Expanding the Global Conversation in Dental Education: Guidelines for Scholarly Research and Writing for International Authors


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Over the past decade or so there has been a significant growth in the number of dental schools in many countries. For example, the number of schools in Australia (with a population of 23 million) has increased from five to eleven. In Malaysia (with a population of around 30 million), the number has increased from one to twelve. In Brazil (with a population of approximately 200 million), there are over 190 dental schools, with 102 new schools being established over the period from 1995 to 2008. Along with the establishment of these new schools, there is a need to employ dental academics to develop courses and teach students, and, in those schools that are linked with research-based universities, faculty members are also required to participate in scholarly activities.

In many cases, new academic staff in dental schools are burdened with heavy teaching loads, and it is difficult for them to establish strong independent research programs due to a lack of appropriate training and/or mentoring, lack of time, and the high costs involved in setting up and maintaining research teams with limited funding opportunities. As scholarly activities are usually required for tenure and promotion, one option that new dental educators may consider is involvement in educational research. After all, new schools are admitting new cohorts of students who are undertaking newly established educational programs, so this environment provides opportunities to evaluate the outcomes of new educational approaches in new settings. Furthermore, there is a move to greater use of IT for supporting learning, and more students are spending time on community-based education outside their school. As a result, these initiatives introduce possibilities for generating educational research questions of significance that add to our understanding about why or how these approaches work (or do not work).

In an editorial in the January 2013 issue of the *Journal of Dental Education (JDE)*, the Editor, Dr. Nadeem Y. Karimbux, provided statistics on the countries of origin of manuscripts submitted to the *JDE* along with the percentages accepted and published. It was pleasing to see that the number of submissions from countries other than the United States was high in 2011 and 2012—forty-three non-U.S. countries in 2011 (65 percent of submissions) and forty-two non-U.S. countries in 2012 (69 percent of submissions)—reinforcing the fact that the *JDE* has become a truly international journal. These submissions may appear in any one of the sections in the journal, although the majority from other countries appear in the International Dental Education section. However, a large proportion of submitted manuscripts never see the light of day. They are either rejected by the Editor without being

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sent out for review or are rejected after going through the review process. The overall accept-reject ratio for the *JDE* was 38 percent:62 percent in 2011 and 36 percent:64 percent in 2012. However, the ratios were much lower for submissions from many countries. For example, of the 106 submissions from India in 2011, only twelve were accepted (11 percent:89 percent); of the thirty-eight from Brazil in 2012, only seven were accepted (18 percent:82 percent).

It is always disappointing to have one’s submission rejected by a journal, but this also represents a lost opportunity for the educational community as this research may thus never be seen. Common reasons for rejection of articles include a lack of explicit use of theoretical/conceptual or educational frameworks; a lack of originality or significance of the research for an international audience; poor research design or lack of rigor in terms of methods used and interpretation of results; inappropriate statistical treatment; inability to generalize the findings to other settings; and poor English usage.\(^6\) While some of these rejected manuscripts may not be salvageable, others could have potentially been acceptable if the authors had spent more time planning, executing, and writing up their research.

With the increasing interest in global dental education, it is more and more evident that dental educators in different countries can benefit from sharing their research across national and regional boundaries. So how can we improve the quality of submissions to the *JDE* to ensure that more international manuscripts are accepted and published? To answer this question, we need to consider not only the academic staff or educational researchers who are submitting their work, but also the reviewers who provide feedback to the authors and whose recommendations are used by the Editor to make final decisions about whether to publish or not.

Some key questions\(^4\)–\(^7\) for researchers to ask themselves (and their colleagues) prior to execution of a study and submission of their manuscripts include the following:

- Is this original work that is likely to be of interest to the readers of the *JDE*? Does the study address a current gap in our knowledge that is of significance to the readers of the *JDE*?
- Is the problem statement clearly stated in the context of previous work? What theoretical, conceptual, or educational framework(s) have been explicitly used to inform the design and interpretation of the study?
- Are the methods appropriate to the research questions? Are the sampling, data collection, and analyses appropriate for the research questions?
- Are the data reported accurately? Are interpretations based on results, and do they take the limitations of the study into account, including confounding factors? Have the implications of results been considered? Do the conclusions match the results?
- Is this manuscript well-written and logically organized? Are tables and figures used appropriately?

Presumably, many authors do ask themselves these questions and, even though their answers may not all be in the affirmative, still decide to proceed with a submission. While some of these manuscripts will be rejected without review, others may find their way to reviewers. It is then critical that the reviewers fully appreciate their role. As Azer et al.\(^7\) have noted, peer reviewing is a privilege, a responsibility, and a service to the profession. Ultimately, it is the quality of the review process and its ability to provide constructive feedback to researchers that will lead to an improvement in the quality of articles published in any journal. Unfortunately, the quality of reviewers’ reports in dental education can vary greatly, and this makes it difficult for editors to ensure that published work is of a consistently high standard.

We have previously discussed some of the factors that can lead to negative perceptions about dental education research and possible ways for moving forward.\(^1\) Ultimately, the best way to improve these perceptions will be for dental education manuscripts to be of high enough quality to warrant publication in top-ranked journals. Unfortunately, at present only a very small percentage of manuscripts by dental educators appear in non-dental education journals. We need more articles that report outcomes from educational research that has led to tangible benefits for our students, faculty, and the public and that would also be of interest and applicable to other educators. Dental academics also often seem to confuse the scholarship of teaching (which is demonstrated in part by publications in journals)\(^1\) with scholarship in teaching (which we should all demonstrate as dental academics and which includes regular evaluation of our programs that are not necessarily suitable for publication in international journals). There are clear guidelines available for reporting curriculum developments that demonstrate a scholarly approach.\(^13\),\(^14\) and submitted manuscripts on these developments should always include some levels of evaluation.\(^15\)
Some of the approaches that we believe will lead to improved dental education research internationally and then to improved manuscripts submitted to journals are the following: working in teams in which colleagues with interests in educational research (including researchers outside dental education) can provide mutual support and constructive peer feedback; addressing broader research questions, including how and why questions relating to learning and teaching within a planned ongoing research program, rather than undertaking one-off, short-term studies; developing research programs that involve more than one institution; incorporating longitudinal designs to enable outcomes to be assessed over more than just one or two years; if using questionnaires, ensuring that there is appropriate validation of instrument scores in different contexts; and ensuring that statistical expertise is available right from the start of studies and that appropriate designs are devised (e.g., qualitative and/or quantitative analyses). In those countries where it is difficult to build a team that provides sufficient overall expertise in the various aspects of dental education research, linking with established researchers in other countries who can act as mentors and possibly collaborators provides another means of improving the quality of educational research and the manuscripts reporting that research, including ensuring that English expression is clear and concise in submissions. With improvements in electronic communication, productive collaborations are now possible without the need for constant face-to-face meetings.

Through the combined efforts of the dental education research community—i.e., authors and reviewers—in adhering to core principles of quality research and manuscript development, as described in the literature, the quality of our education research efforts will be improved. In turn, this should result in improved acceptance of manuscripts for publication and ultimately the quality of all of our students’ educational experiences.

REFERENCES