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Short communication

A review of the representation of PIRLS related research in scientific journals

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ABSTRACT

Recent decades have seen a rise of international large-scale assessments, which have become an influential instrument for informing educational policies. Likewise, they play an ever-increasing role in academic research. The vast information provided by the surveys relate to research topics relevant in various disciplines. We review the impact of the Progress in International Reading Literacy Study (PIRLS) on academic research and its representation in English language peer reviewed journals. Five literature bases were exploited for the bibliography and strict inclusion criteria set. Articles were analysed according to a comprehensive coding scheme and the resulting data was analysed with SPSS. Results map the evolution of PIRLS related research from the study's beginning, across geographic regions and disciplines. They describe types of research conducted and identify the most commonly investigated topics. Findings point towards topics that have so far been neglected, but would make valuable contributions to the research field.

1. Introduction

For some decades now international large-scale assessments of student achievement have played an increasing role not only in the evaluation of education systems around the world but also for scientific research in education, social sciences and economics. Different surveys such as the Progress in International Reading Literacy Study (PIRLS), the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA) provide rich information and empirical data for the description of academic outcomes, overall structures, and significant features of educational systems (Mullis, Martin, Foy, & Drucker, 2012; OECD, 2013a; Watermann & Klieme, 2002).

PIRLS is conducted by the International Association for the Evaluation of Educational Achievement (IEA) and assesses reading comprehension of fourth grade students, typically between nine and ten years old. The study is conducted every five years since 2001 and in the third cycle in 2011 over 50 education systems around the world participated. PIRLS includes the assessment of two main purposes of reading: 1) for literary experience and 2) to acquire and use information, where an equal number of tasks is devoted to each reading purpose (Mullis, Martin, Kennedy, Trong, & Sainsbury, 2009). The study further captures four main reading comprehension processes that the reader will use when reading for these purposes in and out of school: to focus on and retrieve explicitly stated information, to make straightforward inferences, to interpret and integrate ideas and information, and to evaluate and critique content and textual elements. PIRLS has a curriculum-oriented approach, in which the different countries' curricula are considered in the development

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of the reading passages and corresponding tasks. Information on academic outcomes is further complemented by information on students' socio-demographic and dispositional characteristics, their home environment as well as teaching and learning contexts in classes and schools (Mullis et al., 2009). The amount and breadth of information provided in PIRLS is potentially useful for policymakers and academics interested in different topics such as research on reading, motivational beliefs, educational inequalities and comparative education, to name just a few.

Nevertheless, PISA seems to have considerably more impact on educational policymaking and more frequently found in scientific publications than PIRLS (Breakspear, 2012; Dominguez, Vieira, & Vidal, 2012; Schwippert & Lenkeit, 2012). Several arguments can be made in this regard: PISA assesses reading as well as mathematics and science and is thus relevant to researchers from more disciplines; the age-based sample of 15-year olds in secondary education represents a more interesting cohort, particularly for research at the interface of education, social sciences and economics; the policy impact of PISA might have resulted in greater interest amongst academics; there could be more funding for research related to PISA.

PISA's impact on policymaking (Breakspear, 2012; Meyer & Benavot, 2013; Ozga, 2012) and the scientific community (Dominguez et al., 2012) has been documented. While the impact of PIRLS has been discussed, too, (Schwippert & Lenkeit, 2012), similar analysis for the representation within the scientific community is currently absent for PIRLS. Our own professional experiences already indicated that PIRLS is used as a source of rich quantitative data of levels of reading literacy and contexts of teaching and learning around the world. We moreover knew that the study itself, its implementation and impact on educational policies has been the focus of academic discussions. But a systematic and comprehensive overview of PIRLS related research in academic journals has not been written yet and this paper seeks to address that gap. In advance of the fourth PIRLS cycle in 2016, and the release of its data thereafter, the main goal of this review article is to assess the impact PIRLS has on the scientific community and thereby depict the landscape of what academic publications have captured from PIRLS related research. In particular the paper aims to give an overview of the disciplinary focus of journals publishing PIRLS related research and the addressed research topics. It will identify neglected topics, map the geographical distribution and evolution since 2001, describe the relation between university-led research and that conducted in other institutional settings and the geographical focus of PIRLS related research. We will also discuss possible explanations for the results. For researchers new to the field of international comparative studies this review may serve as an introduction and an overview of more and less frequently addressed topics. For more experienced researchers it may serve as an initiation to reflect upon their approach of PIRLS and its data and to shift focus to less investigated topics and unused potential of the PIRLS survey.

2. Methods

2.1. Bibliographical database

To grasp the landscape of PIRLS related research publications in academic journals, we built a state-of-the-art literature database. In the first phase, two key terms were used in various searches – 'PIRLS' and 'Progress in International Reading Literacy Study'. Both input terms were set as *anywhere* and *any year* in the digital search engines and five databases were purposefully deployed, namely ERIC, PsycINFO, Scopus, Web of Science and Zetoc. These databases were chosen due to their most relevant coverage of literature in the social science discipline, while also covering some areas in science. All publications found were kept and maintained by EndNote, a reference management software.

In the second phase, more searches were conducted so as to exhaust publications which were not indexed or available in those five databases. Repeating the same key terms and procedures, another two search engines, Google Scholar and the Oxford University library system catalogue were employed. Due to the more encompassing nature of these two engines, the search results went beyond the five databases by generating publications in much wider varieties in addition to academic papers. Wherever the key terms were mentioned in those publications, they were imported to EndNote. The two rounds of literature search produced a large volume of publications, to various extents, related to PIRLS in our database totalling 178 papers. The range of publications included journal articles, project reports, conference proceedings, theses, and publications from professional organisations.

A final search was conducted targeting three specific journals which were known by the authors to publish PIRLS related research. But these were missing from our EndNote database because the journals are not indexed in or covered by the seven digital search engines we had relied on initially. The three hand-picked journals were the *Journal for Educational Research Online (JERO)*, *Large-Scale Assessments in Education* and *IERI Monograph Series (Volume 1 to 5)*. Thereby another 20 articles were added to the EndNote database, which then totalled 198 articles.

Our initial overview of the 198 items convinced us that, although 'PIRLS' appeared somewhere in each of these items, the purposes of mentioning this international test in different literature varied considerably. In many publications the acronym simply appeared in a reference work cited by the authors but the foci of these articles did not have a direct bearing on the reading survey *per se* or the common topics of discussion it extends to. Moreover, plenty of the publications identified consisted of only the titles, publication years, author names or book titles without any abstracts or content, and access to these publications, whether electronically or otherwise, were proven to be problematic and inefficient. Taking these constraints into consideration criteria for data inclusion were determined.