Transparency in Searching and Choosing Peer Reviewers

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Introduction

- Open peer review ➡ Reviewers' names are included on the peer review reports = Transparency

- Our case: Openness and Transparency in **searching and choosing potential reviewers**

- The reviewers search process is **transparent** when the whole process of searching and selection is evident and **can be repeated with identical results**

- The repeatability of the process is possible: clear **criteria** and appropriate **tools** for the selection of potential reviewers

Requiremets for the improvements of peer review

- Most of the important decisions regarding science and scientists are based on the peer review ➡ subject to constant **criticism.**

- Need of the methodology that provides: reviewers who are **competent** to assess certain scientific research topics, achieves the effective **elimination of conflict of interest** and can be **automated** as much as possible

- Pilot study of searching the grant applications reviewers by using the **Reviewer Finder (RF)** methodology

- Combined methods of analyses

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Adaptation of peer review systems in science

- **Adequacy of reviewers**: intellectual knowledge, the exclusion of the conflicts of interest, proportional representation (regional, the rate of expertise, etc.) satisfactory responsiveness and clear peer evaluation criteria.

- A peer reviewer must have **expertise** as the researcher in the field.

Positions of the three main stakeholders:

1. those who are evaluated (**researchers**),

2. those that evaluate (**reviewers**) and

3. those who conduct the procedures (**administrators**).

Reviewer Finder (RF) methodology

- It searches potential reviewers on the base of the authors' profiles in particular disciplines

- It uses Scopus as a comprehensive database of scholarly publishing and its impact.

- Basically it uses a semantic search, but it also provides a list of potential reviewers with **indicators of expertise** and **possible conflicts of interest** by entering the text from the application .

- The list of potential reviewers **can be filtered** by the criteria of the researchers publishing (h-index, the extent of their publications, the period of publishing), as well as geographic origin.

Combined analyses

- **1. The implementation of the RF tool** in the process of finding reviewers in Slovene research agency (SRA) grant applications assessment in June 2014

  After the completion of the tender we analysed their responsiveness and compared reviewers' grades.

- **2. A short survey on peer review**

  was sent by e-mail to all potential reviewers that have been found by using RF.

- **3. Experiment using RF tool with students**

  of the 2nd year Master's degree in library and information science. The purpose was to determine how the RF search tool is useful when it is operated by „beginners".

1.1 Responsiveness of reviewers selected by RF

- 152 potential reviewers have been called. The evaluation was accepted by 28% of the invited reviewers, 27% rejected the call for evaluation, the rest (45%) did not respond.
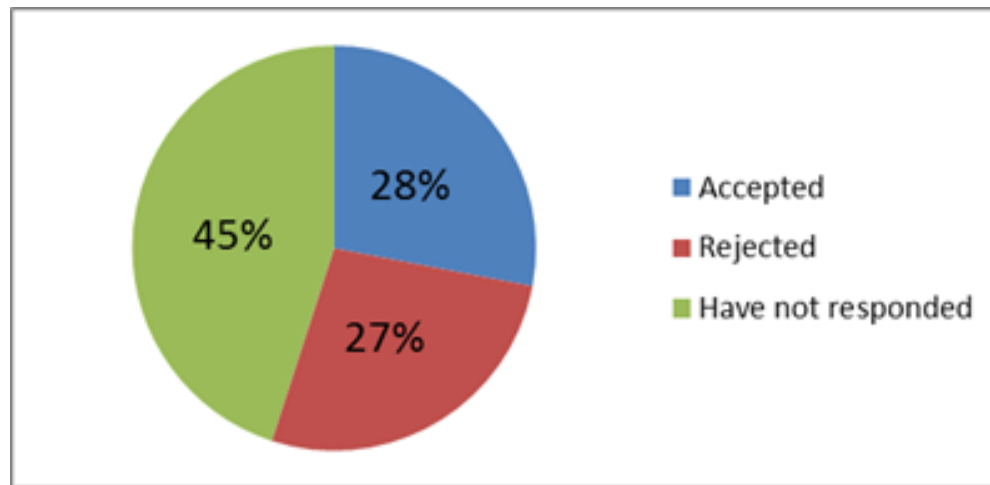
1.2 Ratings comparison of reviewers selected by RF

- Reviewers have written 52 reviews. Half (52%) reviewers selected by RF evaluated the applications exactly the same as the other reviewer chosen by other means.
- In general their scores were slightly lower.
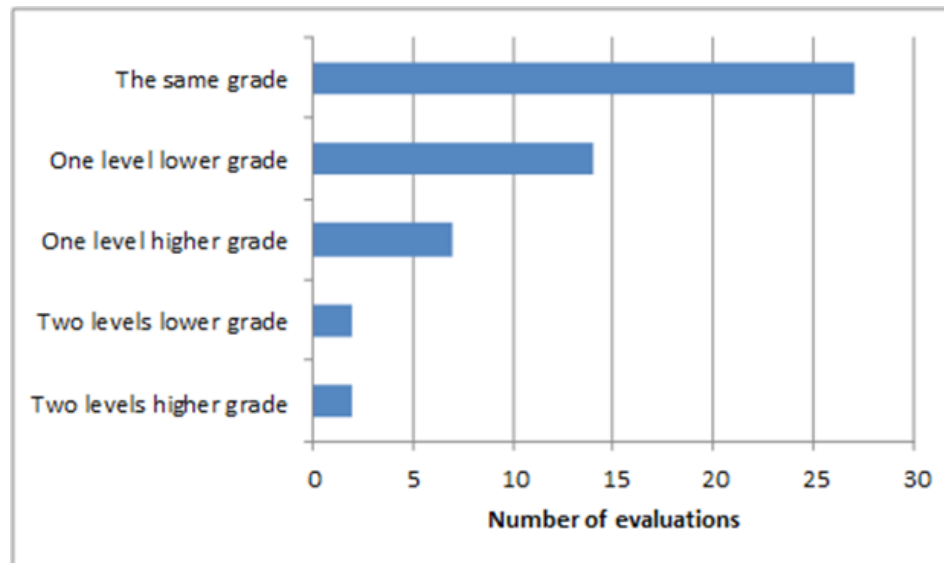
2.1 The attitude of researchers to the peer review in science

- Public call for submission of research programs (June 2014)   we participated in the search for reviewers using RF.

- First of all we wanted to investigate **whether the reviewers found were actually researchers suitable** for reviewing grant applications.

- We were interested to see **what can cause** their positive response or a rejection of the invitation for a peer review.

- The survey has been answered by 124 potential reviewers selected using the RF.

- The majority of respondents - 94 (75%) answered that they have already been reviewing different grant proposals in the past.

2.2 Reasons for the acceptance of peer review

- „This help the research community"
- „I had good knowledge of the field of applicated research"
- „I wanted to see what is new on the field"
- „ I have interes that certain research field develops"
- And also: „ The payment"
- Other individual reasons for the acceptance: the acquisition of new experiences in peer review, recognition of its own expertise, well-prepared and interesting applications.

2.3 Reasons for the rejection of peer review

- „Lack of time"
- „If the application is not in their field of research"
- „Due to the poor prepared applications"
- „The complexity and ambiguity of the peer review procedure"

3.1 Experiment using RF tool with students

- In the classroom, we performed a practical presentation of potential reviewers searching.

- We determined unified search criteria for reviewers (region, number of publications, search period).

- We also agreed on what criteria we choose potential reviewers from the proposed list (considering the exclusion of conflicts of interest, h-index, number of publications, seniority, the authorship of any review paper, matching the research field).

3.2 The relevance of the RF tool for non-professionals

- All 12 students involved in the experiment have appropriately searched potential reviewers by the use of the RF. We have analysed the correspondence of the research areas, compared their degree of expertise and regional representation (Europe).

- It was confirmed the assumption that the RF tool is suitable for use even by non-specialists, so administrators needn´t really be experts in the specific scientific research areas to search reviewers.

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Conclusions

- The proposed methodology allows collecting a wide range of suitable candidates for peer review, but the process must be accordingly adapted and supervised.

- There must be set up **a suitable long list of potential reviewers** because of high rejection rate.

- **Administrators** must provide clear uniform principles to prepare applications and to conduct evaluation and provide enough time for **reviewers** to conduct the procedure.

- **Researchers** that propose grant applications will have to pay greater attention to the systematic and serious preparation of their applications.

Thank you for your attention!

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