

Peer Review and its contribution to the Professional Growth and Learning of Pre-service Teachers of Religious Education

Abstract

In recent times peer review strategies have been incorporated into the learning and teaching plans of many tertiary education courses across a variety of disciplines. Recent studies have found that the inclusion of peer review strategies has increased student motivation (Topping, 1998), promoted collaborative learning and improved academic skills (Malone & Riggsbee, 2007), fostered constructive feedback from peers (Bernstein, 2008) and improved learning outcomes for students (Van Weert & Pilot, 2003). This paper reports on some of the key findings about the inclusion of peer review strategies in a religious education subject undertaken by pre-service teachers enrolled in a postgraduate diploma in secondary education at Australian Catholic University (Melbourne campus), Australia. The study involved sixty pre-service teacher participants who were undertaking a curriculum and teaching religious education class. Each participant was involved in the peer review process and then invited to share their perceptions by participating in a focus group as well as completing a questionnaire. This study was located within a constructivist paradigm and drew upon Glaser and Strauss' (1967) original principles of grounded theory to identify the key findings. The study found that there was a significant alignment between the benefits of peer review strategies in other discipline areas, and religious education. Furthermore, the study found that the peer review process contributed to the pre-service teachers' ability to critically self-reflect on their learning and their professional growth as religious educators.

Introduction

Peer review or feedback can take many forms but generally speaking it involves "a process whereby students evaluate, or are evaluated by their peers" (van Zundert, Sluijsmans, van Merriënboer, 2010, p. 270). As is suggested by such a broad definition, peer review processes can take many different forms – where each form is defined by its various characteristics. Although the benefits of peer review may well differ depending on these characteristics, the literature on peer review has devoted little attention to the assessment of the ways in which the benefits of peer review may change as the form of the peer review changes (Topping, 2010).

This paper reports on a study of a particular form of peer review. It reports on a study of a small group of pre-service religious education teachers which aimed to gain some insights into the significance of a peer review from their perspective. The details about the participants and the actual study are outlined later in the research design section of this paper. The peer review literature informing this study explored peer review processes in other discipline areas in tertiary education (Bindley & Scofield, 1998; Smith, Cooper & Lancaster, 2002; Wen, Tsai, Chang, 2006). The approaches adopted in other discipline areas tended to highlight several benefits for students. These benefits, arising from the studies conducted by Bindley and Scofield (1998), Smith et al (2002), Wen et al (2006), aligned with the perceptions of the pre-service religious education teachers who participated in this study.

The inclusion of peer review strategies in higher education courses have contributed to increased levels of student motivation. These increased levels of student motivation were largely due to increases in student satisfaction arising from the process of being reviewed by one's peers (Topping, 1998).

Peer review is not perceived as having the same imbalance of power commonly associated with teacher /

student and/or tutor / student feedback. Those being reviewed and those providing the review (or peer feedback) are more likely to be perceived as being on an equal playing field. A recent study found that participation in peer review generally resulted in improved learning outcomes for students (van den Berg, Admiraal and Pilot, 2006a). The level of improvement is generally attributed to the type of feedback associated with peer review. In general peer feedback is likely to be based upon the students' experience of dealing with the same (or similar) learning problem and also their own reflection upon that experience. - The student receiving the feedback knows that the student offering the feedback has dealt with the same (or similar) issue(s) and therefore she / he is more likely to be open to receiving feedback from a like-minded peer or peers.

The higher levels of student satisfaction have been attributed to the peer review processes that promote collaborative learning (Malone & Riggsbee, 2007); they provide feedback that resembles professional practice; they involve real-life task performances; and they contribute to improving academic skills (Van Weert & Pilot, 2003).

The benefits reported from the adoption of peer review suggest lessons as to how peer review processes should be designed. In particular, they should be designed to foster constructive feedback from peers (Bernstein, 2008) in order to maximise chances for attaining improved learning outcomes for students (Van Weert, & Pilot, 2003). From a study based on students enrolled in a fourth year History program at Utrecht University in The Netherlands by van den Berg, Admiraal and Pilot (2006b), it was found that most students gained significant insights from peer feedback which led to an improvement in their academic growth. Their study also revealed that there were significant differences in the grades from groups of students involved in peer review to those who were not. For example, better structured writing was found from the groups who were involved in peer preview.

A study of pre-service teachers and in-service teachers participating in tertiary programs across various universities and colleges in Northern Taiwan revealed that there was a slight difference in attitudes toward peer review between pre-service and in-service teachers. Both groups did in fact regard peer review in a favourable light. However the pre-service teachers perceived peer review mainly as an assessment tool while in-service teachers viewed peer review as a learning aid rather than exclusively as an assessment tool (Wen, Tsai, & Chang, 2006). For in-service teachers, peer review was also perceived as a way of enhancing a sense of class participation and increased classroom interaction (Wen et al, 2006). This difference in attitude towards peer review was likely to have resulted from a sense of pressure upon Taiwanese pre-service teachers to actually pass their initial teacher training course with high ranking academic results. Where as, the Taiwanese in-service teachers involved in peer reviews were not bound by the same degree of pressure to achieve a qualification. Against this background of literature regarding peer review in higher education in general, this study aimed to explore whether a peer review process might enhance the academic and professional learning of pre-service teachers of religious education. The following research question underpinned the investigation:

What are the perceived benefits of a peer review process for pre-service teachers of religious education?

Research Design

Participants

The participants were pre-service teachers from the Postgraduate Graduate Diploma in Education (Secondary) / Graduate Certificate in Religious Education course and they were enrolled in the second semester religious education curriculum and teaching unit at the Melbourne Campus of the Australian Catholic University. The total number of students was sixty and they were divided amongst three tutorial groups. The unit took place over a twelve week semester. During each week of the semester, each student attended a one hour lecture and a two hour tutorial.

Setting

The Melbourne campus of the Australian Catholic University offers a one year combined Postgraduate Graduate Diploma in Education (Secondary) / Graduate Certificate in Religious Education course. Upon successful completion of this course pre-service teachers can apply for registration as a secondary teacher in schools in Australia; as well they can apply for accreditation to teach religious education in Catholic schools. The minimum prerequisite for enrolling in this combined teacher education course is a three year Bachelor's degree (or equivalent) from a recognised tertiary institution.

Students enrolled in the unit were divided into three tutorial groups. Each group consisted of twenty pre-service teachers. The unit involved an assessment task which incorporated a peer review component. The assessment task required pre-service teachers to conduct a professional learning seminar for their peers in their tutorial. The pre-service teachers were divided into groups of five. Each group was required to present an overview of a teaching and learning model and demonstrate its application to a religious education curriculum area for a specific year level. In particular, each group was required to demonstrate a teaching and learning approach to a religious education lesson. Each group presented one of the following approaches: De Bono's Thinking Hats (De Bono, 2006); Gardner's Multiple Intelligences (McGrath & Noble, 2005); the Composite Model for Teaching Scripture (Caswell, 2001) or; an Inquiry Learning Model (Wilson, 2006). The time assigned to the seminar was thirty minutes from introduction to conclusion.

At the conclusion of the seminar each presenting group was given an opportunity to conduct a peer review in order to seek feedback from all members of the tutorial who had participated in the seminar. The peer review instruments incorporated both written and oral feedback. Each group prepared a questionnaire generally consisting of closed-ended questions including Likert scaled questions. Figure 1 provides an example of the types of questions asked.

Was the overview of the teaching and learning approach comprehensive?

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

The application of the teaching and learning approach to the curriculum area at a given year level was relevant.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Figure 1. An example of the types of questions incorporated into the written peer review instruments developed by the pre-service teachers.

The actual benefits and use of Likert scale type questions as a peer review instrument for this study were difficult to determine. Furthermore, even though the pre-service teachers researched and decided upon the peer review instruments they would develop or adapt for the purposes of receiving feedback, they were unable to justify their choice in adopting and developing an instrument based on Likert scale type questions. They in fact had trouble explaining any benefits arising from their choice and use of Likert scale type questions as a peer review instrument for the purpose of gaining critical insights into how their professional learning workshop was perceived. Indeed, the focus group discussions (which formed part of the investigation) revealed that the pre-service teachers who used Likert scale type questions did not

perceive that they gained any significant insights from the use of this type of feedback instrument. Given that the pre-service teachers were responsible for designing and developing their own peer review instruments, their reflection and critique on the worthiness of the peer review instruments they had used suggests that their research and preparation for the professional learning workshop was not confined to the content knowledge and processes necessary to facilitate the workshop. Their research skills were also used to decide upon which peer review instruments to adopt and develop, and later to develop the worthiness of these instruments. This suggests that a culture of pre-service teachers of religious education being researchers of their own learning and reflection on that learning should be fostered because many contemporary learning communities in recent times have tried to promote cultures where teachers see themselves as researchers of their own practice (Stern, 2010),

While the pre-service teachers of religious education lamented the adoption of a Likert scale approach to develop a peer review instrument they were also glad that they had adopted another strategy for receiving peer feedback. The use of an oral feedback session as part of the peer review process was perceived as beneficial. They found that the oral feedback from peers provided them with in depth insights into how their ability to deliver a professional learning workshop was perceived by their peers. They were able to use the oral feedback to reflect upon and make judgements about their own learning and professional growth needs.

Once the presenters had collected the written peer review questionnaires they were given an opportunity to seek oral feedback from their peers. Some groups prepared questions and others asked for general feedback. It was an expectation that the feedback from peers be relevant to the assessment task criteria. Figure 2 provides examples of some of the peer review questions asked as part of the oral feedback phase.

To what extent were the strategies used appropriate to the target age group?

In what ways has the professional learning seminar added to your own confidence and ability to teach this topic?

What have you gained from this professional learning seminar that might inform your own classroom teaching?

Figure 2. An example of the types of questions asked during the oral feedback aspect of the peer review process.

The time allocated for the peer review feedback session was approximately fifteen to twenty minutes and each group determined how much time they would allocate to the written or oral peer review instruments. One week after presenting the professional learning seminar and receiving the (written and oral) feedback from peers the pre-service teachers were invited to meet with the tutor and discuss their reflections on the whole experience as well as clarify any issues or concerns.

Method

Towards the end of the semester all of the pre-service teachers were invited to participate in the study by completing a short survey questionnaire and a focus group discussion relating to their experience of undergoing a process of peer review. All pre-service teachers completed the survey questionnaire and fifty-five of the sixty pre-service teachers participated in a focus group discussion. Their participation helped to validate and clarify the categories of findings emanating from the responses to the questionnaire. The focus groups were held outside of timetabled tutorial time to ensure that students did not feel under any undue pressure to participate. Figure 3 provides an overview of the key questions in the survey questionnaire. These questions were also used to guide the focus group discussions.

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- 1) What contributions, if any, did peer review feedback make to your own understanding of the work you presented?
 - 2) What insights, if any, did you gain from the peer review process that will impact on your development?
 - 3) In what ways, if any, did the peer review process contribute to your own professional growth and as an educator?
 - 4) In what ways, if any, has the peer review process contributed to your ability to critically self reflect on your work as an educator?

Figure 3. An overview of the key open-ended survey questions

Data analysis

The study was situated within a constructivist paradigm (Crotty, 1998) and drew upon Glaser and Strauss' (1967) original principles of grounded theory to identify the emergent categories of findings. Since there is very little documentation about the impact of peer review upon pre-service religious education teachers, the principles of grounded theory were adopted in order to gain insights into this relatively unknown area. This methodology and adaptations of it are commonly used where little is known about the phenomenon under investigation (Goulding, 2002). Four categories of findings emerged from the data arising from the survey instrument and the focus groups. The categories of findings which are the focal point of this study are explored in the following section of this paper.

Results and Discussion

The study found that this particular experience of peer review amongst pre-service religious education teachers impacted upon pre-service teachers in the following ways:

- It helped them to identify the strengths and limitations of their work;
- It was a positive experience with the potential to contribute to one's own development;
- It contributed to one's professional growth and understanding of the professional role of a teacher;
- It contributed to a pre-service teacher's ability to critically reflect upon the role of a religious education teacher.

Identify the strengths and limitations of their work

It has been argued that peer review processes can be effective in identifying the strengths and limitations of a student's work in situations where tutors take control of the peer review process by developing peer review instruments such as questionnaires (Wilson, 2006). This study showed that the ability to identify strengths and limitations is not limited to tutor directed peer review instruments, that is, instruments designed and developed by the tutor or lecturer. A unique feature of this study was that participants were responsible for designing and developing their own peer review instruments.

The following comments from pre-service teachers are indicative of their ability to identify some strengths and limitations of their own work. It is common for pre-service teachers (and students in general) to become very focussed on mastering the knowledge content associated with new learning. During a presentation exercise (or in this case leading a professional learning workshop) the focus on content has the potential to cause some students (or in this case pre-service teachers of religious education) to lose sight of the significance of a coherent presentation process. The following comments from Respondents 27 and 9 are indicative of this: "The peer review feedback helped me to figure out the aspects of my presentation that were not clear. If I were to do it again I now know which parts to leave out and which parts to elaborate on" (Respondent 27). "The peer review was very good in helping me to recognise oversights in the presentation. It is hard to see things myself and the feedback helped me to see things from another angle" (Respondent 9).

Positive experience contributing to one's development

It is very common for those receiving feedback from a peer review to hear only the negative aspects even when the positives may well outweigh them (Wager, Godlee, Jefferson 2002). The pre-service teachers involved in this study tended to view feedback from the peer review in a positive light even in situations where they found the feedback to be strongly critical of their work. "One profound insight I have gained from peer review is that I should always be open to constructive feedback because taking on board some of the feedback can really challenge or help me to grow as an educator" (Respondent 36). Receiving feedback from peers can be really challenging for the receiver; however having an opportunity to experience a peer review can also help individuals to be open to the likely potentials for one's own development. For some pre-service teachers the experience of being peer reviewed helped them to improve their work. "Since being involved in the peer review experience I am able to take constructive criticism on board and use it to empower myself and make my work better" (Respondent 15). The opportunity to receive feedback can be perceived as a very positive experience leading to growth and development (Malone & Riggsbee, 2007).

In this study, structures were put in place to help ensure that the feedback could be received mainly in a positive light. A key structure (or process) incorporated into this study required that oral feedback from peers was not to be challenged or discussed between the reviewer(s) and those being reviewed during the feedback session. To debate the feedback at this point in time has the potential to reduce the opportunity to receive a broader range of feedback. This was due to the fact that there was limited time in which to hear the range of feedback from peers. Another structure incorporated into the peer review process was to provide pre-service teachers with the opportunity to respond to the feedback in a written evaluation of their experience of the whole process. Against the backdrop of these structures (or processes) being set in place this study supports the view that to be able to receive feedback from a peer review can contribute to a pre-service teacher's own improvement. "The feedback from peers can really assist in my development" (Respondent 4).

Professional growth

Participation in peer review has the potential to change one's educational outlook (Bell, 2005). A recent study based on a group of pre-service teachers in Taiwan revealed that peer review was perceived as an assessment tool rather than a learning aid and this perception generated an unfavourable outlook toward peer review (Wen, Tsai & Chang, 2006). However, this peer review experience amongst pre-service teachers in an Australian tertiary setting enabled many to further consider what it means to be part of the teaching profession. Because it was not viewed primarily as an assessment tool, the participants predominantly perceived the experience as contributing to their professional growth. The following insight reflects the general view of the pre-service teachers involved in this study. "It has convinced me that teaching is a highly skilled profession and anyone who thinks that all it takes to be a good teacher is to have a bright personality and like children is seriously mistaken. There is so much more to this profession!" (Respondent 3).

During the early stages of the course (and up until participating in the professional learning workshop) Respondent 3 perceived that having a likeable personality was the main requirement needed to be a successful teacher of religious education. The peer review experience transformed the perception held by Respondent 3. In a professional learning workshop segment facilitated by Respondent 3 the 'likeable personality theory' was put to the test. The peer feedback was enlightening for Respondent 3. The feedback from peers challenged Respondent 3 claiming that a lack of preparation was evident and that the professional learning workshop segment facilitated by Respondent 3 did not clearly demonstrate the relevance for adolescent development in relation to the learning and teaching approach being demonstrated. This was a turning point for Respondent 3 which help the respondent to reflect on his/her own professional growth as indicated by the comment made earlier by the Respondent.

Critically reflect upon the role of a religious education teacher

Tertiary students, including pre-service teachers (and pre-service teachers of religious education), can be encouraged to develop their thinking skills in ways that enable them to think critically and independently (Savoy, Burnett and Goodburn, 2007). The potential for these skills to be developed through peer review were evident in this study not only in terms of understanding the knowledge and skill content but also in terms of what it means to be a religious education teacher. "Peer review provided me with a solid set of data to refer back to and it helped to ensure that my own reflections are more critical and hence productive because I gained insights into possible improvements that can be made not only to my classroom teaching but also to what it means for me to be a religious education teacher" (Respondent 7).

Another benefit of the peer feedback process in this study was that it advanced the pre-service teachers' ability and willingness to critique their own work and profession. "It gave me more insights by which to critique my own teaching from different but equally relevant perspectives" (Respondent 29). Or, as one other participant stated; "My own critical self-reflection about what it means to be an effective religious education teacher can be assisted by seeking and considering feedback from peers" (Respondent 40).

For many pre-service teachers the key learning related to the importance of knowing the content knowledge associated with a range of affective teaching and learning strategies designed to enable students to gain access to and to critically reflect on the content knowledge associated with the discipline. In addition another key learning was to be familiar with the developmental stages of an adolescent (including the faith and spiritual developmental stages).

Conclusion

This paper has reported on the preliminary findings of a small study into the perceptions of pre-service religious education teachers about their participation in a peer review process. The insights gained should not necessarily be generalised beyond the scope of this study. While it is likely that increased student motivation may arise from student involvement in peer review (Topping, 1998), this study has shown that an increased level of motivation amongst pre-service teacher of religious education in both their academic and vocational / professional learning. The participants' involvement in the peer review process perceived it as a favourable experience because it helped them to identify some of the strengths and limitations of their own learning (including collaborative learning) and professional practice. These insights were used to motivate them to take responsibility for their own improvement. The experience of collaborative learning contributed to improved academic skills (Malone & Riggsbee, 2007). The participants in this study perceived that the feedback from the peer review process gave insights into how to improve their work. It was as a positive experience in that they perceived it as having the potential to contribute to their own academic and professional development. The pre-service teachers in this study, unlike their North Taiwanese counterparts (Wen et al, 2006), perceived peer review as a learning aid rather than an assessment task. As such this non threatening approach to peer review enabled them to consider the skills involved in being a teacher of religious education as well as orient themselves towards taking responsibility for their own professional growth. It is possible to achieve improved learning outcomes (Van Weert, & Pilot, 2003) and the participants also perceived that the peer review experience enabled them to critically reflect upon the role of a religious education teacher and focus their learning towards achieving the skills required to be an effective teacher of religious education.

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