Editorial

Editing Croatian scholarly journals: achievements and challenges

Journals published from small and emerging professional communities face difficulties that often negatively affect the research performance and hinder the scientific progress at a national level. However, there are a few good examples of how changes in the education system and research management with limited financial resources translate into advanced research and better visibility of locally produced knowledge. The Croatian experience, with its benefits to authors, researchers, journal editors, and educators over the past two decades, is exemplary. This is one reason Croatia is hosting this year's conference of the European Association of Science Editors (EASE) – a major scientific and educational event for science editors – which will gather representatives from most European and other countries. In line with the theme of the conference – the complexity of editing – some of the presentations will reflect on the Croatian experience. For our part, we will provide space in this and forthcoming issues of *European Science Editing* for items about editorial policies and peer review in Croatian journals, digital archiving in the Hrčak platform, and editing national journals.

Croatia has well established traditions of publishing, particularly in the natural sciences and biomedicine. Its oldest periodicals, *Liječnički Vjesnik* and *Periodicum Biologorum,* were launched in 1877 and 1886, respectively.[1] This is perhaps one of the reasons why so many Croatian journals are currently listed in the SCImago Journal & Country Rank database (131) with their outstanding impact indicator levels. Based on repetitive and comprehensive bibliometric and bibliographic evaluations[2] the *Croatian Medical Journal* is the flagship European periodical. Remarkably, this journal remains one of the few general medical journals covered by Thomson Reuters Current Contents Connect® database.

To better understand what Croatia has gained within a short period of transforming a small socialist society into a modern European nation (1991-2013), we should refer to the outstanding profile of the country in the Web of Science® database. There are currently 54 Croatian journals tracked by this highly selective hub of 'elite' periodicals.[3] For a non-Anglophone country with a population of 4.28 million, this is a great achievement. Two of the indexed journals have relatively high two-year impact factors: *Biochemia Medica* – 1.873 and the *Croatian Medical Journal* – 1.25 (Thomson Reuters Journal Citation Report® science edition 2013). Both journals are archived in PubMed Central.

A turning point for improving the visibility of Croatian journals was the launching of the Hrčak digital platform in 2005, which has expanded its archive from the initial three to the current 356 periodicals.[4] More than half of the archived journals in the field of science, technology and medicine are published in English only, and the majority of journals (76%) have international editorial boards.[4] Despite all these achievements, the transparency of peer review remains a challenge.[3] The national journal editors can improve transparency and make their journals more attractive for the global scientific community by publicising the employed models and quantitative indicators of the peer review.

Croatia, as many other emerging scientific powers, faces the challenges of plagiarism and other forms of misconduct in research papers. An analysis of 754 items, submitted to the *Croatian Medical Journal* in 2009 and 2010, revealed that 85 (11%) of these submissions, mostly from China, Croatia and Turkey, contained plagiarized text.[5] This can, at least partly, be explained by the difficulties of writing in English, which force the authors to recycle chunks of texts from published sources. The temptation to misappropriate writings can be overcome by learning lessons from others' mistakes and by referring authors to proper writing and editing services. Plagiarism, along with duplicate publication, is the main reason for retractions of Croatian papers. Although the number of the retractions is not high (7 in PubMed), it may not be representative, requiring more efforts of editors and reviewers at pre- and post-publication review to detect the misconduct and 'clean up' the language of unethical papers. Importantly, of the seven retractions in PubMed, three were issued by the *Croatian Medical Journal* and one by the *Archives of Industrial Hygiene and Toxicology*, the top-tier national periodicals with established policies of ethical publishing.

Obviously, these and many other challenges faced by Croatian editors are not unique, and can be overcome by discussing them with colleagues from EASE and other learned associations at educational meetings focused on selected topics, such as plagiarism, pre- and post-publication review, and open access.

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Original articles

Composition of editorial boards and peer review policies of Croatian journals indexed in Web of Science and Scopus

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Abstract Croatia, when compared to its neighbouring countries, has the largest number of journals per scientist and per Gross Domestic Product. The aim of our study was to evaluate the composition of editorial structures and transparency of peer review policies of Croatian journals indexed in Web of Science (WoS) and Scopus. Our study showed a lack of transparency of peer review processes in Croatian scientific journals as described in publicly available information for authors. More research is needed to determine the impact of the editorial structures and work on the international recognition of journals from small scientific communities, such as Croatia.

Keywords Peer review; editorial boards; Croatia

Introduction

The number of scientific publications has been exponentially increasing since the 17th century, with no indications of a decline.[1] The establishment of large bibliographic databases, specialized search engines, wide visibility and accessibility of scientific publications[2] have led to the increase of journal memberships in organizations such as the Committee on Publication Ethics (COPE) and indexing in the Directory of Open Access Journals (DOAJ), Web of Science (WoS), and Scopus.[2,3] In the last decade, a large number of regional journals have been accepted for coverage in various indexing databases.[3]

In Croatia, the first scientific periodical was published in 1851,[4] the first medical journal in 1860,[5] and the first electronic journal in 1994,[6] only a year after the World Wide Web went public. Despite its relatively small size (4.3 million inhabitants)[7] and semi-peripheral scientific status,[8] Croatia has the largest number of journals per scientist, per Gross Domestic Product (GDP), and per WoS-indexed articles, compared with neighbouring countries.[9]

The aim of our study was to evaluate the composition of editorial structures and transparency of peer review policies of Croatian journals indexed in WoS and Scopus.

Methods

We contacted Thomson Reuters and Elsevier to obtain the list of active journals indexed in WoS and Scopus and we checked the instructions to authors of these journals on their websites to record the editorial structure and type of peer review. In the case of absence of an official website, we extracted the same data from the latest print issues. Open access status was ascertained by records in DOAJ or by free availability of the journal articles on their websites.

Distribution of outcomes was tested for normality by the Kolmogorov-Smirnov test, and the data were expressed either as mean ± standard deviation (SD) or median (interquartile range), with 95% confidence intervals (CI). We employed the Student's T test and Mann-Whitney U test for parametric and non-parametric comparisons, respectively. Proportions were compared with a χ^2-test.

All tests were two-sided, with the alpha error set to 0.05. Data were analysed using MedCalc v.12.5 (Medcalc, Ostend, Belgium).

Results

There were 54 Croatian journals indexed in WoS and 127 in Scopus, with a 94% overlap (all but 3 WoS-indexed journals were also listed in Scopus). The 2012 Impact Factor of WoS-indexed journals ranged from 0 to 1.87. The 2012 Source Normalized Impact per Paper (SNIP) of Scopus-indexed journals ranged from 0 to 1.8. There were no statistical differences in SNIP values between WoS- and Scopus-only indexed journals (P=0.95 see Table 1). Most journals (n=122, 94%) had one editor-in-chief of Croatian descent (95%); the majority of the editors (66%) were males. There were no differences in IF and SNIP based on the gender of the editor-in-chief (t-test, P=0.836 and U-test, P=0.51, respectively).

The number of editorial board members for all journals ranged from 2 to 50, with no statistical difference between WoS- and Scopus-only indexed journals. However, there were substantially more WoS-indexed journals, with at least one member with a non-Croatian affiliation (70% vs 48%; P=0.0255). The overall percentage of non-Croatian board members did not differ between WoS- and Scopus-only indexed journals (53% vs. 50%; P=0.63).

Gender distribution of editorial board members was unequal: 6 journals had only male members and 2, only females, while the rest of the journals had, on average, more male than female members (75% vs 25%; P < 0.0001).

Almost half of the journals were open-access (n=58, 45%), with no difference between WoS- and Scopus-only indexed journals (χ^2=1.489, P=0.0222). There was no difference in IFs between open (n=12) and subscription journals (n=29) (P=0.38). However, SNIP values of open-access journals (n=57) were greater than those of subscription journals (n=65) (U-test, P=0.0032).

Table 1. Composition of editorial structures and impact indicators of Croatian journals indexed in Web of Science and Scopus

	Journals indexed in		P*
	Web of Science (n=54)	Scopus only (n=76)	
Editors in chief (Md, IQR)	1 (1-1)	1 (1-1)	0.257
Editors in chief's sex (n, %)			
Male	36 (66)	48 (63)	0.167†
Female	15 (28)	28 (37)	
Two or more editors of different sex	2 (4)	0	
Missing (only name and initial listed)	1 (2)	0	
Editorial board members (Md, IQR)	16 (11-21)	13 (8-19)	0.155
Impact Factor 2012 (M, SD)	0.42 (0-1.87)	/	
Source Normalized Impact per Paper (Md, IQR)	0.27 (0.10-0.42)	0.26 (0.05-0.51)	0.952
SCImago Journal Rank (Md, IQR)	0.14 (0.11-0.22)	0.14 (0.1-0.2)	0.286

*Mann-Whitney U test
†χ^2-test

Nine journals did not have instructions to authors posted on their websites (7 of these were indexed in WoS). Of the journals with posted instructions, 45 (37%) did not have information about type of peer review, with no difference between WoS- or Scopus-only indexed journals (χ^2=0, P=0.99). Of the 76 journals that presented the type of peer review, only 12 (15%) described if the peer reviewers were independent (n=9, 75%), affiliated with the journal (n=1, 8%), or mixed (2, 17%). Furthermore, 33 (43%) mentioned who made the final decision regarding the manuscripts acceptance: most often the editorial board (48%), followed by the editor-in-chief (40%), and editorial office (12%). There were no differences in IF and SNIP values between the journals that did or did not have a peer review process, as described on their websites (t=0.221, P=0.8261 and Mann Whitney U-test, P=0.894, respectively).

No journal had a description of the roles within its organizational structure on the website. We found a large number of different structures and staff titles (Table 2).

Discussion

Our study showed no differences between Croatian journals indexed in WoS and Scopus with regards to their impact, number of editorial board members, open-access status, and details of peer review policies in the instructions to authors. We found a low proportion of women editors that were not associated with the journals' impact indicators. We also found a wide variation in the journal editorial bodies and roles, which may reflect specifics of the respective scholarly communities.

It is difficult to draw any conclusion about the role of the journals' editorial bodies since no details were available in print and digital versions of the instructions to authors. Future studies, including those employing qualitative methodological approaches, may explore this issue and reflect on its influence on the journal visibility, quality, and impact indicators.

Croatia is a good model for analyzing editorial policies of science journals, because it belongs to the scientific semi-periphery.[8] The country has a large number of publicly supported journals with a wide visibility.[9] It is, however, not clear whether this success is related to the editorial structure of the journals or their policies. Our study showed a lack of transparency in this aspect of the work: only 63% of the journals described the peer review process in their guidelines for authors. These findings are in line with those of an older study, which showed that of the 278 medical and scientific journals analyzed in 2000, 187 (67%) described the peer review process, with just 53 (19%) in sufficient detail.[10] Similarly, a 2013 survey of 1,340 biomedical academics from high-ranking universities showed that only 25% believe that the peer review is sufficiently transparent.[11] This lack of transparency makes it difficult to conclude whether the inclusion of Croatian journals in selective international databases influences the journals' editorial structures and functioning.

The recorded higher SNIP value of open-access journals suggests that an open-access strategy improves visibility of publications from semi-peripheral scientific communities. However, a recent study of biomedical journals from Slovenia proved that open access, as sole factor, is insufficient for widening the journal visibility.[12] It is therefore likely that the adherence to the international standards, transparency, quality peer review, and open access are all drivers of the competitiveness of the newly launched open-access journals.[13]

Transparency of the editorial and organizational work at the journals seems to be a driver of the international recognition and greater scientific impact. More research is warranted to determine the influence of different aspects of the editorial work on the international recognition of journals from small scientific communities such as Croatia.

Table 2. Different journal structures and staff titles listed in Croatian journals indexed in Web of Science and Scopus

Editorial office	Journal structures
Associate Editor	Advisory Board
Co-Editor	Chief Council
Copy-Editor	Consultant Board
Deputy Editor	Consulting Editors
Editor in Chief	Corresponding Members
Editorial Advisor	Council of Experts
Executive Editor	Editorial Board
Guest Editor	Editorial Council
Junior Editor	Honorary Council
Linguistic/Language Advisor	International Editorial Board
Managing Editor	Journal Council
On-line/Web editor	Junior Editorial Circle
Proof-reader	Scientific Advisory
Section Editor	Scientific Board
Translator	Scientific Council
Young Assistant Editor	Statistical Board
Editor emeritus	Young Editorial Board
Editorial Assistant	
General Editorial Assistant	
Honorary Editor	
Junior Editorial Assistant	
Layout Editor	
Secretary	
Senior Editorial Assistant	
Technical Editor	

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Galerija Meštrović - an art museum in Split, Croatia dedicated to the work of the 20th-century sculptor, Ivan Meštrović. The gallery preserves and displays the most significant works of Meštrović, and is in itself an art monument. The permanent collection includes works of sculpture, drawings, design, furniture and architecture. The gallery building and grounds were based on original plans by Meštrović himself, and included living and working areas, as well as exhibition spaces.