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Using Debates as Assessment in a Physiotherapy Capstone Course: A Case Example

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Abstract

While not a new teaching and learning approach, debating may be considered novel when included in a suite of more traditional teaching and learning activities. Despite the potential benefits of debates for the development of generic skills, their use in physiotherapy education remains unreported. Thus, our aim was to evaluate student satisfaction of a debate assessment item in a physiotherapy capstone course. We recruited students enrolled in a final year physiotherapy course undertaking a group debate assessment. Students were invited to complete two surveys of their expectations regarding the debate assessment, and their satisfaction after completing the debate. Students were further invited to participate in a focus group. All students participated in the debate ($n = 20$). Six students (30%) completed the first survey, 16 students (80%) completed the second survey, and seven students (35%) participated in the post-debate focus group. We found that before the assessment item students were apprehensive about the debate, however they felt it would be a beneficial learning experience. After the debate, students claimed they enjoyed the novel assessment and were supportive of its continued inclusion in the capstone course, however, students were ambivalent on the inclusion of debates in earlier courses in the program.

Keywords

Communication, Generic skills, Health professional education, Physical therapy, Post-graduate.

Cover Page Footnote

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Introduction

Physiotherapists require excellent theoretical knowledge, critical-thinking ability and practical skills to be competent and independent clinicians. Effective decision-making and positive patient outcomes rely on a sound ability to process clinical information and select appropriate and timely management strategies. Developing and refining physiotherapy students' generic skills, such as communication regarding professional and medicolegal issues, is challenging, though critical to their future professional careers (Hunt et al. 1998).

Formal debates have been suggested as a method of engaging students in professional dialogue and encouraging critical thinking in aspiring professionals (Warhurst 2001). Engagement in such an active mode of assessment has the potential to increase student interest and attention, while fostering complex thinking in the application of course content (Kennedy 2007). Used in this manner, debates may be an effective teaching and learning activity for students nearing graduation to critically contemplate potential professional and medicolegal issues they may later face in their professional lives. Further still, the novel and appealing, yet relevant, assessment item may increase motivation for learning (Earl 2003) and complement the curriculum through constructive alignment (Biggs 1996). Despite the potential benefits, research regarding student satisfaction with debates used as assessment is scarce, particularly in physiotherapy education.

Clinical Conference is a capstone course in the Griffith University five-year exercise science/physiotherapy double undergraduate degree program, and is now offered as a capstone course in the two-year (six-semester) graduate-entry Master of Physiotherapy program. Capstone courses have been defined in numerous ways (Rosenberry and Vicker 2006). Clinical Conference was developed with specific objectives, including students' ability to demonstrate "accomplishment of the full spectrum of [the] learning" in the curriculum (Moore 2006). In terms of pedagogy, engagement in authentic professional experiences (Shoaf 2000) and adoption of a student-centred learning approach (Robbins et al. 2008) are considered to be particularly important facilitators of student success in capstone courses. In physiotherapy, integrating science knowledge across the curriculum with clinical and professional issues are key discipline-specific objectives (Edwards et al. 2004).

At Griffith University, the physiotherapy capstone course provides an opportunity for pre-registration students to discuss advanced concepts in physiotherapy practice with their (soon-to-be) clinical colleagues and members of other relevant health professions. In the course, students integrate their fundamental exercise-science knowledge with advanced physiotherapy knowledge and skills from each of the core physiotherapy areas of clinical practice, in readiness for graduate practice. The Clinical Conference course is offered in blended-learning mode and is designed on a framework of four hypothetical clinical cases that each incorporate elements of complex clinical practice, and which are specifically designed to raise a number of professional issues.

Assessment involves five evenly weighted assessment items throughout Clinical Conference, including two written assignments (one individually assessed and one assessed as a group submission), a discussion board, a *wiki* and a group debate. The debate focuses on professional, medico-legal and ethical issues in physiotherapy practice, which may have arisen out of the four hypothetical cases or may be topical for other reasons. Importantly, the debate is designed to encourage critical thought about the prescribed topics in a manner that is contextually relevant to the profession. As an assessment and learning tool, the debate was designed to better prepare pre-registration physiotherapy students and confirm for them the multidimensional nature of clinical

practice and the realisation there may not be one simple solution to a specific clinical scenario. In fact, debates have been used effectively to facilitate engagement of physiotherapy and pharmacy students in ethics and professionalism topics (Strawbridge et al. 2014). Although students in this study found the debates challenging, they recognised the benefits of working in a team and the depth of critical thinking that the debates afforded. Debates may therefore be an appropriate and relevant assessment modality for ethics and professionalism topics in physiotherapy capstone courses.

Feedback from previous years of the course suggested a degree of student apprehension prior to the debate; however, routine course evaluations indicated that students were satisfied with the assessment item and viewed it as beneficial to their learning and future practice as professionals. The aim of this project was to formally evaluate the debate assessment item, which has been part of the course assessment for seven years, and to illuminate the basis of student expectations and satisfaction. Based on previous informal feedback, we expected that students would be apprehensive about their participation in the debate assessment, albeit satisfied with the learning experience on reflection.

Methods

Participants

Students enrolled in 5005PES Clinical Conference at Griffith University (n = 20) were invited to participate in the study. Consent was considered implicit by the voluntary return of anonymous survey responses and/or participation in the focus group. Approval to conduct the study was obtained from the Human Research Ethics Committee at Griffith University (approval number: PES/26/11/HREC).

Structure of the debates

Debates were held in the final week of the semester, though the assessment item (including detailed guidelines) was discussed with students in week one. Written guidelines to aid preparation were placed on the course website and a brief slide-show summary was presented to students during class time. Debate guidelines were based on a modified British Parliamentary style of debating, and each debate was contested by two teams (i.e., one affirmative and one negative), each with three members. Speaker roles were explained in the guidelines, and each speaker was permitted five minutes to present their argument (including rebuttal as relevant to the speaker role). Five minutes were allowed for post-debate discussion, including questions from the floor. Speakers were permitted to refer to notes or palm cards and were allowed to take additional notes for themselves or their teammates during the debate. The audience of peers was polled before and after each debate for their support/non-support of the debate topic. The more persuasive debating team (debate winner) was determined by the differential shift in support of the topic by the audience.

Students were able to form their own teams and sign on for a topic of their choice. On this occasion, students could choose to debate any one of four topics in the general fields of professional ethics (e.g. “Tax incentives are the best way to encourage sustainable behavioural and lifestyle changes in overweight and obese Australians”), conflict of interest (e.g. “The reality of today’s global marketplace is that for health businesses to survive, making money must be their first priority”) or privacy matters (e.g. “Electronic health records and associated technologies are a positive initiative for the safety and health of Australians”).

Marking of debates

Students were assessed on an individual basis, although a small percentage of the mark (i.e., 10%) was allocated to the performance of the debating team as a whole. Students were awarded the average of marks given by the course convenor (i.e., a physiotherapy lecturer) and an external guest with experience in debating but with no physiotherapy background. A criterion-based rubric was used by each examiner to calculate grades based on dimensions of *content*, *structure*, *research*, *result* and *presentation*. The mark awarded for the debate formed 20% of each student's overall course grade. A small amount of written feedback was provided to individual students and a general summary of all group performances was made verbally once all debates were completed.

Evaluation

Short surveys (Figures 1 and 2) were administered to participants electronically via a survey website (Survey Monkey, www.surveymonkey.com) two weeks prior to the debates and one week following. The first survey contained several questions regarding students' perceptions and attitudes toward debates as a method of assessment and preparation for their professional careers after graduation. The second survey, administered in the week following the debates, sought to determine student satisfaction and attitudes towards the activity. All survey responses were collected anonymously. Survey responses were made on a five-point Likert scale (from strongly disagree to strongly agree) and the pooled data analysed on the basis of group averages and tallies of positive and negative responses.

1. Have you previously participated in debates? (Yes/No)
2. I believe the debate will be a worthwhile learning experience.
3. An ability to engage in professional dialogue regarding ethical, medicolegal and professional issues is important for a physiotherapist.
4. I feel apprehensive/anxious about participating in the debate.

Figure 1. Survey of student expectations of the debate assessment item (pre-debate); responses made on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree)

1. I enjoyed participating in the debate.
2. The debate was a worthwhile learning experience.
3. Having participated in the debate, I feel more confident engaging in professional dialogue about ethical, medicolegal and professional issues in physiotherapy.
4. The debate should be continued as an assessment item in this course.
5. Debates should be used more commonly in the physiotherapy program.

Figure 2. Survey of perceptions of and satisfaction with the debate assessment item (post-debate); responses made on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree)

Finally, a focus group was conducted in the week following the debates to add qualitative depth to the evaluation and gain further insight into student satisfaction with the assessment activity. A staff member, independent of the teaching team and not involved in teaching the current student cohort, facilitated the focus group and transcribed the audio recording to ensure anonymity. Six primary questions served as the basis for student responses (Figure 3). Due to the case design and small sample of the current study, a thematic analysis was not undertaken; however, the transcript was analysed to identify positive and negative responses, and example quotes were used to improve the fidelity of the findings.

1. Have you had any previous debating experience?
2. Did you find the debate a worthwhile learning experience?
3. Did you enjoy the debating experience in this course?
4. What did you learn from preparing for and participating in the debate?
5. Would you recommend that debates continue to be used as assessment in this course or other courses?
6. Are there any other “pros or cons” to the debate assessment?

Figure 3. Structured questions used in the focus group

Results

Student sample

A total of 20 final-year physiotherapy students were enrolled in the course. All students completed each of the five course-assessment items, including the debate. Six responses (6/20, 30%) were received for the first survey, while 16 responses (16/20, 80%) were received for the second survey. Seven students (7/20, 35%) volunteered to take part in a focus group at the end of the semester following the debates.

Pre-survey of debate expectations

Of the six students who participated in the first survey, half had previously participated in a debate (Table 1). Two believed that the debate would be a worthwhile learning experience, and the remainder either were ambivalent or disagreed with the proposition. All respondents felt that engaging in professional dialogue on ethical, medico-legal and professional issues was important for a physiotherapist, while five of the six students were anxious or apprehensive about the debates.

Post-survey of debate satisfaction

Sixteen students (80% of the class) completed the second survey (Table 2). Approximately two-thirds (n = 11) enjoyed the debate, and 10 respondents found it to be a worthwhile learning experience. Two students did not enjoy the debate. One student did not feel the debate was a worthwhile learning experience, while the remainder recorded a neutral response. Eight students

felt more confident engaging in professional dialogue; compared two did not. Only two students felt the debate should not be continued as an assessment item in the course, and five students felt the debates should not be used more commonly in the physiotherapy program.

Focus-group findings

Seven students (35%) participated in a focus group following the debates. Most students explained they had had no previous debating experience at all; however, one student had participated in an informal debate at high school and another had participated in a debate whilst undertaking another university program of study. When asked about the value of the debate as a learning experience, responses were very positive. Of 17 student responses recorded during the focus group, 11 were classified as positive, four were neutral and the remainder were constructive rather than negative. Of the positive responses, most were focused on the novelty of the activity and the benefits of presenting as a team; for example:

“Made it more interesting, because you tend to fall asleep listening to normal presentations”; “Was nice to do something different, rather than the same old presentation format and it took a little bit of the pressure off to do it as a team”; and “Doing the presentation in the team format I didn’t get as much stage fright as in normal presentations”.

The constructive comments were focused on the topics and the lack of choice provided; for example:

“It would be better to get the class to come up with the topics or perhaps offer more choice”; and “Maybe more debatable topics – would be better if you really cared about the topics a lot, it would help you develop your arguments”.

Students indicated their enjoyment of the debates, giving five positive comments, one neutral comment and two constructive comments. Positive comments were related to the reduction of performance anxiety by presenting as a team and the innovative format. Examples of positive comments included:

“I liked it because it was a completely different format to what we have done before and it was fun”; and “I think it is a good time in our program to do it too, because everyone is comfortable with each other and there is not as much pressure. I wouldn’t do it in first year, I don’t think it would work there”.

Table 1. Responses to pre-debate survey of expectations (n = 6)

Survey Questions	Response	Mean	Range	Positive (%)	Neutral (%)	Negative (%)
1. Have you previously participated in debates?	6/20, 30%	Yes = 3; No = 3	-	50	-	50
3. I believe the debate will be a worthwhile learning experience.	6/20, 30%	3.2	2 – 4	33	50	17
4. An ability to engage in professional dialogue regarding ethical, medicolegal and professional issues is important for a physiotherapist.	6/20, 30%	4.0	4	100	0	0
5. I feel apprehensive/anxious about participating in the debate.	6/20, 30%	3.7	2 – 4	83	0	17

Table 2. Responses to post-debate survey of satisfaction (n = 16)

Survey Questions	Response	Mean	Range	Positive (%)	Neutral (%)	Negative (%)
1. I enjoyed participating in the debate.	16/20, 80%	3.8	2-5	69	19	12
2. The debate was a worthwhile learning experience.	16/20, 80%	3.8	2-5	63	31	6
3. Having participated in the debate, I feel more confident engaging in professional dialogue about ethical, medicolegal and professional issues in physiotherapy.	16/20, 80%	3.5	2-5	50	38	12
4. The debate should be continued as an assessment item in this course.	16/20, 80%	3.4	1-5	38	50	12
5. Debates should be used more commonly in the physiotherapy program.	16/20, 80%	3.2	1-5	38	31	31

When asked about what they learned from preparing for and participating in the debate, the students gave four positive responses and one neutral response. Comments related most closely to the process and structure of a debate and speaking persuasively; for example:

*“...I definitely learnt a lot about the process of a debate and how to do one”; and
“I learnt that to be really effective at arguing a point you really need to support it
and believe in it yourself”.*

Students were unanimous in their support for the continued use of a debate in the course. However, students were less positive regarding the inclusion of debates as assessment in earlier courses in the program. For example, one student commented:

*“Can’t see us doing this in earlier courses, especially because you haven’t had a
lot of pracs [clinical placements], and therefore you haven’t experienced some of
the professional issues and ethical issues that come up in real life.”*

When given the opportunity to discuss any other aspects of the assessment item, students reiterated that the debate was “an enjoyable activity” and that it was an effective assessment for “*taking some of the pressure off*”. Negative aspects were related to the topics and the degree of choice of topic provided, and to the marking criteria, suggesting that participants would be more satisfied receiving a group mark than an individual mark for the assessment item.

Discussion

The aim of our study was to determine student satisfaction of a debate assessment item in a physiotherapy capstone course. We found that participants were initially apprehensive about the format of the assessment item, despite only a small proportion of respondents (17%) with negative preconceptions of the item’s worth as a learning experience. Following the debate, most respondents claimed they enjoyed the assessment item, and rated it a worthwhile learning experience.

To our knowledge, this is the first paper describing the use of debates as assessment in a pre-registration physiotherapy program. Our encouraging findings are in accordance with reports of similar initiatives in other disciplines and professions (Walker & Warhurst 2010; Paladino 2008; Roy & Macchiette 2005; Dundes 2001; Kennedy 2009; Edelheim 2010). For example, students studying to become teachers rated their views on debates before and after a series of in-class debates (Kennedy 2007). Despite describing some fears associated with debating, 75% of participants stated they would use debates as an instructional strategy themselves when they became qualified. Physiotherapy students in the current study were equally supportive of the format, with only 12% suggesting that the debates should not be continued in the course. Supporters of debates promote them as an effective teaching and learning strategy for the development of critical-thinking skills, empathy and communication skills (Rai 2001, Warhurst

2001), attributes that are at the core of physiotherapy. However, others contend that debates as an instructional technique may harbour a bias toward dualism (Tumposky 2004), thereby narrowing students' appreciation of the possible (and potentially multiple) views on topics. To mitigate this, Temple (1997) assigned roles to his health-education students just prior to the debate, such that they would prepare their arguments with a broad appreciation for the topic. Despite following the traditional dichotomous approach to debating, we observed fair to high student satisfaction of the activity. Furthermore, it could be speculated that the dualism inherent in our activity design led to a degree of competitiveness between groups and contributed to their enjoyment.

In Australia, university entrance scores to physiotherapy programs are typically in the top percentile bands. Busato et al. (1999) recognised the interaction between learning styles, personality traits and achievement motivation (and associated fear of failure) in higher education; and the association between academic success and intellectual ability and achievement motivation (Busato et al. 2000). Fear of failure can be considered in both negative (e.g., tension, worry and lack of confidence about future performance) and positive (e.g., feelings of thrill when challenged) ways, both of which may be extrapolated as having contributed to the outcomes of the current study. The intellectual challenge inherent in debating may be commensurate with the academic capacity of the physiotherapy students; additionally, achievement motivation and fear of failure may be a reason for the apprehension noted in the initial survey, and the positive nature of the feedback after the event. De Raad and Schouwenburg (1996) claim that traits such as extraversion, conscientiousness and openness to experience are educationally relevant. Future research in this area may benefit from correlating personality traits with success in performance-related assessment endeavours.

Interestingly, students not only supported the future inclusion of debates in the current course but suggested that the timing of their inclusion in the program was beneficial. Students commented that such an activity, which allows in-depth discussion of the “pros and cons” of complex or difficult professional situations, was particularly beneficial to them at the final phase of studies, given their prior participation in clinical placements. Indeed one of the recommendations for engaging adult learners is to design activities that draw on real-life experiences of the students (Cercone 2008, Merriam & Caffarella 1999) such that representations of the content are strengthened in an episodically rich fashion (Herbert & Burt 2004).

Taken together, our survey and focus-group findings highlight a generally positive student experience of debates used as assessment in a physiotherapy capstone course. Survey findings of student enjoyment and recognition of a valuable learning experience were particularly reinforced by statements made during the focus group. Where students were somewhat more ambivalent in their survey responses, focus-group respondents tended to be more positive, restating their enthusiasm for the item in terms of novelty and enjoyment; however, they contended that debates earlier in the program might not be as effective, owing to students' limited experience of professional issues until the capstone semester.

The element of enjoyment (or “fun”) recognised by students undertaking the debate assessment is noteworthy. Others have identified that when students enjoy learning, they tend to be better engaged and harbour an intrinsic motivation toward their studies (Zepke & Leach 2010). Indeed, other studies of debates as assessment report that students enjoy the approach, citing active engagement, teamwork and novelty as reasons for their enjoyment (Kennedy 2007; Kennedy 2009; Walker & Warhurst 2010). These reasons were echoed by focus-group participants in the current study, and may underpin their perceived improved confidence engaging in professional dialogue about ethical and professional issues highlighted by post-debate survey results.

While we observed reasonable participation in each of our outcome measures (surveys – 30% and 80%; focus group – 35%) our findings were based on a single, small class (n = 20); thus, results may be limited in their generalisability. In any case, the surveys and focus group were voluntary, and responses were kept anonymous to the investigators to maximise the rigor of our findings. We intend to collect more data in future offerings of the course to better understand the place of debates as an avenue for critical reflection and learning in a pre-registration physiotherapy program.

In conclusion, we found an in-class debate assessment useful and appropriate for inclusion in a physiotherapy capstone course. Students enjoyed their participation and were satisfied with the format and timing of the activity. Thus, debates may be an attractive, novel approach to learning in health-professional education, particularly in the context of professional and ethical issues.

References

- Biggs, J 1996. Enhancing teaching through constructive alignment. *Higher Education*, 32(3), pp. 347-64.
- Busato, V V, Prins, F J, Elshout, J J & Hamaker, C 1999. The relation between learning styles, the Big Five personality traits and achievement motivation in higher education. *Personality and Individual Differences*, 26(1), pp. 129-140.
- Busato, V V, Prins, F J, Elshout, J J & Hamaker, C 2000. Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education. *Personality and Individual Differences*, 29(6), pp. 1057-1068.
- Cercone, K 2008. Characteristics of adult learners with implications for online learning design. *AACE Journal*, 16(2), pp. 137-159.
- De Raad, B & Schouwenburg, H C 1996. Personality in learning and education: A review. *European Journal of Personality*, 10(5), pp. 303-336.
- Dundes, L 2001. Small group debates: Fostering critical thinking in oral presentations with maximal class involvement. *Teaching Sociology*, 29(2), pp. 237-243.
- Earl, L M 2003. *Assessment as learning: Using classroom assessment to maximise student learning* (pp. 77-86). Sage Publications, London.
- Edelheim, J R 2010. Challenging undergraduate hospitality students: The use of debates as interactive teaching and assessment tools. In Crispin, S, Dunn, A, Fishwick, S, Franklin, A, Hanson, D, Reiser, D, Shipway, R, Wells, M & Baxter, C (eds.), *Proceedings from "Challenge the limits" – the 20th Annual Conference Council for Australian University Tourism and Hospitality Education (CAUTHE)*, Hobart, Tasmania. Accessed on July 18; <http://search.informit.com.au/fullText;dn=814969878039511;res=IELBUS>

- Edwards, I, Jones, M, Carr, J, Braunack-Mayer, A & Jensen, G M 2004. Clinical reasoning strategies in physical therapy. *Physical Therapy*, 84(4), pp. 312-30.
- Herbert, D M B & Burt, J S 2004. What do students remember? Episodic memory and the development of schematization. *Applied Cognitive Psychology*, 18(1), pp. 77-88.
- Hunt, A, Adamson, B, Higgs, J & Harris, L 1998. University education and the physiotherapy professional. *Physiotherapy*, 84(6), pp. 264-273.
- Kennedy, R 2007. In-class debates: Fertile ground for active learning and the cultivation of critical thinking and oral communication skills. *International Journal of Teaching and Learning in Higher Education*, 19(2), pp. 183-190.
- Kennedy, R 2009. The power of in-class debates. *Active Learning in Higher Education*, 10(3), pp. 225-236.
- Merriam, S B & Caffarella, R S 1999. *Learning in adulthood* (pp. 159-186). Jossey-Bass, San Francisco.
- Moore, R C 2006. The Capstone Course. In Christ, W G (ed.), *Assessing media education: A resource handbook for educators and administrators*. Lawrence Erlbaum Associates, Inc., Hillsdale, NJ. Accessed on July 18; <http://users.etaown.edu/m/moorerc/capstone.html>
- Paladino, A 2008. Creating an interactive and responsive teaching environment to inspire learning. *Journal of Marketing Education*, 30(3), pp. 185-188.
- Rai, A 2001. Benefits of in-class debates as an instructional strategy. *Economic Affairs*, 56(2), pp. 139-145.
- Robbins, E J, Kinney, J M & Kart, C S 2008. Promoting active engagement in health research: lessons from an undergraduate gerontology capstone course. *Gerontology & Geriatrics Education*, 29(2), pp. 105-123.
- Rosenberry, J & Vicker, L A 2006. Capstone Courses in Mass Communication Programs. *Journalism and Mass Communication Educator*, 61(3), pp. 267-283.
- Roy, A & Macchiette, B 2005. Debating the issues: A tool for augmenting critical thinking skills of marketing students. *Journal of Marketing Education*, 27(3), pp. 264-276.
- Shoaf, M M 2000. Classroom note: A capstone course for pre-service secondary mathematics teachers. *International Journal of Mathematical Education in Science and Technology*, 31(1), pp. 151-160.
- Strawbridge, J D, Barrett, A M & Barlow, J W 2014. Interprofessional ethics and professionalism debates: Findings from a study involving physiotherapy and pharmacy students. *Journal of Interprofessional Care*, 28(1), pp. 64-65.
- Temple, M 1997. Using debate to develop health literacy. *Journal of School Health*, 67(3), pp. 116-117.

- Tumposky, N 2004. The debate debate. *Journal of Education for Business*, 81(6), pp. 315-320.
- Walker, M & Warhurst, C 2010. "In most classes you sit around very quietly at a table and get lectured at...": Debates, assessment and student learning. *Teaching in Higher Education*, 5(1), pp. 33-49.
- Warhurst, C 2001. Using debates in developing students' critical thinking. In: Walker, M (ed.), *Reconstructing professionalism in university teaching* (pp. 81-104). SRHE and Open University Press, Philadelphia.
- Zepke, N & Leach, L 2010. Improving student engagement: Ten proposals for action. *Active Learning in Higher Education*, 11(3), pp. 167-177.