The least motivating internal factors for Q1 respondents (desire to obtain the academic title of professor / associate professor) can be explained by the fact that some respondents have already got these titles and don't need additional financial reward.

It has been suggested that the least motivating internal factors for Q1 respondents (the desire to get the academic title of professor / associate professor and to enhance their authority abroad) are in the long run for that academic staff that do not have any publications in the international peer-reviewed journals.

Comparing the quantitative data from the diagrams 1 and 2, it can be admitted (in evidence:) greater influence of internal motivation factors on the growth of publication activity for both groups of respondents, and overall greater influence of external and internal motivating factors on Q1 respondents than on Q2 respondents (all indicators are about twice as many): Q1: average value for external factors: 31.5; for internal: 55.2; Q2: average value for external factors: 19.3; for internal: 33.3.

The next step was to identify the subjective and objective difficulties that had been arising in the process of writing the article. The answers show that for Q1 respondents, in general, the tasks related to the preparation and publication of an article do not seem very difficult. However, the urgent task is to increase the level of English language proficiency and develop journal search skills.

Analysis of Q2 respondents' answers helps make the conclusion that different difficulties (choosing a topic for research, formatting the article in accordance with the requirements of the journals, formatting the list of sources in accordance with the international standards etc.), to a greater or lesser extent, may be an obstacle to publish the article in Scopus and/or Web of Science indexed journals. Among the most problematic ones – the search for the journal, English language proficiency.



**Figure 3 Factors for the Successful Publishing the Articles in Scopus and/or Web of Science Indexed Journals according to the Q1 Respondents (created by authors)**

The Q1 respondents demonstrate the awareness of relevant research as a determining factor for successful publishing in the indexed journals. Among the least valuable factors according to the Q1 respondents` answers are methodological recommendations prepared at the Grinchenko University that stimulate to review them and adapt to the requirements of indexed journals.

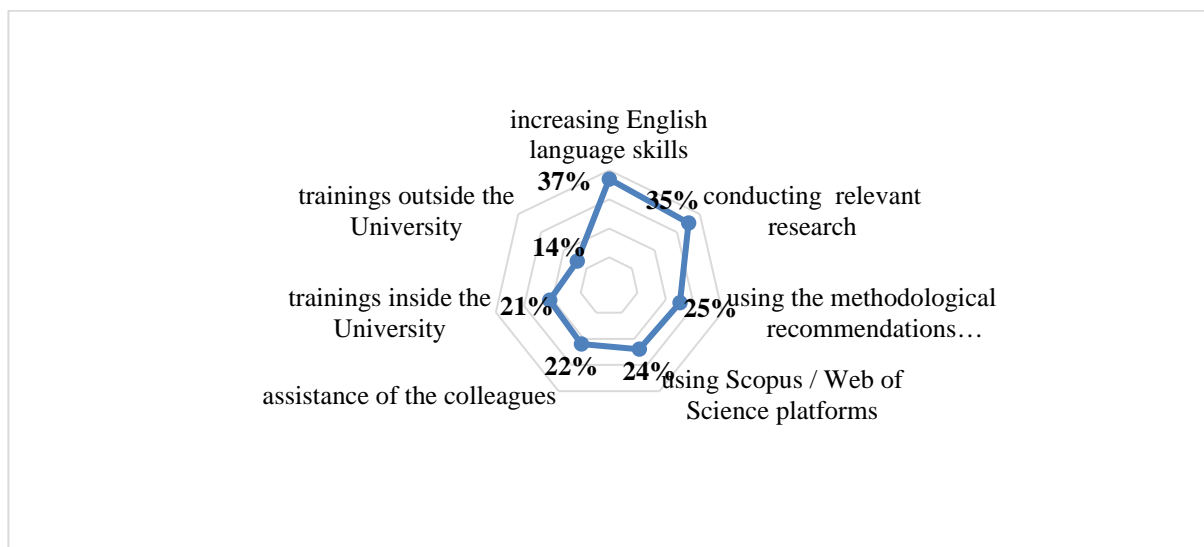


Figure 4 *Hypothetical Success Factors for Publishing the Articles in Scopus and/or Web of Science Indexed Journals according to the Q2 Respondents (created by authors)*

The results reveal the need of Q2 respondents to increase their level of foreign language proficiency and their awareness of the importance of conducting relevant research. It has also been revealed that trainings outside the Grinchenko University are considered to be one of the least important factors of success for both Q1 and Q2 respondents. It may be attributed to the fact that in Ukraine the issue of publishing in indexed journals has become very popular and lots of private organizations make money on it and don't give the quality content.

## Conclusions and Discussion

Studies of the regulatory framework, financial mechanisms, Research Competence Development program, conducting the survey of 25 (questionnaire 1) and 287 (questionnaire 2) respondents and analyzing the results have revealed the objective and subjective factors of low publication activities of Grinchenko University academic staff in Scopus and/or Web of Science indexed journals during 2016-2020. It helps to formulate the main problems and relevant administrative decisions:

- 1) **specifics of the fields of knowledge:** at Grinchenko University human sciences prevail and it is commonly believed that for the representatives of this area it is more difficult to publish the results of their research in the international indexed journals than, for example, it is for representatives of technical fields. In addition to that, there is Institute of Arts in the structure of the Grinchenko University, academic staff of which have shown a very low level of motivation to conduct the research and publish the articles, as they are more focused on artistic



- and educational activities. **Administrative decisions:** a) to take into account the heterogeneity of the research team, in particular by dividing responsibilities at the departmental level between academic staff according to their ability and desire to engage more in science, education or art; b) provide consulting services of the University Library on the search for a journal for publication, literature, etc., especially for representatives of the humanities;
- 2) **poor publishing culture** caused by low level of the most domestic journals which only begin their transformation in accordance with the international standards. What is more, there are too few Ukrainian journals specialized in human sciences that are indexed in Scopus / Web of Science. **Administrative decisions:** to develop the publishing culture by promoting University journals (12 printed and 5 e-journals) to the international databases by the approval of the annual "Action Plan" which will contain the most important tasks such as: assignment DOI identifiers to the articles for the last 4 years; adding the journals into the international databases (DOAJ, Erih Plus, EuroPub etc.); systematic anti-plagiarism checking of the articles for; increasing the number and quality of English-language articles; improvement of the review system etc.;
  - 3) **lack of financial support** (low salaries of Ukrainian academic staff, lack of grant money etc.) – it causes the fact that a significant part of articles has published for free in low quartile (4) journals, which reduces the probability of citing these articles and does not increase the credibility of the scientists. **Administrative decision:** to improve the mechanisms of rewarding for publishing the results of research in the journals indexed in Scopus / Web of Science at the institutional level. One of the main novelty is that the quartile of the journal should be taken into account;
  - 4) **influence of the "old school"** – among the academic community there are lots of representatives that are accustomed to measure the results of their scientific activities by the number of publications in Ukrainian journals, dissertation defense and writing monographs which are not considered to be authoritative achievements in the world scientific community. **Administrative decision:** to conduct systematic educational and motivational activities on the level of middle managers (heads of departments), attaching those colleagues who have already had successful experience in publishing their articles in Web of Science and Scopus in order to increase the understanding the importance of conducting relevant research, publishing activities and their

- opportunities for professional career and status of Grinchenko University at the national and international levels;
- 5) **lack of research skills and needs in constant development of the research competence. Administrative decision:** to improve the Research Competence Development program by developing new trainings such as: "Opportunities of Web of Science and Scopus platforms for researchers"; "Selection of the journal for publication in Scopus and Web of Science". "Author profile and Researcher ID in Publons, synchronization with ORCID, author IDs and indicators of publication activity"; "Text editing services"; "Verification of scientific texts for plagiarism" etc.

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