



# Scientia Education Investment Fund Grants Final Report

**January 2019**

**Designing, piloting and evaluating a process for formative peer-review of teaching**

**School of Public Health and Community Medicine**

**UNSW Medicine**

**Project leader and contact details**

**A/Prof Chinthaka Balasooriya**

**[c.balasooriya@unsw.edu.au](mailto:c.balasooriya@unsw.edu.au)**

**Names of team members**

**Dr Patrick Rawstorne**

**Dr Reema Harrison**

**Dr Husna Razeed**

**Dr Lois Meyer**

**Report authors**

**All team members**

## 1. Executive Summary

This project led to the design, trial and implementation of a Formative Peer Review of Teaching (FPRT) process at UNSW. Following successful refinement and implementation at UNSW Medicine, the process generated wide interest across the university. The project team received invitations from four other faculties to expand the process to their contexts.

The development of a reviewer training program was a key highlight. This process included strategies to develop deeper understanding of the process and the dimensions, with calibration activities that enabled discussion of what constitutes good practice in relation to each dimension. This was a valuable activity in itself, as this led to many in-depth discussions amongst academics from various disciplines around the meaning of teaching quality. The wide interest generated by the project led to the training of 80 reviewers from four faculties at UNSW.

The project also developed a website for FPRT, and this served as a template for other faculties to develop their own websites. The project also trialled the early development of a chatbot (on the IBM Watson platform) to serve as a virtual agent that could provide information related to formative peer review.

In addition to multiple presentations across UNSW faculties, the project team also received an invitation to conduct a workshop on FPRT at an overseas university, and have been invited to present a symposium at an international conference (AMEA 2019).

Overall, the project has not only led to the introduction of FPRT at UNSW, but has opened up opportunities for academic discussions around the quality of teaching. Analysis of the qualitative data illustrates how academics perceive the process and its value. Preliminary analysis of quantitative data supports the use of the eight dimensions of the review tool and indicates directions for further research.

The project led to the development of a number of recommendations to improve the process of peer review. Some recommendations extend across both FPRT and summative review, while others focus solely on FPRT.

### **Recommendations relevant to both FPRT and Summative peer review:**

1. Formative and summative review of teaching can complement each other and can collectively lead to quality enhancement. However, it is important to continue to maintain the clear separation of the formative and summative processes, in order to maintain the integrity of each process.
2. Reviewer training is a key determinant of the success of both formative and summative peer review of teaching. There is opportunity to share learnings across the two processes. Calibration activities that enable reviewers to understand the criteria (dimensions) are critically important.
3. An ongoing process of evaluation needs to be built into both the formative and summative peer review processes. De-identified data needs to be analysed to evaluate the instruments and the processes.

### **Recommendations specific to the FPRT process:**

4. A feedback dialogue is a key component of FPRT, and the pre and post review meetings play a critical role in this. Processes need to be developed to support the scheduling and effective conduct of these meetings. Reviewers require training in providing feedback to colleagues.
5. Efficient processes need to be developed to support scheduling of formative peer reviews and selection of formative peer reviewers. While there is an opportunity to draw on the processes developed for the summative process, this needs to be done with care, to maintain the separation between the two processes (the importance of this is noted above).
6. The limitations of the current dimensions and instrument needs to be acknowledged and addressed. For example, the dimensions are currently worded to focus on 'what the teacher does'. While this is reasonable within a process that reviews 'teaching', the ultimate goal is to enhance student learning. A review of the wording of the dimensions to focus more on student learning would be useful.
7. The asynchronous online teaching tool needs to be reviewed for use in both FPRT and summative peer review as the current instrument is challenging to interpret and includes components that focus predominantly on course design.

## 2. Outcomes and impact

The project has been successfully implemented and the following has been achieved:

1. A process for conducting formative peer-review of teaching (FPRT) has been designed, trialled and refined. This was done with wide consultation including:
  - a. Project group meetings
  - b. Consultation with the advisory committee that spans across schools
  - c. Three information / consultation sessions and a presentation at the UNSW Medicine L&T Forum
  - d. Trial reviews by the project team to refine the FPRT process
  - e. Incorporation of feedback from advisory panel and reviewers
2. The FPRT instruments were refined and finalised, and user-friendly electronic versions were developed. This process was informed by feedback from the trial reviews.
3. Ethics approval was received for the research component of the project
4. A reviewer training package was developed. This package includes a self-assessment activity and two calibration activities. The key elements of the training activity are as follows:
  - a. During the self-assessment activity, reviewers are encouraged to use the eight dimensions to rate one of their own teaching sessions. This is designed to help reviewers develop a preliminary understanding of the eight dimensions, and to make them more meaningful by encouraging self-reflection on how the dimensions may relate to their own practice.
  - b. During the next activity (the first calibration activity), reviewers rate a video recorded teaching session using the eight dimensions. An online rating system (using the commercially available system named 'Zeetings') has been developed. This online system allows each reviewer to independently rate the video recording, following which the group ratings can be viewed by the full group. This provides a means for reviewers to compare their ratings against others' ratings, within a safe and confidential environment. The view of the group ratings provides a basis to discuss diverse views related to each dimension. This activity thus deepens the understanding of the eight dimensions and adds to the initial understanding developed through the self-assessment activity.
  - c. During the second and final calibration activity, the reviewers use the standard FPRT rating form to rate a video recorded teaching session. This is designed to build reviewers' confidence in using the FPRT rating form. As the reviewers have developed a fair understanding of the dimensions through the previous two activities, this final activity is designed to help them feel ready to conduct a review.
  - d. The reviewer training package was trialled within the Medicine Faculty and through the first stage, 20 reviewers were trained. Subsequently, we were invited by other faculties to conduct reviewer training sessions for their staff. We have now trained a total of 80 reviewers across four faculties.
5. A 'teacher self-efficacy' instrument was designed.
6. A webpage for the project was established: <https://staff.med.unsw.edu.au/formative-peer-review-teaching-process>. This includes background information relating to the project and the process. This website provided a template for other faculties to follow, and a number of websites have been established by other faculties: <https://teaching.unsw.edu.au/summative-peer-review>
7. A focus group was conducted to consider the applicability of using the Asynchronous online course tool for FPRT processes in the future
8. Considering the sustainability of the project beyond the funding period, a preliminary version of a 'virtual agent' (chatbot) was developed. The current version is at a preliminary stage, but it provides insight into further developments that are possible. <http://unsw-watson-assistant-demo.au-syd.mybluemix.net/>

**Impact:** The project has had a positive impact across schools and faculties at UNSW. The formative process has been embraced by academics as a valuable and useful exercise. (Interestingly, this has been influenced by some of the concerns related to the summative review process.) Formal and informal feedback on the formative process has been largely positive. This impact is elaborated on further within the discussion of the qualitative data. The non-threatening and voluntary nature of the process, the spirit of collegiality that was built through wide consultation, and the confidentiality of the process, have all contributed to the positive perceptions.

The reviewer training sessions have had a particularly strong impact on influencing views on the quality of teaching. The training sessions have led to sharing of views amongst academics across various disciplines. The discussions that are encouraged as part of the calibration activities of the training program, allow for deep discussion around the meaning of educational quality. These discussions allow for the eight dimensions to be discussed in-depth, and to develop a broader awareness of these dimensions amongst academics. As some reviewer training included colleagues from multiple faculties, these sessions enabled very interesting practice sharing across disciplines.

The project has impacted staff at four faculties across the university. We now have a total of 80 reviewers trained (Medicine: 29, Built Environment: 17, Engineering: 18, FASS: 16). The Faculty of Science has also requested input to introduce the process at their faculty.

The main challenges that impact on the process of conducting a FPRT process relate to perceived time commitments (which are in part related to the anxiety of preparing for reviews). The time and effort required to schedule reviews, even with the assistance of a dedicated administrative assistant, have also led to some challenges.

The project is now starting to have an impact beyond UNSW. The project lead has been invited to present on formative peer-review of teaching at the Asian Medical Education Association (AMEA) Conference in April 2019. He was also recently invited to deliver a training session for staff at the faculty of Medicine, University of Peradeniya, Sri Lanka, in January 2019.

**Strategic priorities addressed:** This project relates to SEIF Priority 6. "Significantly enhance the student experience or student outcomes via any other original approach not covered above or in other funded schemes like the Inspired Learning Initiative or UNSW 3+ calendar".

Formative peer-review of teaching is expected to lead to enhanced student experience through higher quality teaching. The formative process also complements the summative peer-review process which is a key element of the Scientia Education experience.

The project relates to the UNSW 2025 Strategy A2: Educational Excellence. It specifically relates to Initiative 2: "Supporting and valuing teaching excellence". This project includes many elements that "support and value exceptional teaching, developing academics who are committed to creating a rich learning environment and providing a consistently excellent educational experience." The project directly addressed this through implementing processes to enhance the quality of teaching and by better preparing academics for recognition through summative review.

The wide interest that has been generated by this project is extremely positive. The positive feedback received from across other faculties suggests that FPRT is likely to be implemented widely across UNSW. This project has thus paved the way for wide ranging benefits across all faculties and courses.

## **2. Dissemination strategies and outputs**

As noted above, the project has been introduced across four faculties, was presented at the Annual Medicine Learning and Teaching Forum 2018; and has been presented internationally. The project team developed a website for FPRT at UNSW Medicine, and this acted as a catalyst for other faculty-based websites. The FPRT chatbot is currently being developed as an innovative means of facilitating the exchange of information regarding the FPRT process.

## Outputs

Invitation to present at International Conference: Asian Medical Education Association (AMEA April 2019)

Invitation to conduct staff development workshop on Formative Peer Review of Teaching at Faculty of Medicine, University of Peradeniya, Sri Lanka (conducted January 2019)

Manuscript in preparation: The design and implementation of the FPRT process and lessons learnt

Manuscript in preparation: Review of strategies to evaluate the quality of teaching

## 3. Evaluation of project outcomes

Project evaluation included formal research components (quantitative and qualitative) as well as an informal review of the dimensions developed for review of asynchronous online teaching.

**Findings from the qualitative component of the research:** The findings showed that in general both reviewees and reviewers found this to be a positive experience, one that contrary to expectations was “unobtrusive, comfortable, non-threatening and good”. Both reviewers and reviewees noted that it did not require an onerous time commitment although there were comments on the complexity of the logistics in organizing a convenient time for both reviewee and reviewers. The informal nature of the process was something that was appreciated. Feedback provided by the reviewers was generally received well. Reviewees noted that the feedback they received was for the most part constructive and positive.

*(Potential limitations to note: It is likely that those who have volunteered for the FPRT process are academics who are highly enthusiastic and passionate about their teaching and who already receive positive feedback from students. What is also interesting is that most of the reviewees have already received some form of training in learning and teaching, another factor which perhaps contributes to the positive experience.)*

While reviewees found the feedback process helpful and positive, reviewers expressed some level of anxiety in providing feedback. As one noted it “requires careful crafting”. The following quote suggests perhaps it is to do with confidence in providing feedback.

Lots to say about FB process – requires careful crafting of feedback, reviewer to put himself/herself in reviewee's shoes, not offend, not be overly critical, phone meetings better than F2F, Not sure if own opinion is the right thing (Reviewer AZ142)

The helpful aspects of the FPRT process were related to feedback, the reviewers, the pre-review process and the tools used in the process. Having two reviewers, reviewers being external and having trained and experienced reviewers were considered helpful.

Reviewers should have experienced being reviewed and be sensitive to how FB can be received and experienced in giving and receiving FB (AZ142 Reviewer)

The pre-review process was seen as an essential part of the process as this helped clarify expectations on the part of the reviewee and reviewer as well the reviewer getting an understanding of the context in which the teaching would take place. Having a meeting prior to the actual observation of the teaching “kind of broke the ice” and made the process less intimidating.

Preview helped understand context, necessary for a fair assessment, put reviewer and reviewee at ease – establish rapport (AZ142 Reviewer)

We did have pre-review... , I took care to make sure that I introduced the activity I was inviting people into... and actually demonstrated the entire process, like how the teaching (inaudible 5:45) process is structured in that course, and where that lecture fits in. In my opinion it was important for them to understand what I'm trying to achieve by this activity, because even lectures, you know they can be different styles and different aims. So that was important for me and I appreciated the chance to talk to them. (AZ146 reviewee)

Reviewees mentioned that they volunteered for the FRPT process as this enabled them to get a different perspective on their teaching especially from outside their own discipline, was a way to help them “improve [their] course delivery” and would help them “prepare for this formal process [of summative peer review]”. For one reviewee the motivator was to help fellow academics in their research process.

Reviewees felt strongly about the current process of FPRT not capturing the quality of teaching in its entire sense as teaching/learning goes beyond the one hour face to face session observed.

...Apart from my lecture, I have my course notes, I have online quiz, and I make some assumptions, like learning outcomes for example. I write them clearly in front of the course notes, before they start - in the beginning of the course notes.

Some comments from reviewees also highlighted how they respond to feedback:

There are a few things which I know that I'll be able to cover again in tutorials. So that way, it will be... When they come to the lecture, I feel that they don't get the whole picture. And [reviewers] assess just based on that. For example, they are sitting there. So if... Whereas there's a broader picture in which perhaps some of the things... So some of the things, like in my first three lectures, I have arbitrarily put the material in. I know that I'll finish them in three weeks, but it's not necessarily that first week's slides will be finished in first week. It depends on how much interaction I have with students and all. So in doing that, for example, I didn't finish my slides, so I have a last summary slide summarising what we have done. But they didn't see that because I've not finished the slide, so they gave me a comment that you should have a summary slide in the end. So you know, those sort of things. So I told them I already have them, but I don't finish it in time because of these things – technical nature of you know, first three lectures and all. (AZ149 reviewee)

According to both reviewees and reviewers the FPRT process helped them to engage in reflective practice.

Finding a weakness/area for improvement lead to thinking about whether this happens in own teaching practice. (AZ142 Reviewer)

A number of improvements to the process were suggested by the reviewees. These included the following:

Tailoring the process to the career stage of the academic

Reviewees having some basic knowledge of learning and teaching theory will make the process and acting on the feedback more meaningful

Post meetings needed to be held soon after the observation.

Reviewers needed to be experienced (also as a reviewee) and well trained, particularly in how to provide feedback in a constructive manner. The need to be cognizant of how the feedback, especially negative feedback could impact on the academic. They also require training in interpersonal communication skills.

Providing ongoing follow up support that can enable the academics to address the feedback they received.

Having clarity around the scope of FPRT and SPRT and their differences

Having clear guidelines for what is expected from pre and post meetings, the observation session and also guidelines on how to deal with cultural and gender issues.

**Findings of the focus group discussion:** A focus group was conducted November 2018 to review the currently proposed dimensions for the review of asynchronous online teaching. The discussion aimed to explore the applicability of these dimensions for future FPRT processes and to inform further UNSW peer review teaching. The focus group was conducted with SPHCM academics who had a depth of experience teaching online and using asynchronous teaching methods (n= 6) and the focus group was facilitated by one of the FPRT project team members (LM). Members of the focus group were provided the tool prior to meeting and all members of the group were familiar with the face to face or synchronous dimensions of teaching.

In reviewing the asynchronous online teaching tool, the focus group identified it as challenging to use noting that there were some significant underlying assumptions. These issues were seen as accentuated beyond the challenges shared with the review of face to face sessions (as the dimensions referred to the 'course site', suggesting that the entire course was being reviewed). One participant asked, "Are you looking at the whole asynchronous experience in a course or just a snapshot?". This highlighted a disconnect with the process used for reviewing face to face sessions. Others agreed and there was consensus that it was difficult to know just what one was expected to review in a course spanning from a week through to a term so that the breadth of how much to review on a course was not clear from the tool. It was noted this was very different to reviewing in a face to face context where the time period of an hour class made the parameters well defined and clear for the review process.

A second key concern raised through the focus group was that the tool focused on the design of the online course rather than facilitation of engaging in asynchronous online teaching. It was noted that the sub-dimensions were worded as "course site challenges..." or "course site assists" ..etc. while focussing on the

design aspect is recognised as important, this is true for both face to face and online teaching. The focus on the design elements in online teaching and on the delivery elements in face to face teaching, introduces an inconsistency that could be problematic especially with summative processes. It was also noted academics who were being peer assessed in their online teaching could be unfairly advantaged as the design process is supported to varying extents (for example through ILI). Thus the success of the design may or may not reflect the skills of the teacher being reviewed. The focus group were strongly of the view that the tool needed refinements to address such issues to ensure equity.

The focus group made a number of recommendations that would assist refining the tool for future use both in FPRT and in summative peer review at UNSW.

- 1) Clarify the aspect / level or stage of the online course that is to be peer reviewed
- 2) Focus the review process on asynchronous facilitation over time that demonstrates how academics interact with students online rather only on course design
- 3) Review all the sub-domains of the Dimensions to reduce current emphasis only on design for ensuring equity with the face to face and synchronous online teaching tool
- 4) Consider developing a separate peer-review instrument to evaluate design and development of curriculum/ courses (for all types of teaching including face to face teaching)

#### **Summary of analysis of quantitative data**

The quantitative component of the project evaluation included analysis of data from the completed FPRT forms and Teaching Efficacy forms. During the review process, reviewers were asked to rate not only the eight dimensions, but also 40 sub-dimensions that were drawn from the descriptors of each dimension. The aim of this exercise was to examine whether the eight dimensions were supported by the data.

The analyses reported on in this section of the report are preliminary and inconclusive because of the small sample size. Due to these limitations, these analyses are reported on for interest purposes only. It is the authors' intentions to continue collecting data after the conclusion of the SEIF-funded project in order that we may obtain enough data to address our research questions.

Descriptive statistics for each of the forty sub-dimensions and internal consistency reliability of these groupings for each of the FPRT dimensions (N=10) are presented in table 1 on appendix 1, and the key findings are summarised here: The preliminary analyses in Table 1 shows that most of the indicative teaching strategies pertaining to each of the FPRT dimensions are conceptually similar as evidenced by alpha coefficients  $\geq .60$ . For those dimensions (D2 and D7) where the alpha coefficient for the indicative teaching strategies was low, it was mainly as a result of one of the indicative teaching strategies correlating negatively with several others based on participant responses. Negative correlations in this context may have been caused by participants observing fewer instances of these teaching strategies, rather than as a result of conceptual dissimilarity. Overall, the relative similarity of the indicative teaching strategies pertaining to each dimension confirms the use of these examples as useful prompts for peer reviewers.