Is education immune from evidence-based scrutiny?

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Evidence-based practice appears to be well established in our profession. However, the main focus of evidence-based practice has been in the clinical and research realms; with clinicians and researchers often bearing the brunt of criticism concerning the lack of evidence supporting physiotherapy management practices. In the move towards global evidence-based practice, very little attention has been given to the practices of physiotherapy education programs in Australia. If universities and physiotherapy educators are put under the same evidence-based practice spotlight, how well do their educational programs and curricula rate? How defensible are their teaching and learning practices?

In medical education literature, the term evidence-based education is being used with increasing frequency. Evidence-based education refers to two distinct concepts. First, it refers to the level of evidence underpinning the content presented within the curriculum. And second, it refers to the level of evidence supporting the types of teaching practices and models used to foster learning (Davies 1999, Harden et al. 1999, van der Vleuten et al. 2000).

The need to review educational practices is being driven by a number of external forces. There is a greater need for fiscal accountability to government and community as students and their families face increased fees for their education. Backing Australia’s Future (the Australian government blueprint for higher education reform; http://www.backingaustraliasfuture.gov.au/policy.htm), particularly the new Learning and Teaching Performance Fund, will be a key driver of higher education reform; http://www.backingaustraliasfuture.gov.au/policy.htm, particularly the new Learning and Teaching Performance Fund, will be a key driver of educational outcomes. The rationale for spending time, effort and money on education is that it is believed to have a significant impact on the way that physiotherapists practice and, in the longer term, on health outcomes. Unfortunately, it could be argued that both undergraduate and postgraduate physiotherapy educational practices are based upon intuitive and historical beliefs about the kinds of educational practices that promote effective learning, rather than on credible research. This is reflected in the lack of rigorous published research into educational practices and curricula (Chipchase 2004, Strohschien et al. 2002).

Why is there a lack of sound scholarly work on Australian physiotherapy educational practices? The reasons may be three-fold. First, many academics and teachers of physiotherapy entered academia with professional and clinical expertise. The research focus of these academics has generally been the clinical area in which they work rather than the scholarship of teaching and learning. Second, educational research is complicated as the environment in which educational intervention occurs is the real world, making the intervention under study complex, multi-factorial and long term (Borthwick 1999, Murray 2002). The impact of significant alterations to curriculum on practitioner competencies may not be known for years following implementation. In addition, the spectre of change to established and accepted methods of teaching (lectures, tutorials, practical and clinical education) is commonly seen as introducing an unacceptably high risk of reducing academic standards and not providing an educational experience of value to students, academics and the professional community. Third, in Australia there exists little opportunity to share different models of educational practices between institutions. Even today, very little publicly accessible information is available in Australia concerning physiotherapy curricula, models of teaching, clinical supervision, or assessment practices. This is exacerbated by the shortage of funding to support educational research. With the exception of employment rates and student satisfaction survey data, we currently have no specific mechanisms for sharing best practice educational processes and outcomes for physiotherapy education programs between states or institutions.

The unfolding of evidence-based practice in the clinical arena in the last decade is probably another reason why academics are apprehensive of the same philosophy being applied to educational practices and research. There are many lessons to be learnt from the mistakes and misconceptions surrounding evidence-based practice (Wolf 2000). One of the main issues is that evidence-based practice has been often mistakenly interpreted as the existence of randomised controlled trials to support the use of a particular intervention. In reality, evidence-based practice includes three equally important factors: ‘The integration of best research evidence with clinical expertise and patient values’ (Sackett et al 2000 p. 1). In practice this means the ability of each clinician to plan a treatment strategy which is supported by the best research evidence available but interpreted in the light of the needs, values, and presenting condition of the current patient and the clinician’s past experience with similar patients.

With respect to evidence-based practice in education, perhaps the original definition by Sackett et al (2000) could be amended to read ‘evidence-based practice in education is the integration of best research evidence with educator’s expertise and student values.’ In educational practice, this refers to the ability of each University to plan an educational strategy which is supported by the most appropriate teaching and learning research available but interpreted in the light of the needs, values, and current educational level of the students, and the academics’ past experiences with similar students.

In many instances, appropriate educational research needs to be based on the description of teaching and learning strategies presented in light of both educators’ and students’ experiences, needs, and behaviours. Methods of inquiry and knowledge generation, such as debate, discussion, critical enquiry and action research should be included in our definition of evidence-based practice in education.
Education of physiotherapy students has at its core clinical education, which involves a symbiotic collaboration between clinical sites and universities. Through this collaboration, the importance of the role of clinical physiotherapists as educators is well established and valued highly by the profession. The challenge now for educators is to include best-evidence practice for both clinical and educational strategies. Are we as a profession ready for this challenge? If we are, this teaching expertise should be rewarded appropriately with remuneration and opportunities for promotion.

The small amount of relevant current research available from medical education literature combined with our historically based traditions in physiotherapy education both suggest that patient encounters in the clinical setting are an essential component for graduating competent, effective physiotherapists. While most would agree with this, there still remain huge discrepancies across Australian universities as to how this clinical education is structured, who pays and just what educational activities constitute clinical learning.

Currently, physiotherapy education, rather than being evidence-based, appears to be experience-based or perhaps even exposure-based (Parsall and Bligh 2001). Experience-based education is where decisions regarding clinical education and the associated competencies are based on what has always been done, and exposure-based education is based on the premise that if the students are immersed in enough hours in clinic they will eventually become competent.

An example of the lack of evidence base for physiotherapy curriculum is the requirement by Australian Council of Physiotherapy Regulating Authorities (ACOPRA), albeit not enshrined in policy, that all Australian entry level physiotherapy programs provide 1000 hours of supervised clinical experience. This requirement is based on opinion and intuition rather than credible research. There is currently little evidence, specifically in physiotherapy education, about what is the most effective, cost-efficient educational approach to achieve clinical competency in our graduates. Do students who graduate from a degree that completes all clinical units in their final year after studying all the underpinning academic theory achieve similar levels of new graduate competencies as students who complete their clinical education as part of an integrated model? And what of the recommended 1000 clinical hours? Is this really the indisputable bench mark for achieving clinical competency? Before our profession attempts to find a solution to the predicament of provision and sustainability of clinical education we need further understanding of issues and outcomes in order to inform our decision making.

Is our profession able to review and critically appraise current clinical education practices with a view to refining them in the light of the best available research evidence? Can we do this so that our physiotherapy programs continue to graduate physiotherapists able to shape health care into the future? We believe that the time is right. If the lively debates and well-attended discussions at the APA congress in Adelaide earlier in the year are anything to go by, there is now a strong sense of urgency and commitment to education from clinicians, academics, and the APA.

So how do we achieve an evidence-based approach to education? We believe three things need to happen.

First, we need to promote and value educational research by encouraging educational institutions and academics to explore different ways of educating students. This means planning for educational research in the same way that clinical research is expected and feted within our profession. Processes, outcomes, and findings of educational strategies need to be disseminated through publication in peer reviewed journals. In the last two years there have been no original research articles on physiotherapy education in the Australian Journal of Physiotherapy. Educational outcomes reported by students are unlikely to be published in the Australian Journal of Physiotherapy (the guidelines for authors state that ‘surveys of physiotherapy students … are generally of low publication priority’). A possible solution would be to create a section or supplement to the journal that provides a means of propagating educational scholarship. In addition, more transparent funding opportunities from within the profession should be available and accessible.

Second, there is a clear need for more cross-institutional collaboration and discussion concerning educational processes. The leaders of physiotherapy schools in Australia and New Zealand have demonstrated their commitment to clinical education by convening an annual meeting of Clinical Co-ordinators from each physiotherapy school. However, there needs to be more strategic educational research into physiotherapy. We have an opportunity to undertake multicentre educational research using a variety of research strategies. Australia is a small, albeit geographically scattered, country with only 11 universities currently producing approximately 1000 new graduate physiotherapists each year. Collaboration and communication between these universities is the key, rather than letting fear of competition limit the possibilities of educational research.

Third, and finally, our profession will need to acknowledge explicitly the complexity of the learner/teacher/client interaction and accept that evaluating educational outcomes in terms of grades and student satisfaction alone is unlikely to assist in our understanding of best educational practice. As is the case within the clinical realm, we need to acknowledge that no one research design or approach will provide all the answers. Qualitative, quantitative, and mixed research approaches will be essential to understand how the way in which we educate our students shapes their knowledge base, reasoning abilities, and technical and professional skills (Morrison et al 1999). When developing outcome measures to explore educational interventions, we perhaps need first to consider the development of methodologies and tools that go one step further, beyond student learning into graduate outcomes.

In summary, most universities in Australia would boast that they provide high quality educational physiotherapy programs that produce graduates who are in demand throughout the world. As is the case in many areas of education and business, the pressures on universities are mounting and there are greater demands being placed on diminishing funding and resources. Without a strong research base on which to mount our arguments and defend our practices, particularly in relation to clinical education, the profession is in grave danger of having the quality of its entry-level programs severely reduced. There is an urgent need for a framework that promotes, develops, and allows collaboration of educational physiotherapy research and practice.

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References


