Assessing Educational Research Publications – A Multi-attributive Approach

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Background
Studies of the publishing behaviour of German educational researchers show that books and book chapters still play a major role and that only a small fraction of their total publishing output is covered in the existing citation databases. According to the most recent study, journal articles account for only one third of all publications and just about 13.5% of these articles were published in ISI-indexed journals, that is merely 4.5% of all analysed documents (Dees, 2008: 5). As a result, alternative non-citation based indicators are necessary for conducting research assessment studies in this field. This paper reports on an ongoing research project that develops such a new non-citation based approach to evaluate publications in the field of educational research.

Methodology
The research project suggests a new indicator that shall incorporate several different attributes of a publication. These can be grouped into two categories (Botte, 2007: 306): characteristics of the source of the publication and characteristics of the publication itself (see figure 1).

The attributes of the single document relate to assessing the usage of a publication (number of downloads) and to the description of the status of a publication in the scientific process (e.g. research report, state-of-the-art report) using special metadata. The second group of attributes is based on the evaluation of the source of a publication.

The new indicator shall become a part of the literature database German Education Index (GEI) and uses the bibliographic data of this Index in the development process. The GEI records professional literature from all disciplines of educational science as well as educational policy resources and practical texts and currently comprises about 690,000 entries dating from 1980. It is produced by a network of about 30 cooperation partners from Germany, Austria and Switzerland.

First results
At the present stage of the project the focus is on establishing a database that collects information on the editorial quality of mainly German educational research journals and series and on the analysis of usage patterns of the German Education Index. The key variables included in the database of publishing outlets are editorial concepts (orientation towards research or non-research), editorial processes (composition of editorial boards and practices of reviewing manuscripts), formal standards (regularity of publication and availability of metadata, such as keywords) and internationality (multilingual titles and abstracts). These key variables are supplemented with information on indexing in databases, readership, acceptance rates, circulation and library holdings. The collection of data on these variables can basically be carried out in two ways: by surveying the editors of the journals (cf. Forgionne et al., 2002) or by examining journal homepages or copies of each journal (cf. Lu, 2004). Both approaches are used in the project.

Figure 1. Model for a multi-attributive indicator of “scientific relevance”
For the majority of educational research journals the data are collected by consulting journal databases like Ulrichs and the journals homepages. Only for journals in the field of didactics the data are collected by sending out questionnaires to the editors. Up to now, the database contains the required information of about 200 journals. Noticeable is the quite low number of journals that apply a peer review-procedure. The analysis of usage patterns refers to two types of usage. The number of downloads of open access publications and the number of clicks on a button called “availability” (leading to libraries that hold the respective document) in the case of printed documents or documents with restricted access. First analyses show, that the share of open access documents is still comparatively low in the German Education Index, but their relative use, i.e. clicks per paper, tends to be higher than that of non-open access publications. Moreover, the construction of a journal usage factor, calculated as the total usage of an individual journal in 2008 divided by its total number of articles (published in 2006 and 2007) in the GEI produced a journal ranking that resembles rankings based on expert opinion surveys.

Next phases in the research

After completing the database on publishing outlets the resulting lists of sources will be presented to experts in the field to let them rate these outlets from their perspective (see “Peer rating” in figure 1). Such opinion surveys are not yet that common in the field of educational research, but a few journal rankings have emerged in this field, too. The latest one is probably the Journal Banding Survey conducted by the Australian Centre for the Study of Research Training and Impact (Holbrook et al., 2007). Another rating of educational research journals was carried out in Spain (Fernández-Cano & Bueno, 2002) and pedagogical and educational research journals are also included in the highly controversial European Reference Index for the Humanities (ERIH) (cf. Andersen et al., 2009; Gorman, 2008, The British Academy, 2007: 34-36). In contrast to ERIH, the categorisation of journals in the presented project will not be defined by their scope and audience but by their quality and relevance for the scholarly communication in the field and the focus will be on German journals. Since the required metadata for the attribute “document genre” are not routinely recorded in the GEI and are costly to record, the results of the related project European Educational Research Quality Indicators (EERQI) on the automatic classification of documents shall be utilized for this aspect. EERQI also wants to develop new indicators to determine the quality of educational research publications, but its focus is on different European languages and on the use of full texts and the application of methods of text analysis.

There is a close contact between this European project and the presented one since the German Institute for International Educational Research is also a consortium partner of EERQI.

Conclusions

The reported project tries to utilize not just a single but multiple approaches and to explore the relationships between different rating methods and different evaluative variables. This modelling of an evaluative indicator as multi-attributive, including a wide variety of characteristics of the publishing source and beyond that also of the publication itself was rarely attempted so far. The suggested approach is therefore highly experimental.

References