University library - support to university scientific journals

Lenka Nemeckova
Czech Technical University, Central Library, Prague, Czech Republic
Abstract

New publication standards in the international scientific publishing environment keep gradually coming up. At a university, various types of journals are published (in external cooperation, university-wide, faculty-wide, departmental, etc.). Their editors are above all expert researchers, lecturers and authors in their domain, giving the journals its scientific quality. On the other hand, it is hard for them to become as well experts in complex publishing activities. They lack personal capacity, time, even familiarity with the availability of the standards at the university and possibility to ask for assistance. On top of this, some argue by lack of money, and by low importance of the standards in their opinion.

The Central Library at the Czech Technical University in Prague has implemented and tested the standards in order to keep up the level of scientific publishing at the university and to provide complex assistance to the journal editors at one place to work towards the journals’ visibility and prestige in the international environment.

Keywords

University journals, Publishing behavior, Research support, University library, Publishing standards

1. Introduction

Researchers play various specific roles during the research cycle. They are the Users – Active researchers – and Authors, depending on the stage of the research cycle they are in at each point and they should fulfill all three roles at a high standard. The User stage comes mainly at the initial phase of their research as they seek and retrieve information. Next, they conduct their research activities in their domain. And last, they publish their results, be it preliminary, or final, which becomes the starting point to the next research cycle. By fulfilling the research cycle, researchers transform themselves from information users to information creators and they enrich the information environment with new findings. Since information circulates in an enclosed research environment which calls for highest quality research information available at the input, the output needs to generate high quality research results. The higher quality of information output, the greater development of the particular discipline this brings. This idea stands behind many bureaucratic requirements of various funders - grant agencies, governments, and universities.
According to the researchers’ point of view, it is the fulfillment of such requirements that is the main motivation for their work.

2. The national R&D assessment scheme and its impact on publishing behavior

The Czech national R&D assessment system is based on measuring quality by formal criteria. For journal articles and conference papers in engineering, only those published in internationally recognized sources indexed by Web of Science (WoS) and/or Scopus, are taken into account. For monographs, an expert evaluation process is held that evaluates the quality of the output. Also commercially used patents are rated high in the assessment. To slightly simplify the process, the outputs are awarded points. The higher quality source (e.g. journal by Impact Factor), the more points is the publication awarded. The more points, the more governmental funding the institution receives. This system is used to provide budgeting for the institution’s R&D activities and stands for roughly 20% of the institution’s budget. Also, the government is not the only funder of university activities. Further requirements and even more demanding criteria are issued by external funding bodies, e.g. grant agencies.

This means that no matter of the scope of their research, researchers are pressured to publish in the recognized international environment. There is no significant exception and support to purely national research in science and technology. Societal, economic, and practical/industrial impact of the research is not being assessed. Just the pure count of the mentioned output types is what matters at all.

Based on the data from the Czech Technical University in Prague (CTU) 2013 outputs, articles in journals with Impact Factor (IF) get in average the highest rating, followed by books and book chapters, patents, articles in journals indexed by Scopus, and conference papers being awarded the least points.

On the other hand, in terms of quantity, the most published are conference papers, followed by articles in journals with Impact Factor, articles in journals indexed by Scopus (which are not in parallel indexed by WoS), books and chapters, and patents.

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Avg. rating per output</th>
<th>No. of outputs published</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF journal articles</td>
<td>56,9</td>
<td>1676</td>
</tr>
<tr>
<td>Books and book chapters</td>
<td>32,8</td>
<td>372</td>
</tr>
<tr>
<td>Patents</td>
<td>29,5</td>
<td>35</td>
</tr>
<tr>
<td>Articles in journals indexed by Scopus</td>
<td>13,4</td>
<td>483</td>
</tr>
<tr>
<td>Conference papers</td>
<td>10,9</td>
<td>2422</td>
</tr>
</tbody>
</table>

Table 1 – 2013 CTU research outputs

2.1. Authors’ motivation to publish

Based on preliminary results from a qualitative survey among researchers regarding their information and publishing behavior, the national R&D assessment scheme influences 100% of their work. Some authors say that they see their work as business – as a survival struggle, trying to “sell” as much as they can, publishing for the sake of earning money through the assessment, rather than for the benefit of having high quality publications and earning prestige.

Therefore the publishing preferences set by the authors are rather pragmatic. The first is to meet the national R&D assessment criteria. Web of Science is taken as the only measure of quality. Scopus is for the vast majority of disciplines considered as not as important and prestigious as WoS (as is significant form the above mentioned publishing rate). Researchers tend to publish just such outputs that are supported by the system. If it was not for the system, they said they

---

1 http://vyzkum.cz/
2 Latest available data at the time of writing the article. 2014 outputs are still under evaluation.
3 According to the latest available 2013 Annual Report, CTU counts 1919 FTE.
4 Research in progress, results of pilot in-depth interviews with researchers from various fields of engineering conducted with the authors at the CTU in 2015.
would tend to produce slightly different outputs. Their main criteria is the best journal possible, the Impact Factor is an obligation, the idol. However, there are smaller and rather specific disciplines that are not very well covered by WoS, or not sufficiently covered by high quality research journals respectively. Those have roughly only 3-4 journals with IF in the world, so there is not much to choose from. Broader disciplines have about 20 suitable journals with IF. Some authors publish in the few journals they already have experience with, some are experimenting in order to broaden the range of journals they can publish in. Authors often choose from 2-3 journals prior to submitting the article for peer review.

Besides IF, the main important criteria the authors apply to choose the journal are:

- the topic of the journal and of their research,
- the chance for the article to be accepted,
- knowing the editorial board members (e.g. by having done peer-review for the journal in the past),
- duration of the peer-review and editorial process before the article gets accepted and then published,
- and prestige of the title and the publisher.

Publishing in conference proceedings is also not straightforward in terms of the authors’ motivation and reward. Conferences are the point of communication of the latest research results. It is a point of meeting people in person, sharing experiences through informal communication, and finding colleagues for further cooperation. Quite a necessary activity for researchers in rapidly developing disciplines such as sciences and engineering. The above numbers indicate that even though publishing in conference papers is quite purely rated, the researchers tend to publish there the most. Proceeding papers are the most published materials and at the same time the least awarded. The WoS/Scopus pressure applies to conference papers as well. It is not always evident ahead of time, whether the proceedings would be submitted and accepted by WoS or Scopus, or if papers will be published in some special journal issue. The authors often take it as another chance to publish amongst their community, get immediate feedback, and meet with other researchers in person. Earning the assessment points is also important, however the drive to attend the conference is the primary motivation, and the hunt for points from the event comes right after.

Books and course materials are complex materials, often describing theoretical principles and thus are most likely to be written by authors with some reasonable professional experience. It is a great success and the authors earn high professional credit from the community when publishing a monograph. Unfortunately, this is not reflected by the R&D assessment, since monographs are rather lower assessed (compare to e.g. journals with IF), and course books and course materials are even not assessed at all. University academic employees usually take both roles and fulfil them roughly half-to-half. They are researchers as well as teachers. Both activities take time and effort, publishing educational resources is similar to publishing research results. Course books require even more work since they should capture the current state and be regularly updated; often these are published through some online publishing platform, which is easy to update. So, the authors publish both outputs types regardless the income and the risk of not fulfilling the R&D assessment expectations.

Patents have no reason if they are not licensed. The usability of patents is not a subject to the R&D assessment, however unlicensed patents are fairly low ranked. And since it costs money to register a patent, it is not worth registering patents that are of no usability. Although even such situations happen.

2.2. Consequences of the R&D assessment

R&D in the Czech Republic is strive for financial resources. There is a significant pressure put on the authors by the funders as well as by the universities, and their parts (faculties, departments). Researchers are forced to bring money – grants, publications in IF journals, or any outputs that are awarded points in terms of the national R&D assessment. Some authors at some institutions
or faculties are even financially rewarded by bringing the financial resources in. It is evident that with the change of awarded outputs, researchers change their publishing behavior as well, they stop publishing outputs that are no longer supported (e.g. software, or articles in Czech peer-reviewed journals, etc.)\(^5\), and tend to publish just the supported ones.

### 2.3. Related ethical issues

Researchers are creative and innovative personalities in principle. And just the same approach they have to all these funders’ requirements. But not all creative solutions meet the ethical criteria. All the controversial rules, restrictions and pressure lead the researchers to accept steps leading too close to the boundary of ethical research and publishing behavior – e.g. plagiarism, self-plagiarism, publishing partial research results (i.e. salami publications), or submitting articles in a form of the “minimal publishable units”. Here we enclose the circle, because such articles can rarely earn the requisite academic credit. These are “survival” publications rather than prestigious or comprehensive ones.

iThenticate lists 10 most frequent types of plagiarism in research (iThenticate, 2013). Taken from the most common, it is wrong paraphrasing, repetitive publishing of research results, citing secondary resources, duplication of one’s own publications, copy and paste without appropriately citing the source, using results of collaboration without appropriately citing the source, wrong acknowledgements of co-authorship, replication – submitting the same paper to multiple journals, incorrect references, and the most serious case – complete plagiarism, which means publishing someone else’s work for one’s own.

### 3. Research support at the library

Because of the existing pressure to publish certain research results, the university library should help its researchers in a number of issues all through the research cycle. In terms of providing information, the researchers are pretty much set and know their way around to obtain articles/information resources they need. Also the library has an established tradition in providing information services in terms of information delivery. The new task is to help with publishing activities and disseminating information. Key principles stated in literature say that the services should not overwhelm researchers during the research process, and should not bring extra bureaucratic requirements. Instead, they should overcome the existing difficulties and rather be held in the background, ready to be pulled out at the right point when needed. The services should be meant to make the researchers’ life easier, so they can put up with the bureaucracy which is quite strong even at this point.

#### 3.1. Publishing support

Earning the R&D assessment points basically means to publish in resources covered by citation indices WoS and Scopus. There are obviously many resources that are already indexed and that are available to our researchers for publishing. Next, there is a broad category of publications (journals, proceedings) published at our university that are of a high quality, have good reputation, however the editors did not earlier have the motivation to submit the publication to the databases. Prestigious journals were listed on the List of Czech peer-reviewed journals, which was a subject to the R&D evaluation until 2012. Starting in 2013, these journals are for most subject areas from the evaluation excluded. The authors are thus looking for different opportunities to publish. And the editors experience quite a drain of authors and struggle for keeping the quality up.

Besides journals, various proceedings of different meeting types are published at the university - from student conferences to renowned international meetings. Because of the importance of the meetings to their participants, the meetings do not experience such a drain of attendees as journal

\(^5\) Output categories that used to be supported by the R&D assessment by 2013, and were frequently published.
editors do. The second reason might be the fact that the conference evaluation is conducted a posteriori, that means that the possible acceptance is a nice by-product of the meeting itself.

As a result of these requirements, the library receives many requests asking simply: “What to do to have our publication indexed by WoS or Scopus?” We provide detailed guidance to editors and conference organizing committees to meet the requirements for submitting their publications to the appropriate database. We are in close contact with the database providers to make sure we understand the criteria well and that we provide our authors with correct information. Then we work with journal editors to help them became internationally recognized, to find their citation scores in the databases, to watch their improvement and to decide when it is the time to submit. With conference organizing committees it is good to work since the very beginning of the event planning. Some proceeding editors talk to us just prior to publishing the proceedings or even after publishing it. The latter case does not give us much chance to modify more than just some details which is often not enough.

Our support should be targeted in the same manner at all parties involved – at the individual authors as well as at editors of any publication at the university and thus at the publications themselves. Our goal is that the university provides its authors and editors with high-quality tools and publishing platforms that meet the demanding international standards and the national R&D assessment criteria.

### 3.2. Publishing standards

In order to make the publications competitive, the primary task is to implement the requisite formal criteria. We have implemented the “must haves”, the most common publishing standards and we provide them to all university editors. OJS (Open Journal Systems)\(^6\) is an absolutely essential platform. It provides nice and user-friendly interface to users, authors, editors, and peer-reviewers, and it is highly recognized by international research community. It further provides tools to meet additional publishing standards incl. Open Access publishing criteria. These include DOI identifier, CrossCheck antiplagiarism tool, ORCID implementing is in progress, as well as Cited-by linking, a CrossRef tool to track citations of articles from a particular journal in the CrossRef database. ORCID identifier has already been out there for some time and is becoming the universal author ID by its independence of any particular commercial product, and also by providing data clearance in the citation databases, especially in Scopus. By its connection to CrossRef database and more resources, ORCID provides a universal author identity unification across the worldwide scientific community. The library is the central administrator for those standards and activities at the university. We provide them to all who are interested and we also make sure that our all users meet all requirements set by the individual service providers.

### 3.3. Open Access & related topics

Besides traditional publication channels, Open Access publishing is rising with all its advantages and disadvantages. This fact also needs to be reflected by the library in terms of user support.

**Gold Open Access**

Many of our university journals are published in Open Access being financed by the university/faculty/departamental budget. However the editors might not be aware of the fact that it is the Open Access journal that they publish. With the expansion of predatory journals, sometimes the board line between serious and a predatory journals is not clear. In some cases a journals with low or decreasing IF tends to have some elements of predatory strategies. Distinguishing between serious and predatory journals has thus become very difficult for everyone. Our researchers do not clearly identify Open Access, they see it mostly by its pitfalls and have the opinion of Open Access being the low-quality, second-class, even just predatory publishing. They are often caught by predatory journals announcing to have been ranked with Impact Factor. Only some authors recognize to have been cheated. Their idea of Open Access is thus mostly formed by such a negative experience. Our duty here is to help researchers distinguish the “good” from

\(^6\) [http://ojs.cvut.cz](http://ojs.cvut.cz)
the “bad” and show that the real Open Access has nothing to do with low-quality publishing. Understanding Open Access helps researchers and editors to publish Open Access more often without doubts or worries of publishing a second-class output. DOAJ registry is important with the task. Especially with upgrading their criteria in 2014, it is a “good and safe community” to be part of. Our activities often lead there - promoting DOAJ and Beall’s list to be the core resources to distinguish the “good” from the “bad”.

**Green Open Access**

Not only should our authors, also our editors should be aware of the advantage of self-archiving in an institutional repository. According to the “traditional” arguments - the more free availability of the outputs, the more chances for the text to get to the end users, to be read and cited. We provide full guidance to self-archiving and to its workflow at our university which is tightly bound to the university CRIS and to the workflow of gathering research outputs for R&D assessment.

**Intellectual property issues**

Many authors and editors are not well aware of copyright issues. On one hand, they say they do not know the copyright agreement, however are aware that they might be violating it. On the other hand, they know they have signed the agreement and know that all their rights are listed there. But still refuse to read it because of frustrating overload with rules and regulations. They are also most likely not aware of Creative Commons licenses. This means it is difficult to persuade the editors into implementing CC licenses since they tend to keep the traditional publishing form.

4. **Publication toolkit**

All the mentioned services are connected to each other. Our goal is to change the editors’ viewpoint of academic publishing, to let them know that it takes just a little effort to bring significant improvement to their publications in order to eventually meet the “traditional” goal of being indexed by the citation indices. The goal is to help the editorial boards to publish high quality outputs. All the mentioned tools make the synergetic effect only if they are implemented all together. It takes time, but it is easy to implement with the library guaranteeing most of the administrative issues so that the editors can only focus on the qualitative matters. We believe that by providing OJS publishing platform, DOI, CrossCheck, Cited-by linking, ORCID, institutional repository; and guidance in Open Access publishing (Gold/Green OA), in DOAJ registration, in journal quality evaluation, and in citation databases indexing criteria (WoS, Scopus) we bring our journals, proceedings, and possibly books the required formal quality and correspondence with the worldwide research outputs. We also hope that these tools help the editors with their editorial and publication process and will not require too much of their time, which should rather be devoted to research activities.

By offering all these tools and services we have created such a “publication toolkit”, individually, according to each editor’s aim, capacities, and requirements, we hope to make our university outputs internationally competitive and better recognized.

5. **Partnerships and cooperation**

So far, we provide continuous services to 6 university publications, and we have provided single services to numerous conference proceeding editors regarding their submissions to Web of Science. The services are individual. Each editor needs and wants different services, each editor implements the services in a different time period, with regard to their capacities and/or financial possibilities.

At the Czech Technical University in Prague, an editorial office of two university scientific journals is since 2013 part of the university library. This first journal is a scientific journal published since 1961. It is indexed in Scopus and aims at publishing high-quality scientific articles, and at supporting especially young scientists and their supervisors, so that young scientists succeed in the context of respected authors and in the context of open international scientific cooperation.

---

To systematically help conference organizers, we have established the second journal, a university conference proceeding series. This periodical is aimed at publishing the best conference proceedings through all CTU disciplines. Both these periodicals are published in Open Access and meet all formal criteria and standards of current scientific publishing.

Thanks to this cooperation, the library could have taken this opportunity to implement all the publishing standards, to test them, help implementing them, understand their fundamentals, and to become the administrator for the whole university. The librarians further learn all aspects and secrets behind scientific publishing process, and the editors learn the librarian perspective, which is also important to understand the database providers and the user perspective. For the editorial board, this was the great opportunity to implement all the standards and to give an immediate feedback.

This is an interesting and highly beneficial activity to both parts and above all to the researchers and authors at the university. We have a very good experience with this cooperation. It has brought an interesting synergy to all parties involved, and contributes to successful collaboration of researchers in the international scientific community and to increasing the quality and prestige of our university outputs.

By providing these activities and services and by our open communication, the library can have great, all-embracing and valuable feedback from our users and from the researchers on their information and publishing behavior. We can thus flexibly provide them with all necessary support to all their roles: Users – Active researchers – Authors. Especially useful and interesting seems to be the support focused on young researchers who are at the beginning of their career and who are yet forming their research and publishing behavior. All this is also an important added value to the library activities and we can highly benefit from it while designing further library services that meet new challenges in R&D activities.

The editorial office as a relatively new part of the CTU Central Library cooperates with all library parts, and this great synergy allows library to be integral part of the prestigious technical university and a beneficial partner of all researchers.
References


