



SELECTING THE BEST OPEN ACCESS JOURNAL ARTICLES: TO WHAT EXTENT DOES THIS GO BEYOND BEING A SUBJECTIVE EXERCISE?

Mark Brown, Eamon Costello, Mairead Nic Giolla Mhichil, Dublin City University, Ireland

Summary

At the end of 2016 and 2017 a team of staff in the National Institute of Digital Learning (NIDL) at Dublin City University (DCU) published a list of what it judged to have been the top 10 open access journal articles produced in the general area of Blended, Online and Digital (BOLD) education over the course of each year. The purpose of the initiative was to more widely flag valuable professional readings to those working in the field and to promote debate and further knowledge of new and emerging research in area. A secondary internal objective was to help raise awareness and encourage members of the NIDL team to more deeply engage with published literature. This paper critically reflects on both the value and usefulness of this exercise, including the selection criteria, chosen methodology and validity of our top 10 selections. It briefly describes and offers an analysis of the selected articles and then invites discussion on the trustworthiness of our selections and feedback on some of the wider lessons arising from the initiative. In particular, the paper identifies and reflects on the blurring of boundaries between open and closed publications, the growth of review and meta-analysis articles, and the continuing value of traditional restricted publications. Finally, in the spirit of Richard Steele, a great Irish writer and co-founder of “The Spectator”, who claimed that “Reading is to the mind what exercise is to the body”, we invite critical self-reflection on the most important features of a really good journal article.

Introduction

A wealth of literature is published annually in the general area of Blended, Online and Digital (BOLD) Education. For example, Perkins and Lowenthal (2016) report in their comprehensive analysis of publications in the field that there are over 270 open access journals alone. The challenge is that we are all busy researchers and professional educators and when combined with the grey literature—blogs, press releases, electronic newsletters, to name a few—it is virtually impossible to keep up-to-date with everything that is published in the area. To help address this problem over the past two years the National Institute of Digital Learning (NIDL) at Dublin City University (DCU) has published on its blog (<https://nidl.blog>) a list of what it deems to have been the top 10 open access journal articles produced over the course of each year. However, this exercise has raised a number of interesting questions:

- What selection criteria do you adopt to help identify a really good (open access) journal article?
- What selection methodology do you use to help identify the top 10 (open access) journal articles for the year?
- Who do you involve in the selection process to help enhance the validity of the list of top 10 (open access) journal articles?

With the above questions in mind the next part of this paper briefly describes the selection criteria and methodology adopted to arrive at our top 10 (open access) journal articles for each year.

Selection criteria

When the NIDL team first began this task in 2016 the truth is that we did not have any clearly defined selection criteria. Lack of explicit criteria was partly in the interests of promoting inclusion and recognition of the fact that we all have different interests and perspectives. However, we recognised the subjective nature of our selection process and therefore when we began the nomination process in 2017 we understood the value of more explicitly anchoring our selection in guiding criteria (NIDL, 2017a). Accordingly, in 2017 the final selection of the top 10 open access journal articles was guided or informed by the following inclusion criteria:

- Published in open access journals listed on NIDL website.
- Restricted to Higher Education articles (inclusive of teacher education).
- Strong preference to journal articles with international focus or relevance.
- Minor preference to journal articles published by professional associations.
- Strong preference to journal articles offering major literature reviews.
- Strong preference to journal articles addressing major gaps in the literature.
- Minor preference to journal articles exploring new and emerging research topics.
- Strong preference to journal articles which challenge conventional thinking.
- Minor preference to journal articles relevant to current NIDL's projects.
- Overall selection of top 10 journal articles reflects a mix of gender, cultural and geographical diversity.

Implicit in the final criterion was an effort to recognise wherever possible the work of new and emerging scholars. We also recognised the value of broadly anchoring the selection criteria around the four main platforms of DCU's Research and Innovation Framework which focuses on fostering innovation, promoting engagement with enterprise, and contributing to societal and economic impact. More specially, set within the wider context of this framework the intention was to give at least some recognition to the five broad strands that encapsulate the NIDL's main research interests: (a) lifelong learning, (b) opening up education, (c) student transitions and success, (d) learning and teaching transformations, and (e) education futures. That said, in practice this particular criterion was not something that played a crucial role in the selection process, partly reflecting the extent with which the above foci actually live in the NIDL's research activities.

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Selection methodology

The selection methodology over both years involved a nomination process open to around 20 members of the NIDL team (NIDL, 2017a). While the primary objective of the exercise was to flag valuable professional readings to those working in the field a related aim was to raise awareness and encourage NIDL team members to more deeply engage with the published literature. A shared Google drive folder for the collection of nominated top journal articles was established for this purpose at the beginning of each year. In addition to this open nomination methodology when the more formal selection process began at the start of November, the Director systematically went through the full list of open access journals maintained on the NIDL's website (<https://www.dcu.ie/nidl/resources/online-journals.shtml>) to help identify specific journal articles which might qualify for inclusion in the long-list. Using this dual selection strategy by the end of November the authors then took responsibility as the steering group for selecting a more discerning short-list of top articles for the year. This list was further refined to a draft selection of 10 articles which NIDL team members were then invited to rank in order of merit keeping in mind the selection criteria and wider readership value. During this period the draft top 10 list was relatively dynamic as the ranking process tended to engage more staff and usually led to additional nominations. Moreover, a handful of new journal issues published late in the year needed to be included in the sample. As a consequence, during the process in both years a number of articles in the original list was replaced with late additions, which posed some challenges in the ranking methodology. Our willingness, nevertheless, to consider new articles missed in the original nomination process or incorporate those published late in the year is evidence of the inclusiveness of our selection methodology.

Top 10 selections

Our final selection of top 10 open access articles for 2016 is shown in Table 1. The top article appears in the “Australasian Journal of Educational Technology” and two articles in the top 10 were published in “Online Learning Journal and Research in Learning Technology” respectively. Between them these five articles represent publications managed or supported by the major professional bodies in Australia, United Kingdom and the United States. Article No. 8 exploring the concept of Sociable Scholarship is a good example of a thought-provoking selection that met the criterion of challenging conventional thinking. Lastly, it is noteworthy that half of the selected articles provide major literature reviews or analyses of important research trends.

Table 2 shows the final selection of top 10 open access articles for 2017 (NIDL, 2017b). Notably, the top 10 articles come from just five well-known journals. Partly by design, with one notable exception, once again professional associations manage or publish the majority of these journals. The standout exception is the “International Review of Research in Open and Distributed Learning”, which notably has three articles in the top 10 and in most credible citation indexes continues to be ranked as one of the top five journals (open and closed) in the field. The only other publication not managed by a professional association is the

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“International Journal of Educational Technology in Higher Education” published by Open Springer.

Table 1: Top 10 open access journal articles selected for 2016

Rank	Title	Author	Journal
1.	Open Access Journals in Educational Technology: Results of a Survey of Experienced Users	Ross A. Perkins & Patrick R. Lowenthal	Australasian Journal of Educational Technology
2.	Mapping Research Trends from 35 years of Publications in Distance Education	Olaf Zawacki-Richte & Som Naidu	Distance Education
3.	Different Views on Digital Scholarship: Separate Worlds or Cohesive Research Field?	Juliana E. Raffaghelli, Stefania Cucchiara, Flavio Manganello, & Donatella Persico	Research in Learning Technology
4.	Research Trends in Massive Open Online Course (MOOC) Theses and Dissertations: Surfing the Tsunami Wave	Aras Bozkurt, Nilgun Ozdamar Keskin & Inge de Waard	Open Praxis
5.	A Systematic Analysis and Synthesis of the Empirical MOOC Literature Published in 2013–2015	George Veletsianos & Peter Shepherdson	International Review of Research in Open and Distributed Learning
6.	Learning Analytics Methods, Benefits, and Challenges in Higher Education: A Systematic Literature Review	Sandra Nunn, John T. Avella, Therese Kanai & Mansureh Kebritchi	Online Learning Journal
7.	Open Educational Resources and College Textbook Choices: A Review of Research on Efficacy and Perceptions	John Hilton	Educational Technology Research and Development
8.	Sociable Scholarship: The Use of Social Media in the 21 st Century Academy	Cat Pausé & Deborah Russell	Journal of Applied Social Theory
9.	Reaching the Unreached: Demystifying the Role of ICT in the Process of Doctoral Research	Kwong Nui Sim & Sarah Stein	Research in Learning Technology
10.	Retention, Progression and the Taking of Online Courses	Scott James, Karen Swan & Cassandra Daston	Online Learning Journal

It is interesting to note that two journals each provide three of the top 10 articles—namely, the “Online Learning Journal” (Nos. 4, 5, & 8) published in the United States by the Online Learning Consortium (OLC) and the “International Review of Research in Open and Distributed Learning” (Nos. 2, 3, & 7) published by Athabasca University. However, once again our No. 1 article for 2017 comes from the “Australasian Journal of Educational Technology” published by the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE). Two articles from this journal appear in the 2017 list. A version of our top article was also published later in the year in “Online Learning Journal” but a decision was taken not to include two publications reporting the same research in the list of top articles for the year. The two remaining articles in the list come from more traditional publishers: the

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traditionally closed “tier 1” Taylor & Francis journal Distance Education, which was first launched in 1980 and is managed by the Open and Distance Learning Association of Australia (ODLAA); and the “International Journal of Educational Technology in Higher Education”, which was re-launched by Open Springer in 2016 with a new name (previously RUSC Universities and Knowledge Society Journal) under continuing leadership of Universitat Oberta de Catalunya, Spain.

Further analysis of the 2017 list shows that most of the chosen articles were co-authored ($n = 7$), with a total of 22 authors ($n = 25$ in 2016). Two authors appear twice in the list and also feature in both the 2016 and 2017 lists (i.e., Bozkurt & Zawacki-Richte). A reasonable geographical spread of authors appears across developed and developing countries but across both year women author less than 40% of papers. Once again, publications managed or supported by professional associations figure prominently. Six of the top 10 articles are published in journals supported by major professional bodies, which serves to illustrate the valuable role they play in actively promoting open access scholarship and the wider dissemination of research. That said, there are some important open access journals from major professional bodies missing from the 2017 list, including “EDUCAUSE Review”, “Open Praxis”, “Research in Learning Technology”, and the “European Journal of Open, Distance and eLearning”, which should not be overlooked in judging the value and validity of our selections. Notably, to date “EDUCAUSE Review” and the “European Journal of Open, Distance and eLearning” have yet to have articles appear in our top 10 selections.

While the final list of top 10 articles for 2017 cover a wide range of topics and arguably provide a solid foundation for postgraduate students undertaking research in the area there are some notable gaps. For example, learning analytics, mobile learning, personalised learning, professional development, quality enhancement, micro-credentials and the unbundling movement, to name the most obvious, are important research themes missing from the top 10.

Table 2: Top 10 open access journal articles selected for 2017

Rank	Title	Author(s)	Journal
1.	Blended Learning Citation Patterns And Publication Networks Across Seven Worldwide Regions	Kristian Spring & Charles Graham	Australasian Journal of Educational Technology
2.	Review and Content Analysis of International Review of Research in Open and Distance/Distributed Learning (2000–2015)	Olaf Zawacki-Richte, Uthman Alturki & Ahmed Aldraiweesh	International Review of Research in Open and Distributed Learning
3.	Trends and Patterns in Massive Open Online Courses: Review and Content Analysis of Research on MOOCs (2008-2015)	Aras Bozkurt, Ela Akgün-Özbek, & Olaf Zawacki-Richter	International Review of Research in Open and Distributed Learning
4.	Theories and Frameworks for Online Education: Seeking an Integrated Model	Anthony G Picciano	Online Learning Journal
5.	A Critical Review of the Use of	Sedef Uzuner Smith,	Online Learning Journal

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	Wenger's Community of Practice (CoP) Theoretical Framework in Online and Blended Learning Research, 2000-2014	Suzanne Hayes & Peter Shea	
6.	Refining Success and Dropout in Massive Open Online Courses Based on the Intention-behavior Gap	Maartje A. Henderikx, Karel Kreijns & Marco Kalz	Distance Education
7.	Special Report on the Role of Open Educational Resources in Supporting the Sustainable Development Goal 4: Quality Education Challenges and Opportunities	Rory McGreal	International Review of Research in Open and Distributed Learning
8.	A National Study of Online Learning Leaders in US Higher Education	Eric Fredericksen	Online Learning Journal
9.	Bot-teachers in Hybrid Massive Open Online Courses (MOOCs): A post-Humanist Experience	Aras Bozkurt, Whitney Kilgore & Matt Crosslin	Australasian Journal of Educational Technology
10.	Gamifying Education: What is Known, What is Believed and What Remains Uncertain: A Critical Review	Christo Dichev & Darina Dicheva	International Journal of Educational Technology in Higher Education

Finally, an unanticipated observation arising from this exercise over both years was the relatively low number of authors who had no or limited presence on Twitter. Wherever possible over December when progressively tweeting news of the top 10 articles we tried to include the author's Twitter handle—partly to alert them to their inclusion in this list. In 2017, based on our best efforts to locate relevant Twitter handles, as notably none of the journals appear to include this information in standard contact details for authors, just over half of the 22 contributors appear to have Twitter accounts. More to the point, few of these authors are particularly active Twitter users ($n = 4$), which is a little surprising given the nature of their work in the area and what appears to be a conscious decision to disseminate their research through open access publications along with what is known in terms of potential for increased citations when academics tweet their work. This apparent disconnection may be worthy of further investigation in future years.

A more detailed explanation of specific reasons for choosing each article and the perceived contributions they make to research and new knowledge in the area is contained in the NIDL (2017b) blog post announcing the list of top 10 open access publications.

Wider insights and lessons

This section critically reflects back on the exercise and offers three insights or major lessons arising from the top 10 open access article selection process over the past two-years.

Blurring of boundaries

Firstly, there appears to be an increasing blurring of boundaries between open and more traditional closed publications. During the selection process the question arose, what constitutes an open access article? Our second ranked 2016 and fifth ranked 2017 article, for

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example, appears in a highly ranked closed journal published by Taylor & Francis which is managed by a professional association (i.e., ODLAA). It is noteworthy that the publisher now provides an *open select* service where the author(s) have the option of paying a fee to ensure downloads of their article are freely available. In contrast, authors are not required to pay anything when publishing their work in the “International Journal of Educational Technology in Higher Education”, which is published by Open Springer. In the former case we decided to include such publications for consideration in our NIDL list of top 10 articles, as we wanted to recognise authors who demonstrate a commitment to openness and more widely disseminating their work.

The question of what constitutes an open access publication also arose with pre-print uploads of articles by authors to institutional open repositories and academic focussed websites (e.g., Research Gate). This question resulted in considerable debate amongst some members of the NIDL team, especially when the pre-print article went on to be published in a closed journal. For example, this issue came up when we considered an interesting article by George Veletsianos on who participates on MOOC hashtags and in what ways in trying to develop a generalizable understanding of Twitter and social media use. Although a pre-print version of the article is openly available from “ResearchGate”, and on the author’s personal blog, the final version (Veletsianos, 2017) appears in the “Journal of Computing in Higher Education”. After much debate we decided to exclude this publication.

Similarly, on the theme of MOOCs we had to consider how to handle a useful publication on designing Massive Open Online Courses to take account of participant motivations and expectations, which was available as a pre-print version on Gilly Salmon’s personal blog. The final version of this article (Salmon, 2017) appears in the “British Journal of Educational Technology”. In the end, once again, after carefully reflecting on this issue, we decided to exclude the article from our list. However, we appreciated what appears to be a deliberate effort on the part of some scholars to disseminate their research through both open and closed publications, which we speculate from our own experience may be influenced by traditional rules or institutional definitions of what counts as high quality tier 1 research outputs. The lesson from these examples is that some scholars are strategically navigating and intentionally managing both open and closed publication spaces to help more widely disseminate their work. We think this serves as a valuable model for our own NIDL team and other scholars working in the area, especially if they wish to enhance the wider impact of their research.

Growth of review articles

Secondly, there appears to be a growing trend and increasing popularity towards the publication of review articles on topical issues following a systematic review methodology. For example, amongst the list of nominations for 2017 we considered Krull and Duarte’s (2017) article reporting a systematic review of research on mobile learning in higher education. Similarly, we also considered Liyanagunawardena, Scalzavara, and Williams’ (2017) article in the “European Journal of Open, Distance and eLearning” reporting a systematic review of

literature on open badges. In addition, Mnkandla and Minnaar's (2017) meta-synthesis of the literature on the use of social media in e-learning was considered for inclusion, particularly given our preference in the selection criteria for identifying major review articles. Also, with its interesting focus on how authors collaborate in written publications in the area of e-learning, we considered Mohammadi, Asadzandi, and Malgard's (2017) paper in the "International Review of Research in Open and Distributed Learning" analysing articles in the Web of Science over a 10-year period.

While all of the above publications explore important topics, and as reported above our final selection of top 10 articles for both 2016 and 2017 include a reasonable number of major literature reviews, the standout observation from evaluating this type of work is that not all review articles are created equally. Polanin, Maynard, and Dell (2017) support this observation in their critical analysis of this line of research where they report, "Despite their popularity, few guidelines exist and... overviews are a relatively nascent and undeveloped synthesis method that pose unique methodological challenges and may be problematic" (pp.172-173). Building on this concern and Grant and Booth's (2009) typology of 14 literature review types and different methodologies we concluded that researchers' decisions about how they review the literature are never neutral. They invoke and sometimes conceal particular biases and assumptions about what they value (or not) as trustworthy research. The challenge for readers is to critically interpret such major literature review articles in terms of whether they justify the chosen methodology and make explicit their theoretical assumptions.

To state this point another way the lesson is that we need to go beyond potentially closet positivist and narrow instrumentalist methods, which arguably new software solutions make easier and enable new novel forms reporting. In other words, literature reviews that merely describe what has been published typically fail to provide a critical theoretical analysis of the field. Not all of the major review articles we include in our NIDL top 10 lists over the two-years fully address these points.

Value of closed publications

Thirdly, despite the focus of this exercise being on open access publications, which is both philosophical and pragmatic as we want as many people as possible to be able to access these articles, including members of our own NIDL team, many of the so-called best articles (depending on your personal selection criteria) appear to feature in more traditional closed journals. Put another way, our list of top 10 reads for the year would be very different if we adopted a hybrid sample of both open and closed publications. This point begs the question, what might we have included or at least considered in our selection from a wider sample of more traditional closed or restricted journals? This is a difficult question to answer without adopting a systematic selection methodology; however, after this question arose we published on the NIDL (2017b) blog an alternative list of closed publications that we may have considered for our top 10, although it needs to be stressed they were selected without following a defined methodology and many other journal articles would be worthy of

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consideration. The lesson is that educators who do not have the luxury of access to traditional closed publications may be missing out on valuable literature with potential to influence future research, theory and practice.

Conclusion

This paper describes a selection process over 2016 and 2017 of what the NIDL team judged to be the top 10 open access journal articles published in the general area of Blended, Online and Digital (BOLD) education over the course of each year. In so doing the paper outlines the selection criteria, chosen methodology and critically reflects on the common and distinguishing characteristics of the sample of top 10 selections. A number of lessons arising from this exercise are shared but the question remains whether the two lists of NIDL top 10 open access journal articles provide valuable and trustworthy insights into the field or merely represent a subjective collection of publications from the wealth of literature annually published in the area. While we invite others to judge the value of this exercise for themselves “if reading is to the mind what exercise is to the body”, then extending this analogy the central point or underlying message of this paper is that not all exercise should be assumed to offer the same health benefits.

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