

# Editorial board member and prolific author status positively shorten publication time

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## Abstract

Publication speed is one of the important aspects of scholarly communication today since a good deal of research performance evaluation systems are based on published articles. This study aims to reveal the factors affecting the publication speed of journals. In this context, six library and information science (LIS) journals, *ASLIB Journal of Information Management*, *Journal of Documentation*, *Journal of Informetrics*, *Journal of the Association for Information Science and Technology*, *Online Information Review*, and *Scientometrics* are analysed in terms of their publication speed. Results show that being an editorial board member or prolific author for journals significantly shortens the duration of publication. Moreover, when there is at least one editorial board member or prolific author in the author group, the duration of the publication is shorter than the articles from the unknown authors. However, the fact that no significant difference is determined between single- and double-blind peer review and the duration of publication process gives an idea about the scientific levels of articles written by editorial board members or prolific authors. In this regard, our approach is to examine other factors affecting the publication speed by conducting multi-dimensional analysis in future studies.

## Introduction

Peer review, which can be carried out blind (single or double) or open (the identities of reviewers are disclosed at least to the authors), is one of the most effective tools used to make decisions on research quality. However, it has various drawbacks. Most of the problems of current peer review systems are related to the reliability of reviewers' ratings and biases such as status bias (institutional or individual level) or gender bias (Cox et al., 1993, p. 313).

Comparisons for measuring the effectiveness of single- and double-blind review systems are important to choose a fairer and balanced system as well as reduce biases. Blank (1991) showed that the reviewers were more critical of double-blind peer review and the authors from peripheral countries received less acceptance in the double-blind review system. It was revealed in a different study that single-blind reviewers were significantly more likely than their double-blind counterparts to accept papers from popular authors, top universities, or top countries (Tomkins et al., 2017). Okike et al. (2016, p. 1316) concluded that if blinding was not applied properly, variables such as gender or popularity affect acceptance or rejection decisions, and Budden et al. (2008) stated that double-blinding increased the representation of women in science. Sun et al. (2021) suggested a double-blind review system to remove prestige bias in the review process. While Snodgrass (2006, p. 10) indicated that the main problem of the single-blind review was the unfairness to unknown authors, on the other hand, according to some others single-blind reviews provided speed in the peer review process by providing personal knowledge about the authors or works (McCormack, 2009). However, according to a study based on the articles published in *American Economic Review* (Blank 1991, p. 1048), the duration of the single-blind review was two weeks longer than the double-blind.

Studies in the literature have confirmed that there are various practices in all types of peer review processes regarding the journal, gender, country, prestige, etc. The common point of almost all these studies is to reveal who the peer review provides an advantage. In this case, it is possible to say that the concept defined as the Matthew Effect in science, which represents the cumulative advantage of science elites (Merton, 1968), is also valid for peer review processes. According to Merton, reputed or distinguished researchers have more credit than researchers who are unknown in the same field, even if their works were quite similar (p. 59).

It is possible to mention Matthew Effect not only in article acceptance decisions but also in the duration of peer review. While some researchers' articles are published in a very short time, this process may take longer for some other researchers. However, publication speed has importance for all researchers who seek tenure and incentives. The fact that long review processes, the lack of standardization in the processes, and differences from discipline to discipline cause researchers to have negative opinions about the journals (Huisman & Smits, 2017).

The main aim of the paper is to reveal factors affecting the duration of peer review processes for library and information science journals. The research questions are:

- How do the types of peer review affect the duration of peer review?
- Does being an editorial board member of a journal shorten the peer review process?
- Does being one of the most prolific authors of the journal shorten the peer review process?
- Does having more than one role in a journal affect the peer review speed?
- What is the difference between the publication speed of researchers who are central in the LIS field and others?

## Data and Methods

To achieve the aim of the study, three single-blind journals of library and information science (LIS) field (*Journal of Informetrics* [JOI],<sup>1</sup> *Journal of the Association for Information Science and Technology* [JASIST]<sup>2</sup> and *Scientometrics* [SCIM]<sup>3</sup>), and three double-blind journals (*ASLIB Journal of Information Management* [ASLIB],<sup>4</sup> *Journal of Documentation* [JDOC]<sup>5</sup> and *Online Information Review* [OIR]<sup>6</sup>) were chosen. A total of 3,816 articles that were published between 2016 and 2021 were evaluated deeply. Metadata of articles were gathered from Web of Science on January 2, 2021. In the dataset, a total of 2,843 single and 973 double-blind articles were stored. 45% (1,715) of these articles were published in *SCIM*, 20% (753) in *JASIST*, 10% in *JDOC* (381), *JOI* (375), and *OIR* (367), and 5% (225) in *ASLIB*. Therefore, differences between journals should be considered to interpret the results. To achieve this, the average duration for each journal was presented in figures.

To collect the names of editorial board members, the websites of journals were used. All members of the editorial boards were considered. However, considering the important editorial board change for *JOI* in 2019 (Larivière, 2019), two different lists were used for this journal. One for the publications before 2019 and one for publications after 2019. For finding the most prolific authors of each journal, six different searches were done in Web of Science. The last

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<sup>1</sup> <https://www.elsevier.com/journals/journal-of-informetrics/1751-1577/guide-for-authors>

<sup>2</sup> <https://asistdl.onlinelibrary.wiley.com/hub/journal/23301643/homepage/forauthors>

<sup>3</sup> <https://www.springer.com/journal/11192/submission-guidelines>

<sup>4</sup> <https://www.emeraldgrouppublishing.com/journal/ajim#author-guidelines>

<sup>5</sup> <https://www.emeraldgrouppublishing.com/journal/jd#author-guidelines>

<sup>6</sup> <https://www.emeraldgrouppublishing.com/journal/oir#author-guidelines>

10 years (2011-2020) were considered. Only articles and reviews were covered. The first ten authors of each journal were defined as “prolific authors”. If the tenth and eleventh authors had the same number of publications, two of them were added to the dataset. After finding the most prolific authors in Web of Science, the articles were classified accordingly.

The codes were written using Python to get publications’ timelines automatically from journal websites (Taşkın, 2021). To compare the review durations in terms of the journal and peer review types, Kruskal Wallis, Mann Whitney, and Chi-square tests are applied considering the assumptions required to apply parametric testing are not met. Effect sizes are also calculated for the positive test results. Formula 1 shows the effect size calculation for Kruskal Wallis ( $\eta_H^2$ ), and Formula 2 for Mann Whitney U ( $r_G$ ) tests where  $H$  is the Kruskal-Wallis test statistic,  $k$  is the number of groups,  $\bar{R}_A$  and  $\bar{R}_B$  are the average ranks for groups,  $n$  and  $N_T$  is the total number of observations (Cohen, 2013, p. 10-11, 19-20).

$$\eta_H^2 = (H - k + 1)/(n - k) \quad (\text{Formula 1})$$

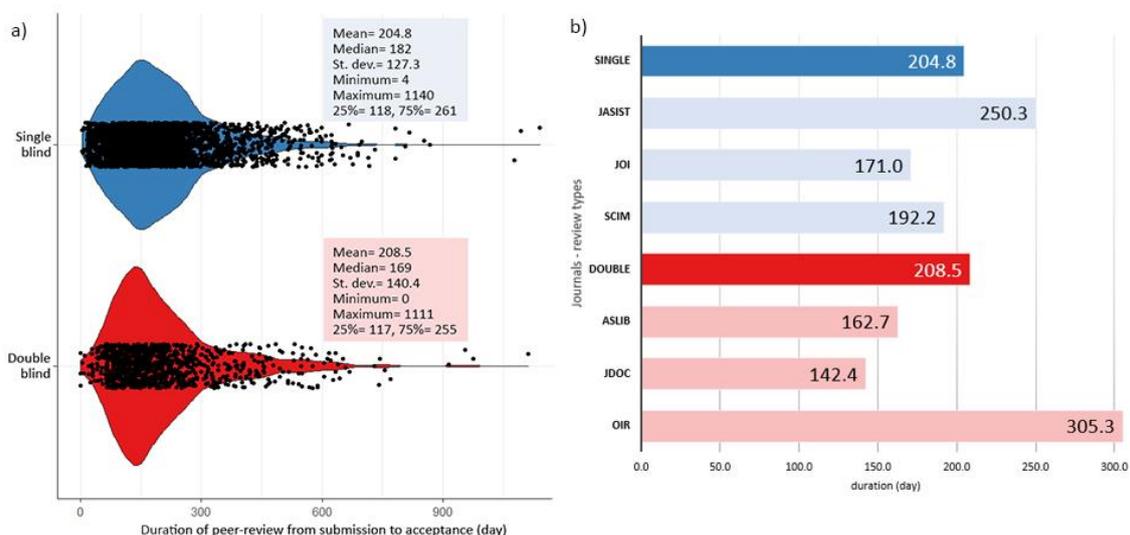
$$r_G = 2(\bar{R}_A - \bar{R}_B)/N_T \quad (\text{Formula 2})$$

We used SPSS (version 21) and RCommander for statistical tests and descriptives; RCommander (with KMGgplot2 plugin) and Flourish Studio for visualization.

## Findings

### *Effects of single- and double-blind reviews on the duration of peer review*

When it was investigated whether the type of peer review affects the review duration, small differences were found between the two groups (see Figure 1). Although the acceptance periods of the specific journals varied, the average duration of the single- and double-blind review types were very similar. Mann-Whitney U test confirmed this similarity ( $U=1358685.500$ ,  $Z=-0.824$ ,  $p=0.410$ ). On the other hand, significant differences were found between the journals’ peer review durations regardless of peer review type. According to the results of the Kruskal Wallis test, significant differences were found for the average duration of peer review ( $H=401.315$ ,  $p<0.001$ ,  $\eta_H^2=0.104$ ). When all journals were compared to understand the source of differences, there were no statistically significant differences found between *ASLIB & JOI* and *JDOC & JOI* at %99.9 confidence level.



**Figure 1. Duration of peer review regarding peer review types**

### Effects of being an editorial board member on the review durations

Being an editorial board member is important in showing that researchers have achieved a certain scientific level, have proven their scientific merit in the field, and thereby have become a decision-maker for a journal (Bedeian et al., 2009; Pardeck & Meinert, 1999). Members of the editorial boards are often selected among the most popular researchers in their fields with high scientific competencies. Therefore, it is expected that the peer review processes of the articles written by editorial board members may be completed faster in parallel with the recognition, experience, and popularity in the field. The differences between the peer review durations of editorial board members' and other authors' papers (see Figure 2) are statistically significant ( $H=92.892$ ,  $p<0.001$ ,  $\eta_H^2=0.024$ ).<sup>7</sup> One of the important findings is that, when an editorial board member is a co-author of a study, it makes the peer review process shorter. It confirms a recent study (Zhang et al., 2021) that reveals the positive effects of editorial boards' cooperation with the authors' publications. Furthermore, this difference is more obvious for single-blind journals ( $\eta_H^2=0.032$ ).

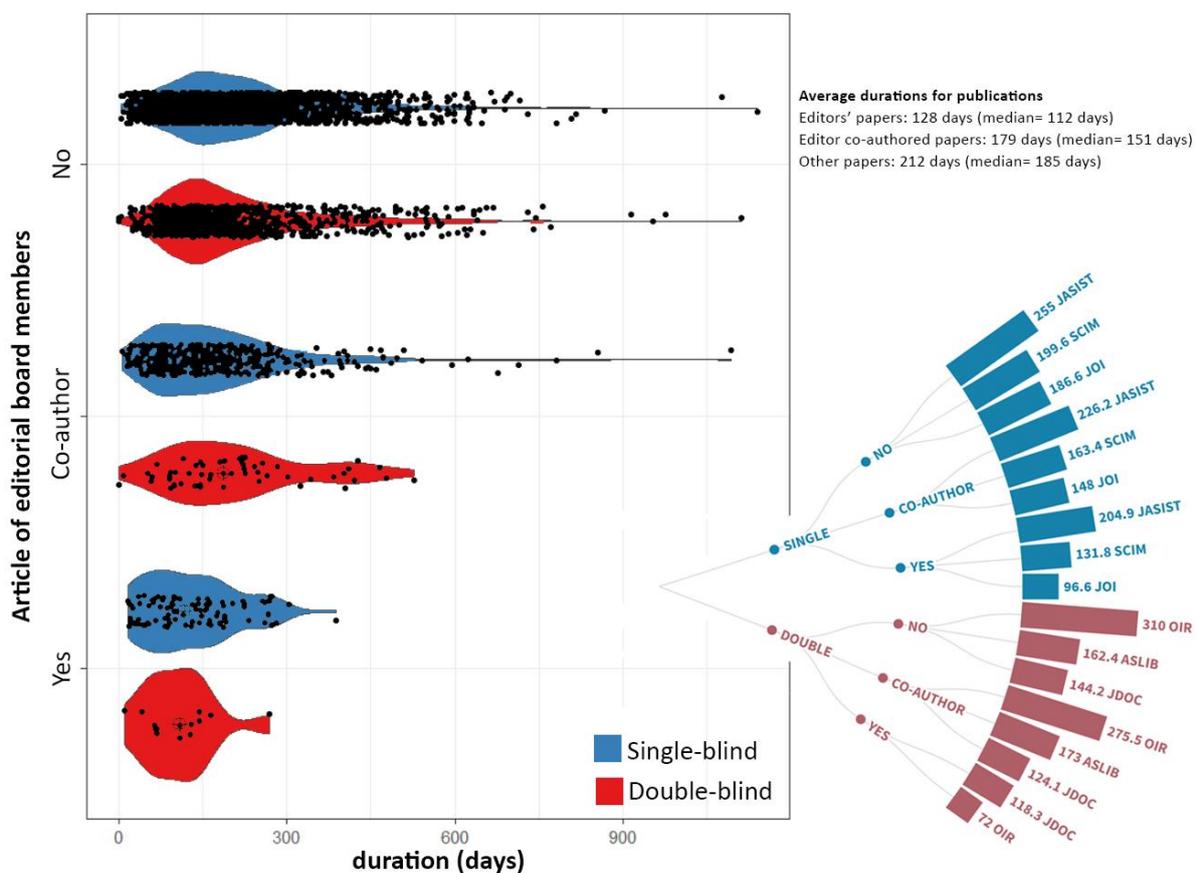


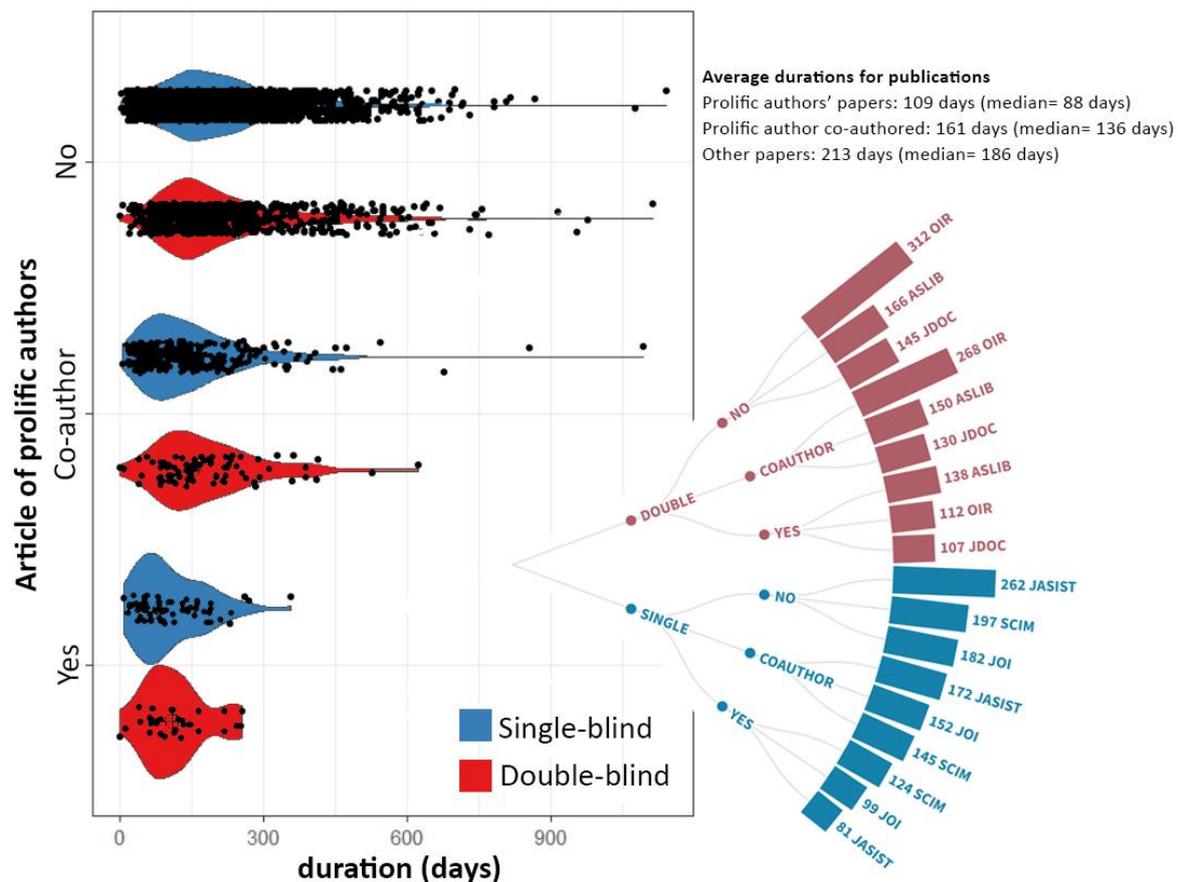
Figure 2. Peer review duration for papers written by editorial board members

### Papers from the prolific authors of the journals

According to Merton (1968, p. 61), the works of scientists who have an outstanding position in science have been validated by judgments of the average quality of their past work. Therefore, it is easier to accept the works of outstanding authors by the journals. To confirm whether this approach affects the review durations, the review durations of the works from the prolific authors of each journal were evaluated in this study (see Fig. 3).

<sup>7</sup> The difference is significant for all the pairs. According the effect sizes calculated, the most significant difference is between the papers of editors (Yes in Figure 2) and papers with no editors (No in Figure 2) ( $U=106418.000$ ,  $Z=-7.636$ ,  $p<0.001$ ,  $r_c=0.420$ )

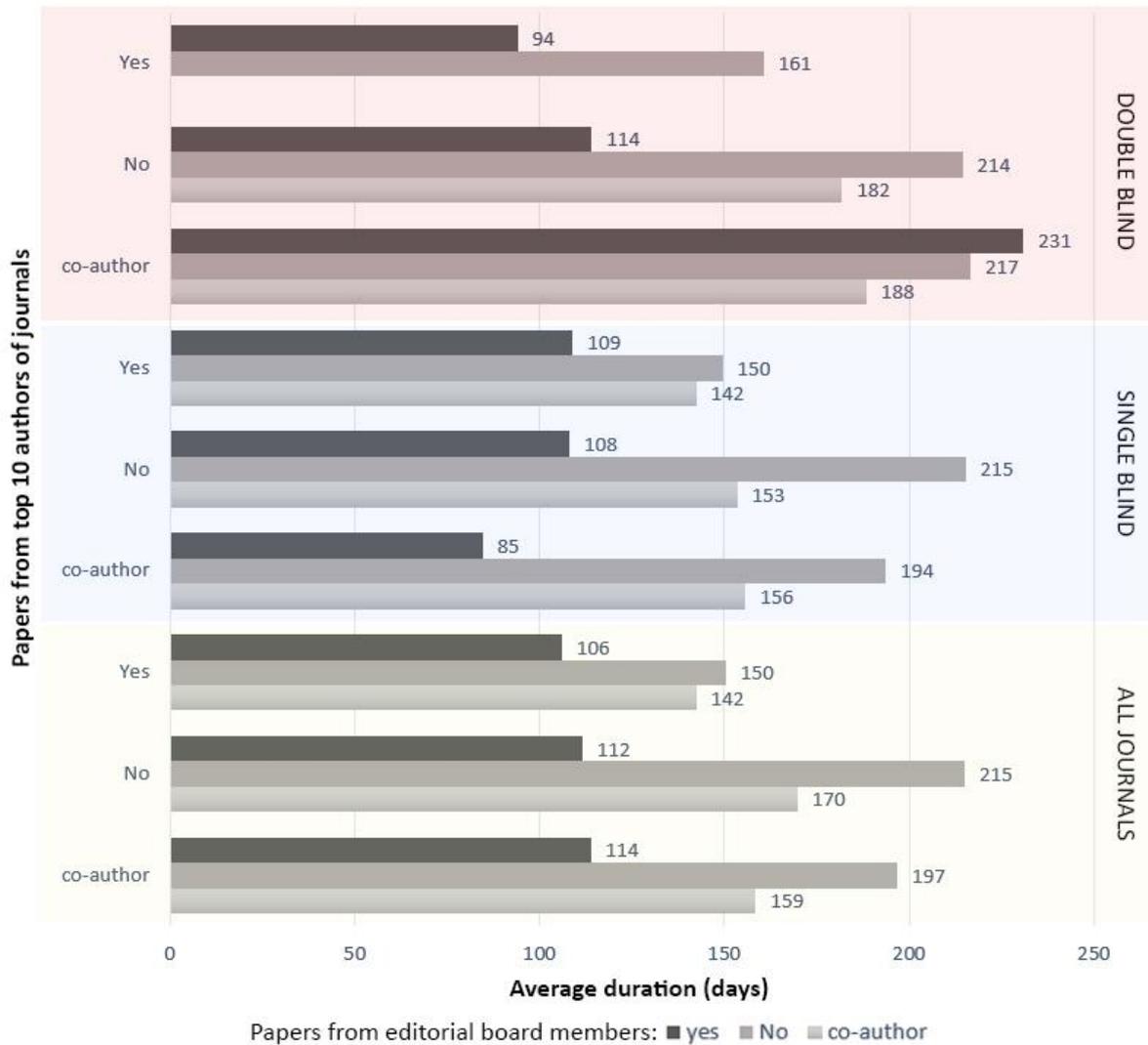
The results show that there are significant differences in peer review durations for the papers from productive authors and others ( $H(2)=151.477, p<0.001, \eta_H^2=0.039$ ). The effects sizes calculated for each of the three pairs showed that the most significant difference is between the papers of prolific authors (Yes in Figure 3) and papers with no prolific authors (No in Figure 3) ( $U=75011.500, Z=-9.265, p<0.001, r_G=0.548$ ). On the other hand, when the effect of prolific authors on peer review duration evaluated separately for single- and double-blind journals, single-blind journals stand out with the more pronounced difference ( $\eta_H^2=0.046$ ) in comparison with double-blind ones ( $\eta_H^2=0.024$ ).



**Figure 3. Peer review duration for papers written by prolific authors of the journals in the last 10 years**

*What if an editorial board member is also a prolific author?*

It was revealed that being an editorial board member or a prolific author of a journal shortens the review process. The main question after this finding is that what if an editorial board member is also a prolific author? According to the results (See Figure 4), if the editorial board members in both single and double-blind peer review were also the most prolific authors and submitted their articles to their journals, it took an average of 100 days to complete all processes. Having one editorial board member or a prolific author as a co-author may also shorten the process. The longest evaluation process was identified for the papers written by unknown researchers of the journals.



**Figure 4. Average durations for the papers written by editorial board members and prolific authors**

*Peer review durations of central researchers of the LIS field*

All the findings of previous parts have proved that there are popular, successful, and experienced researchers working in the LIS field, and their papers published faster than the others, as expected. Looking from the wider perspective, a total of 6,814 unique authors published 3,816 papers in LIS. Some authors serve more than one journal as an editorial board member. Besides, most of the prolific authors of single-blind journals are also editorial board members. Figure 5 shows the distribution of authors with the roles and publication speed of authors placed in the centre of the LIS network.

147 (3.8%) of the articles were single-authored and written by central authors, while 748 (19.6%) of them had central co-authors. Central authors' papers were published in a short time compared to the other authors' papers. Kruskal Wallis test confirms this finding ( $H(2)=146.897$ ,  $p<0.001$ ,  $\eta_H^2=0.038$ ).



databases and it requires data mining. To be able to make accurate analyses, this information should be served by publishers and added to databases.

### **Limitations and Future Studies**

This paper seeks author position related factors affecting the publication speed. Many reasons such as the quality of articles, the date of the article submitted, or the workload of editors, can affect the duration of peer review. However, in this study, we aimed to reveal whether there are researchers who have an advantage on publication speed that can be interpreted as Matthew Effect.

The editorial board members and prolific authors have high scientific levels and qualifications, and the outputs produced by these authors have a significant scientific level. It is expected that the papers written by prestigious authors have good quality and so, they are accepted faster than the papers written by others. However, this study is not about the quality of the papers. It aims to reveal the current practices of journals and to present the duration differences in publication processes of articles written by known and unknown authors. Furthermore, the paper is limited to only six journals in the LIS field, but, as indicated in the Methodology part, the volumes of the journals are not the same. It means the workloads of editors are not equal. On the other hand, the audiences of the journals vary. While some journals can be considered as pure library and information science journals such as *ASLIB* or *OIR*, some journals (*SCIM* or *JASIST*) have more authors from different disciplines. All these factors make the comparison harder. Therefore, more investigations are needed to understand all the factors affecting the duration of publications. This research constitutes the first stage of large-scale research.

It is planned to broaden the research by covering the country of affiliation of researchers, country groups, and collaboration statistics. Conducting a multidimensional statistical analysis is the next planned step of this paper. Besides, an author-level analysis covering more journals will be conducted to understand the duration changes for individual researchers. This will provide us with an opportunity to show all the factors affecting publication speed.

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