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Using Nominal Group Technique to Develop a Consensus Derived Model for Peer Review of Teaching Across a Multi-school Faculty

Abstract

This paper describes the development of a peer review of teaching model for the Faculty of Health at the University of Newcastle, Australia. The process involved using the nominal group technique to engage Faculty academic staff to consider seven key decision points that informed the development of the peer review of teaching model. Use of the consensus based nominal group technique established collegial discussion and networking among participants, and has expanded the discussion within the Faculty about peer review of teaching. Although the academics come from a diverse multi-school and multi-program Faculty, there was high levels of consensus on the structure and process of the developed peer review of teaching model.

Keywords

group technique, peer review, health professional

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Introduction

As applied to the University setting, peer review of teaching (PRoT) involves academic colleagues giving and receiving guided critiques on one another's teaching practices. PRoT can be used to provide feedback about the effectiveness of various teaching approaches in promoting student learning (Harris et al. 2008), and it is recognised as a valuable supporting tool for academics in higher-education settings to evaluate and develop their teaching (Simpson 1995; Harris 2005; Philip & Wozniak 2009).

While the PRoT process is often described in an international setting (Lomas & Nicholls 2005; Kell & Annetts 2009; McMahon et al. 2010), a search of the literature and university web sites by the authors found that it was not a widely reported professional activity in Australian universities. Previous efforts to undertake PRoT in the Australian tertiary sector have generally been conducted using informal methods in small-scale projects, which often means the processes and results are not publicly documented or available for use (Harris et al. 2008).

Currently, the majority of teaching and learning evaluations conducted in Australian universities take the form of student feedback (Barries & Ginns 2007; Tucker et al. 2008; Australian Universities Quality Agency 2007). Methods such as these, while a valuable tool in providing general feedback, are often limited in accurately gauging the quality of teaching and learning, due to low completion rates by students, respondent bias and a lack of specificity to individual teaching and learning approaches and institutions (Douglas & Douglas 2006). PRoT, however, can provide a more universal approach to the evaluation of teaching. Designed to accommodate the wide spectrum of university teaching and learning situations and contexts, PRoT extends beyond classroom teaching and presentation to include design, preparation, learning environment and student engagement.

In recent years, there has been a developing awareness and recognition of the importance of PRoT in Australia (Harris et al. 2008). The Australian Learning and Teaching Council (ALTC) recognises PRoT as an integral and necessary part of quality teaching, and has created a handbook to support the development of PRoT within Australian higher-education institutions. The handbook outlines four situations, each with a specific design guide, where PRoT can be implemented: programs to enhance the teaching environment; programs to raise the standard of teaching; programs specifically for new staff; and programs specifically for sessional staff (Harris et al. 2008, pp. 26-59).

The handbook recommends for consideration seven key decision points essential to the development of a PRoT framework that enhances the learning environment (Harris et al. 2008, pp. 32-37):

1. Whose teaching will be reviewed?
2. What will be the policy regarding participation?
3. What will be reviewed?
4. Who will the reviewers be?
5. What form will the review process take?
6. What reporting will take place?
7. What type of follow-up will occur after completion of the peer review process?

The Faculty of Health at the University of Newcastle comprises a diverse group of full-time, part-time, conjoint and clinical academics and health professionals, teaching in a range of undergraduate and postgraduate programs. The Faculty is structured around four schools, each of which comprises multiple academic or health professional disciplines, staff and programs.

The professional-entry programs of the Faculty include three- and four-year undergraduate degrees, and graduate-entry masters' programs. Programs are delivered in a variety of ways including lectures, tutorials, labs, problem-based learning sessions, workshops, exhibitions, web sites and e-learning. Professional placement and experiential learning form a significant part of the teaching and learning style within the various professional-entry programs. The faculty staff also contribute to coursework postgraduate studies and research higher-degree teaching and learning. Thus there are a wide variety of teaching and learning contexts and situations within the Faculty, making it important to embrace evaluation processes that are sufficiently rich and informative across this diversity.

The University of Newcastle has developed two sets of tools students use when reviewing the quality of teaching and courses: Student Feedback on Teaching and Student Feedback on Courses. However, there are currently no tools available within the University to help staff undertake peer review of teaching.

The aim of this project was to develop an engaging, consensus-building process that would result in the development of a framework for peer review of teaching in the Faculty of Health at the University of Newcastle. Suggested outcomes from this research process included:

1. Increasing the accessibility of peer review of teaching for Faculty academic staff by encouraging and engaging academic staff to assist in the development of a PRoT framework and tools.
2. Providing a framework, process and resources specifically designed to assist Faculty academic staff with peer review of teaching.
3. Enhancing the teaching and learning environment for staff and students

The methodology for the research-based project involved three stages: a literature review to identify existing PRoT frameworks and tools; five consensus-building forums of staff and students using Nominal Group Technique (NGT) to identify the requirements of a PRoT framework for the Faculty; and the research team's development of the framework and tools based on the outcomes of the previous stages. This paper describes Stage 2: the nominal group technique process used within the study and the outcomes of the five consensus building NGT sessions.

Methods

Ethics

Approval for this quality-assurance teaching activity was obtained from The University of Newcastle Human Research Ethics Committee.

Research Team

The research team was established in March 2009 and comprised academic teaching staff from each School within the Faculty of Health. A research assistant (RA), who was a beginning academic staff member of another Faculty, was appointed to assist the team. However, as the research developed the RA became an active and integral member of the research team. The team consisted of two academic staff from Radiation Therapy, two from Physiotherapy, one from Nutrition and Dietetics, one from Nursing, one from Pharmacy and one from Communication and Media in the Faculty of Science and Information Technology (the RA). The team included males and females, as well as a mix of new and experienced staff. This blend of staff allowed for a diversity of teaching and learning situations to be considered when developing the PRoT process.

Consensus Building Process

The Nominal Group Technique (NGT) was chosen as the consensus-building process to be used to gather and prioritise information from academic staff members. The NGT method was

used because it is an inclusive process designed to encourage all participants to contribute equally and democratically (Delbecq & Van de Ven 1971; Center for Disease Control and Prevention 2006; Chapple & Murphy 1996), and it has been used successfully in a range of other consensus-building exercises within both the academic and health environments (Vella et al. 2000; Bamford & Warder 2001; Jones 2004).

The six steps in the NGT process proposed by Jones (2004 p. 22) are:

1. Individual generation of ideas
2. Recording of all participants' ideas (in a round-robin format)
3. Group discussion of all generated ideas (to organise the list and remove duplications)
4. Preliminary vote to select the most important ideas
5. Group discussion of the vote outcomes (including additions and further merging of overlaps)
6. Final voting on the priority of items

The active engagement of all participants during the NGT process meant that the outcomes of the NGTs were not subject to interpretation by the facilitator, nor dominated by the more vocal group members. An important benefit of the NGT process for this project was that it allowed for a consensus on the day of the NGT (Bamford & Warder 2001, p. 318) rather than taking extra analysis time (Jones 2004, p. 23). Given the diverse nature of teaching practices across the Faculty of Health, the NGT process also supported collegial relationships among academics when discussing teaching and learning in a wide variety of contexts.

In the NGT process in this project, each nominal group session ran for approximately 120 minutes and consisted of between seven and 10 participants; this number has been previously identified as being ideal for conducting NGT sessions (O'Neil & Jackson, 1983 p. 132). Each session was conducted by a research team member and audited for consistency by the RA. Within each nominal group session, participants were asked to respond to three of the decision points proposed by the ALTC handbook:

1. What will be reviewed?
2. Who will the reviewers be?
3. What form will the review process take?

The research-team member facilitating the nominal group session outlined the process in detail, addressing any questions, and introduced the questions to the participant group one question at a time in order. Each question was displayed on a Powerpoint slide, and all participants were instructed to anonymously provide up to five responses to each question by writing on index cards that were subsequently collected by the RA. All responses were then transcribed by the RA onto a poster, which was displayed for the entire group to view. The research team member led open discussion on each item to ensure that all group members understood the item, and where an idea was suggested multiple times or where the group recognised highly similar items, these items were arranged with direction from the participants to form a single item. Participants then independently ranked the items on the revised list into their top three choices on a small card; the RA collected the cards and collated the results. The resulting ranked order of items represented the group's prioritised preferred responses to each question. The results were then fed back to the group. This process was followed for each question.

Next, participants were asked to partake in an open group discussion of the remaining decision points:

1. Whose teaching will be reviewed?

2. What will be the policy regarding participation?
3. What reporting will take place?
4. What type of follow-up will occur after completion of the peer review process?

The RA took notes to reflect the range of discussion on these questions, taking care to preserve the participants' anonymity. Upon completion of the nominal group sessions, the project team met and compiled the results from all groups to develop an initial consensus. This was tabulated and emailed to all the participants of the nominal group sessions. All participants were invited to provide feedback on the draft consensus document by attending a follow-up workshop or via email. The results of the workshop informed the development of the final consensus document for peer review of teaching in the Faculty of Health at the University of Newcastle.

NGT Participants

To ensure that the voices of staff from all schools were heard, the team proposed to run a nominal group session for each school within the Faculty (four schools), and one at the Ourimbah campus (Central Coast, NSW). All full-time and part-time academics from the Faculty of Health (n=189 FTE) were invited to participate in the consensus-building exercise via email invitation. To ensure all staff received an email invitation, initial email invitations were sent by Heads of Schools, and by the Research & Research Training Officer of the Faculty. A second follow-up invitation email was sent approximately one week later from a member of the research team. Participants were allocated to one of four nominal group sessions: Health Science; Nursing and Midwifery; Biomedical Science and Pharmacy; and Ourimbah Campus (mixed discipline). Staff of the School of Medicine and Public Health did not participate at this stage of the research. However, several staff who participated from the other schools taught in Medicine and Public Health, so they were represented as much as possible.

Students were invited to contribute to the research, and academics approached student program committees seeking interest and involvement from members. Written invitations were provided to interested students, and a fifth nominal group session was undertaken to accommodate students who volunteered.

Results

A total of 29 academics and four students participated across the five nominal groups (Health Science = 7, Nursing and Midwifery = 10, Biomedical Science and Pharmacy = 6, Ourimbah = 6). Results of the top three priorities identified from each nominal group for questions 1 to 3 are presented below, as are the results of the open group discussion for questions 4 to 7.

Q1: What will be reviewed?

This question generated the most variation in responses, with 13 different suggestions received, ranging from teaching methods, assessment items and online coordination to clinical facilitation. Although there were differences in the rankings and how they described their answers, academics and students consistently prioritised lectures, tutorials and laboratories as priorities for review. These activities represent for most academics the most common teaching and learning contexts in which they engage with students, and participants felt that as a starting point for being reviewed, this was what they required feedback on in the first instance.

Three categories of items to be reviewed emerged from their responses:

1. Topic-content descriptors: up-to-date knowledge and skills, content structured correctly, quality of information
2. Delivery and communication descriptors: clarity of message, communication skills, student engagement and interaction, materials used, lesson plan

3. Learning-outcomes descriptors: facilitation of learning, checking of learning, learning benefits, outcomes of planned activities.

Q2: Who will the reviewers be?

Responses to this question were the most consistent, with only five responses generated from all NGT groups. To provide for review of topic content and teaching and learning style and outcomes, academics widely agreed that reviewers should:

- be staff trained in the peer-review process who can use the designated framework
- include content experts or specialists who understand the program and professional context being presented
- include education experts who can review and advise on matters related to student learning or teaching delivery.

Q3: What form will the review process take?

Seven suggestions were provided from NGT groups; these varied from timing of reviews (once per semester or year, or biannually) through to the process being compulsory or mandatory especially for new staff and the review being performed in reciprocal pairs. Academics felt that the PRoT process should use standardised tools, in which both reviewers and reviewees would be trained, to facilitate appropriate feedback. Reviewees should be able to contact trained reviewers with whom they felt comfortable to review them. The reviewee and the reviewer should be able to meet prior to the session to discuss the session's objectives, how it fits into their program, and how it is to be delivered. It was felt that this process would facilitate a non-threatening, relaxed and less-formal review.

Q4: Whose teaching will be reviewed?

Discussions points from each group revealed a general consensus that all people involved in teaching – including experienced and new academics, sessional staff, clinical facilitators and even guest lecturers – should have the opportunity to have their teaching reviewed if desired.

Q5: What will be the policy regarding participation?

There was majority consensus that participation should be voluntary. However, the student NGT group interestingly suggested that the policy should be mandatory as a matter of quality assurance to ensure that students are receiving the best education and learning environment possible. The majority of participants agreed that peer review of teaching might be linked to staff performance measures, probation requirements and mentoring of academic staff, in addition to being used on a personal level for inclusion in individuals' teaching portfolios.

Q6: What reporting will take place?

All groups agreed that reporting should initially be between the reviewee and the reviewers. Most groups agreed that reporting post-review should take place face-to-face, and all agreed on the need for a formal written document to underpin the face-to-face discussion. All written reporting should be in an official form with both parties maintaining professionalism during the process and being aware of the possibility that the reports could be used for other purposes such as academic promotion. There was also the suggestion that reports should be delivered in unalterable format.

Some participants felt that the results should be sent to additional people such as the Head of School or a mentor to ensure accountability of teaching, but there was not a general consensus on this.

Q7: What type of follow-up will occur after completion of the peer review process?

Most groups felt it was important for the process to be followed up at a later stage to give reviewees the chance to get feedback on whether they had met their objectives for development as identified in the first review.

Discussion

While the NGT has been used in a range of teaching research settings (Bamford & Warder 2001; Philip & Wozniak 2009; Jones 2004), and there is some data using the NGT to assess students' evaluation of teaching and education experiences (Chapple & Murphy 1996; Williams et al. 2006), there is little specific research using the NGT in a whole-of-Faculty approach to the development of a PRoT process. This study used the NGT as a means of gaining consensus from a large and diverse group of academic staff about the PRoT process. The strong consultation and democratic methods used within the nominal group process allowed Faculty staff to take ownership of the development of a PRoT framework and tool. This is one of the identified strengths of using this type of consensus-built process in the context of PRoT (Harris et al. 2008).

Results collected during this project through the NGT method are similar to those collected previously by survey design (Cosser 1998; Kohut et al. 2007). The current study identified that despite the broad array of different undergraduate and graduate entry courses and programs, and teaching and learning activities that exist within the Faculty of Health, there were commonalities in regard to academics' views and opinions on key decision points about peer review.

Participants in this study felt that reviewers involved in providing feedback on an individual's teaching need to be trained in the peer-review process. These results are similar to previous research findings that identify the importance of feedback and evaluation of teaching being approached ethically and with sensitivity and respect, such that the review process is non-threatening and conducted in collegial environments (Handal 1999; Bell 2005). Similar to the results obtained by the NGT process, Kohut et al. (2007, pp. 21-22) found in a large, survey-based study with 223 academics across a range of Faculties, that respondents wanted reviewers for PRoT to complete training about the process. Participants from the Kohut et al. study (2007, pp. 22-23) suggested offering training for observers, and that reviews should follow professional ethical guidelines and involve some sort of classroom or lecture evaluation. The participants in this research had similar suggestions.

Participants in this study suggested that PRoT should be considered at all levels of teaching experience, not only for new staff but for those who are experienced. This finding is significant given that PRoT is typically associated with new staff undertaking a graduate certificate or tertiary teaching qualification. In a recent ALTC review of PRoT processes in Australia universities, it was found that limited peer review occurs in tertiary settings; in those where PRoT is undertaken, it is often only completed for new staff or as part of the teaching curriculum for a graduate certificate in tertiary teaching (Harris et al. 2008). The importance of PRoT in a tertiary setting has also been acknowledged by its prioritisation internationally as means for evaluating and improving teaching in higher education (Irby 1983; Morehead & Shedd 1997). A similar study by Cosser (1998 p. 158), using an open-ended qualitative survey, identified that the reviewer should be someone who understands the subject area: an experienced teacher or one possessing formal education training. The respondents to the survey identified the need for a standardised tool that includes both quantitative and qualitative components. In addition, Cosser's study revealed that when asked "What aspects of teaching should be reviewed?" (a question similar to one in the current study), the results of the top four responses included presentation of material, material, communication skills and presentation style (Cosser 1998, p. 147). Tutorials were also identified as an important category. This demonstrates a consistency in responses across studies for academic staff.

The current study obtained information about peer review from a diverse range of academics in higher education from a variety of health backgrounds. A study by Snell et al. (2000, p. 2) suggests that teachers in medical and health fields with a clinical component should be evaluated in a broader spectrum, and that this evaluation should include all domains relevant to their teaching objectives, extending beyond classroom teaching to “knowledge, scholarship, clinical competence, teaching effectiveness and professional attributes”. These additional components, while not identified as priorities in this study, demonstrate the importance of obtaining evaluation and feedback on teaching from a range of sources. In the current study, participants reported that the information and documentation gathered during PRoT would be highly valuable in both in terms of quality assurance and for use when striving toward excellence in teaching and promotion. This was suggested by groups wanting the PRoT process to be linked to performance indicators, and by students wanting the PRoT to be mandatory to ensure they were receiving the best quality of education. The development of the PRoT has generated a team of academics within the Faculty that have knowledge and skills to undertake the consensus-built process throughout the university in a variety of settings. The process and outcomes have been showcased to academic staff across the university in teaching and learning workshops and to a national collective of higher-education health staff with an interest in the outcomes and process. It is expected that this process will be piloted and undertaken in various Faculties across the University of Newcastle within the next few years.

The current study is limited in that the number of suggestions shown here does not reflect the total output from NGT groups; rather, the results reflect the groups' compacted lists of the items as voted on by participants, and this should be considered when interpreting findings. The NGT method may not always be appropriate for collection of information from larger groups of people, where surveys or focus groups would be better suited. For future studies, the length of time to conduct an NGT could be shortened with trained facilitators and by including a slightly larger sample in each nominal group. Practical consideration for implementation of the NGT method in other settings would include: training in NGT, staff to facilitate them, appropriate resources and incentives to encourage staff to participate.

Conclusion

Within this research, the use of the nominal group technique allowed academics in the Faculty of Health to reach consensus on the structure and process to be adopted in the development of a PRoT framework. Using a collaborative technique to engage academics in discussion has helped establish a greater collegial network and the growth of a culture of peer review of teaching as an integral part of teaching and learning review in the Faculty. The process highlighted the importance of academic peers within the review process; as a result, the consensus among participants was to use the phrase ‘Peer-Assisted Review of Teaching’ (PARoT) to reflect the collaborative nature of the process.

Since the completion of this research, a Peer-Assisted Review of Teaching (PARoT) framework and tool have been developed within the Faculty of Health. The framework and tool were piloted during both teaching semesters of 2010, by a small number of academics (n=30) across various schools within the Faculty. Further collaborative meetings were held to discuss the process and outcomes of the use of the tools, and the outcomes of being reviewed and being a reviewer. Funding from the University’s Centre for Teaching and Learning has supported this research and will assist in making the final consensus-agreed documents available as an e-resource to the Faculty staff in 2011. Additionally, a larger research project, which attempts to extend and include the PARoT NGT process to all Faculties of the University of Newcastle, is in development.

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