

# What do citation patterns reveal about the outdoor education field? A snapshot 2000–2013

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## Abstract

This study considered what insights into outdoor education (OE) research and scholarship could be gleaned from citation indices and patterns. Citation *indices* have long been used as ranking tools in the physical sciences, and more recently have been used in humanities and social sciences. High citation measures indicate high research impact, although the converse is not necessarily true because research can have impact unrelated to citations, especially in a small practical field such as OE, and citation indices cannot be used for cross-discipline comparisons without considering variations in citation patterns between fields or disciplines. Citation data can also be used for purposes other than ranking. One aim of this article is to consider what OE citation *patterns* indicate about the distinctiveness of OE as a field. We wanted to use citation data to inform our understanding, as researchers, of the nature and structure of OE discourse. In particular, we made use of citation tools to look at not only which OE work had been cited but also where citation impact occurred. The study examined the most-cited OE research and scholarship published from 2000 to 2013. We attempted to answer the following questions: (1) What do citation patterns indicate about OE research impact outside the field? (2) Does where OE research is published predict where its citation impact, if any, will be? (3) Do citation patterns point to the existence of a single OE literature, or several? (4) Do citation impacts provide insight into how, if at all, the OE field progresses? Using Google Scholar data, Publish or Perish software, and searches for “outdoor education,” we obtained 1,446 articles or other sources. Using Zotero software, we reviewed and analysed these articles and works. We found strong support for an argument that OE discourse constituted a distinct research community clustered around the *Australian Journal of Outdoor Education* (now the *Journal of Outdoor and Environmental Education*), the *Journal of Adventure Education and Outdoor Learning*, and the *Journal of Experiential Education*. Most published OE work is never cited, and a small number of well-cited works form patterns of citation. We were surprised by the number of theses in the citing works, and found that with the exception of a few articles any impact of OE research and scholarship outside of the OE journals, theses, or OE conferences, is highly diffuse.

Keywords: outdoor education literature, literature reviews, bibliometrics, experiential education

## Introduction

The expanding reach and availability of citation data, particularly due to Google Scholar (GS), have made citation metrics — and patterns — more accessible in the social sciences and humanities and more meaningful, provided differences between disciplines or fields are understood (Harzing, 2013). Citation measurement, long established in the physical sciences, has only recently become mainstream in the social sciences and humanities, in part due to the advent of GS. In some fields and in some institutions citation measures are used to infer the impact of a particular journal or individual academic (LSE Public Policy Group, 2011), but citation data can also serve other purposes. Whether or not citation metrics are important to academic careers in OE, citation data can also be used to help understand the nature of academic discourse in the field, which is the aim of this article.

There is considerable literature on citation metrics. We have relied on Harzing’s (2013) work, which has a particular focus on the use of GS data in smaller or marginal fields of study. GS is important because in a field like OE it picks up any and every citation it can find, as distinct from indexing citations only in a specific set of journals. We refer

readers interested in the more arcane aspects of citation metrics to Harzing (2013) and the literature she cites.

While we expect this article will have some relevance for those interested in the application of citation metrics in ranking exercises, our primary aim was to use citation data and tools to better understand the OE literature. In trying to understand the ebb and flow of ideas in the OE field, citation patterns do not reveal which ideas are most significant — that requires a review of both the cited works and the citations in context — but they do indicate where the most influential ideas might be found.

To the best of our knowledge, there has been no previous research on citation patterns in OE journals or publications. There have been previous reviews of OE research (see, for example, McKenzie, 2000 or Rickinson et al., 2004), and Thomas, Potter, and Allison (2009) have published a broad overview of the content of the *Australian Journal of Outdoor Education* (AJOE),<sup>1</sup> the *Journal of Adventure Education and Outdoor Learning* (JAEOL), and the *Journal of Experiential Education* (JEE).

The most basic citation measure is a count of the number of times a publication (article, paper, book, or thesis) has been cited in the scholarly or