

Pinnacle: evaluation of the graduate teacher training program at the ANU

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Pinnacle is the ANU's teacher training programme for full time PhD students. The Pinnacle Teacher Training Program provides a mentoring system that aims to equip postgraduate students with the skills and theoretical background that they will need to become high quality lecturers. This article describes Pinnacle, and discusses the assessment of its effectiveness by past Pinnacle participants, using quantitative and qualitative feedback. There were differences in the perceived effectiveness of Pinnacle related to participants' sex and their academic discipline. Overall, the participants found that the opportunity to deliver lectures, to work closely with their mentor, and to reflect on their own teaching philosophy and practice gave them a sense of being confident and competent teachers by the end of the programme. Pinnacle provides an opportunity to reflect on the practice of teaching before habit and academic pressures permanently shape teaching practices.

Introduction

Most Australian universities offer teacher-training programs for junior academics and for graduate students who intend to pursue a career in tertiary teaching. All of them provide theoretical background and the opportunity for practice teaching. Many also provide mentors to ease the transition into teaching, such as the University of Canberra, the University of Wollongong and the University of New South Wales (Viskovic 2006; Harland 2006).

Pinnacle is the ANU's teacher training programme for full-time PhD students. This article describes the programme, and assesses perceptions of its effectiveness, using quantitative and qualitative feedback from past participants.

Description

Pinnacle is a semester-long course that has been delivered four times through the Research Students Development Centre at the ANU. It commenced in Semester Two, 2008. Pinnacle participants are potential future academics, so it is necessary to promote within them effective education practices from the outset.

A key feature of Pinnacle is the adoption of a mentor by each participant. This mentor is generally an experienced lecturer with a proven teaching reputation who is running a course in the participant's field of study. Participants meet regularly with this lecturer to discuss the design and progress of their course; they also give some lectures and undertake marking. This is a key component of most teacher-

training courses (Gaia et al 2003; Hickson and Fishburne 2006; Ligadu 2008).

Another important feature is the opportunity for discussion and reflection on teaching. Korthagen and Kessels state that 'student teachers who themselves experienced learning in an active way are more inclined to plan lessons that facilitate students' active knowledge construction' (1999, p.5). Discussion between the Pinnacle participants aims to enrich and solidify their learning. It also provides a perspective about the many different teaching styles and considerations in their respective courses. The concepts and skills taught in Pinnacle are overtly applied to Pinnacle's own delivery. Participants are encouraged to be aware of their own learning process throughout the course, and this informs their own thinking about the material which they are studying. Pinnacle promotes an explicitly reflexive pedagogy in its approach to teaching.

Figure 1 demonstrates the interrelationship of Pinnacle components. These include:

Pedagogy

- Theory Online: This forms a substantial part of Pinnacle. The learning is split into three modules: Student Learning, Course Design and Assessment. The first module centres on theories of learning. The course

design and assessment modules look at the lecturer's role in designing the course and assessment. This component of Pinnacle involves extensive reading.

- Group meetings: These provide a chance for participants to discuss their thoughts about and experiences of pedagogical theory and the practicalities of teaching. Discussions typically revolve around the difficulties that students have faced as learners and teachers, as well as the pedagogical theory from the Theory Online modules.

Practice

- Lecturing: During the Pinnacle semester participants are required to present several lectures in their guide's course. These lectures are filmed and the videos are provided to the participants at the end of the course.
- Marking: Participants mark some or all of the assignments, essays or exams of their guide's course. This may be a part of their tutoring responsibilities, or it may be undertaken purely for Pinnacle.

Assessment

- Reports: Participants submit three reports on the modules of Student Learning, Course Design and Assessment.

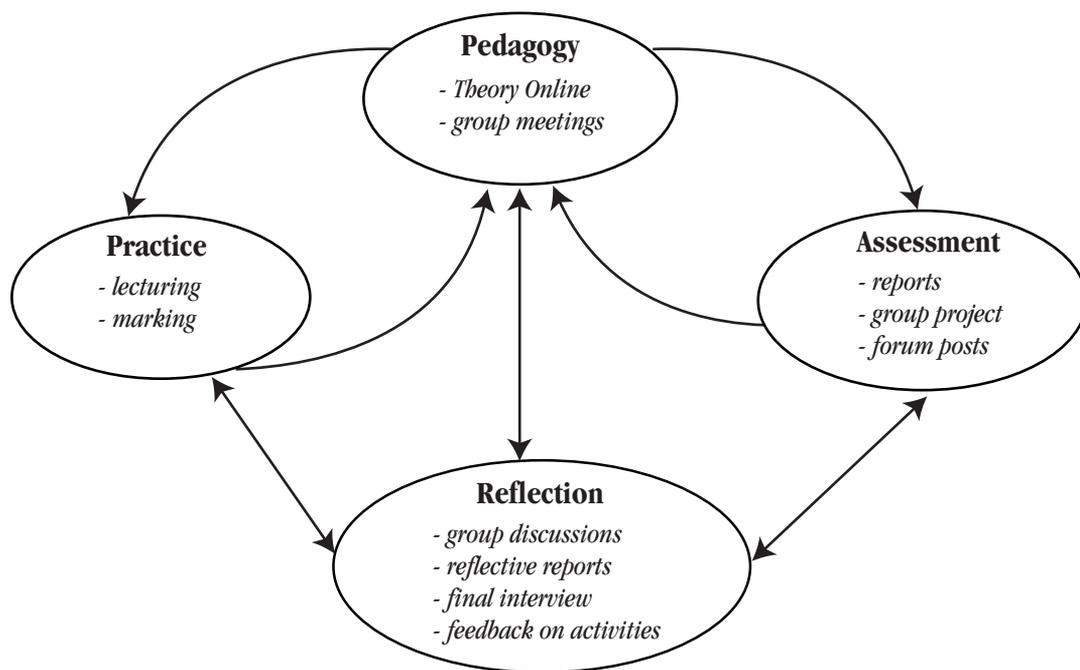


Figure 1: Pinnacle course design

- **Group project:** Towards the end of the Pinnacle semester, participants embark on a group project. This aims to integrate what has been learned throughout the course and to empower participants, allowing them to make an explicit contribution to, and take responsibility for, the quality of teaching in their university or elsewhere. In the past this project has been the facilitation of a campus wide teaching forum. The present article is part of the authors' 2010 group project.
- **Forum posts:** Whilst working through the Theory Online modules, participants post their thoughts about the content into designated online forums, demonstrating their understanding of the course content.

Reflection

- **Group discussions:** Discussing participants' experiences in lecturing and marking, and their responses to the Theory Online modules encourages reflection on all aspects of Pinnacle.
- **Reflective reports:** In addition to the assessed reports, three reflective reports are completed. The first relates to the course with which the participants are associated, the second is a reflective essay on the lectures which the participants have delivered, and the third is a longer essay reflecting on the participant's journey through the course as a whole. The latter reflective essays form a key component of the evaluation of Pinnacle for this article.
- **Final interview:** Interviews are conducted by the Pinnacle course convener with each participant. These centre on how participants' views on teaching have changed and developed through the course.
- **Feedback on activities:** Participants receive feedback on their own lecturing and marking from their mentor.

While no marks are given for activities, all are compulsory to complete the course. At the end of Pinnacle, participants receive a certificate that indicates their completion of the course and a DVD containing the video of their lecture and their interview. The DVD is intended to give the participants a reference point to reflect on later. A small scholarship is also awarded, to compensate for loss of time on PhD research.

Evaluation

To evaluate Pinnacle as a teacher training programme for graduates, feedback from previous Pinnacle partici-

pants was used. This feedback was from the first three Pinnacle sessions, with data from the current Pinnacle session, that of the present authors, being excluded. It consists of the surveys completed at the end of each Theory Online module, and the final reflective essays.

The online surveys had essentially the same format each year. They commenced with questions asking participants to rate the effectiveness of various Pinnacle activities on a scale of 1 to 7, with 1–2 indicating that the activity was *ineffective*, 3–5 *moderately effective* and 6–7 *highly effective*. The overall effectiveness of Pinnacle was then queried. The responses to all the rating questions were collated and averaged. These numerical questions were followed by free-format questions in which any answer could be provided. For this article, the most prevalent responses were noted.

Next, each of the reflective essays was 'interpretationally analysed', whereby comments were extracted, patterns identified and themes determined (Gall *et al.*, 2003 p.453). The themes identified were:

- Motivation for undertaking Pinnacle
- Skills gained from the course and particular course components: course design, lecture delivery and assessment.
- Changes in teaching philosophy.
- Aspects of the course which were liked and disliked.
- Suggestions for improvement.

In addition, the participants' journeys were analysed according to some identified themes:

- Change in teaching philosophy.
- Sense of competency and confidence relating to Pinnacle material.
- Perceived change in personal story.

The procedure described above provided both quantitative and qualitative data on which assessments of Pinnacle could be made.

Survey data

Motivation to undertake Pinnacle

The most common reasons selected by respondents for undertaking Pinnacle related to learning how to be a better teacher. *Opportunity to learn how to teach* was nominated by 37 per cent of respondents while 32 per cent suggested that they became involved in Pinnacle in order to *learn theoretical/practical pedagogy*. *Exposure to good teaching practices* was selected as a motivation by 26 per cent of respondents. One participant nominated the scholarship awarded on completion of the programme as their primary reason

for undertaking Pinnacle. When this participant's responses were tracked through the survey data, it emerged that despite their primarily financial motivation, they still rated Pinnacle highly, found it effective and would recommend it to a colleague. It is clear from the results that the majority of participants undertook the programme because they wanted to learn about teaching and improve their teaching skills.

Overall Effectiveness

Participants were asked about the overall effectiveness of Pinnacle on a scale of 1 to 7. A total of 84 per cent of participants rated Pinnacle as *highly effective* by giving a score of 6 or 7, and the remaining 16 per cent thought the programme was *moderately effective*, all of whom gave a score of 5. The average score was 6.1, which equates to *highly effective*.

There was no significant difference in perceptions of the overall effectiveness of Pinnacle by sex. Men rated the overall effectiveness of Pinnacle as 6.0 and women as 6.1.

Participants came from a wide range of disciplines. For the purposes of evaluation, these were divided into the broad divisions of Humanities and Sciences. When asked to rate the overall effectiveness of Pinnacle, those from the Humanities returned an average score of 5.5 whilst those in the Sciences returned a score of 6.0. This contrasts with their respective responses to individual course aspects, which will be discussed below.

Individual course aspects

Participants were asked to rate the effectiveness of each aspect of the course. The mean for all participants' responses is shown at Table 1, in order of most effective to least effective.

Table 1 shows that the most effective parts of Pinnacle were those in which the learner-teacher actively participated and was entirely responsible for the outcome. That is, giving their own lectures (average score of 6.6), their own tutorials (6.0) and the three written reflective reports (average scores of 6.0, 6.0 and 5.9).

<i>Average Score</i>	<i>Activity</i>	<i>Effectiveness</i>
6.6	Your lectures	↑ Highly Effective ↓
6.0	Lectures report	
6.0	Final report	
6.0	Your tutorials	
6.0	Design report	
5.9	Observing lectures	↑ Moderately Effective ↓
5.9	Working with guide	
5.8	Observing tutorials	
5.2	Interview video	
5.2	Marking	
4.8	Pinnacle group meetings	
4.8	Organising group event	
4.6	Use of Alliance	

Table 1: Effectiveness scores for Pinnacle activities

This aligns with other studies that show that practice teaching is the most useful component of teacher-training programmes. 'Student teaching is considered by many educators to be the single most important experience in teachers' pre-service education, with the potential to be a powerful learning experience' (Head, 1992, p.95).

By contrast, in Pinnacle the least useful part was the mainly passive activity of using Alliance, which is an online collaborative tool through which the Theory Online component was delivered.

Although each sex rated Pinnacle's overall effectiveness almost identically, there were marked differences in the perceived value of individual aspects of the course. The largest difference between the sexes in rating the effectiveness of different aspects of Pinnacle was on the interview video. On average men rated it at 6.3 (highly effective) whilst for women the average rating was only 4.7 (moderately effective). Similarly, men gave group discussions an average rating of 5.8 whilst women gave them an average rating of 4.3. On the other hand, women rated the effective-

ness of their own tutorials (6.3) more highly than men (5.0). The gender differences in assessing the effectiveness of individual aspects of Pinnacle may be related to gender differences in preferred learning styles. There is a large body of research on gender differences in learning. For example, one study of undergraduate learning preferences showed that women preferred kinesthetic learning methods (for Pinnacle this would include their own tutorials) whilst men preferred a range of learning methods including visual, aural and reading-writing (for Pinnacle this would include the interview video and group discussion) (Wehrwein et al 2007).

Participants from the humanities on average rated each aspect of Pinnacle with an effectiveness of 5.7, whilst those from the sciences gave an average rating of 4.8 for each aspect. This is an interesting result because it will be recalled that although rating each aspect more poorly than those in the humanities did, those in the sciences found that the overall effect was more beneficial. Those in the sciences rated all but two of the 13 course aspects at a lower average level than those in the humanities, yet their average overall evaluation of Pinnacle was higher. Although there is a body of literature on the different approaches to learning and perceptions of effectiveness between different disciplines, the apparently contradictory results of the present study cannot be explained simply in these terms.

Tellingly, 100 per cent of participants would recommend Pinnacle to their colleagues. Although positive about Pinnacle, there were some suggestions for improvement made by the participants. With respect to Teaching Interest Groups, 32 per cent of respondents felt that they were too hard to organise and these were abandoned in later semesters of Pinnacle in response to this evaluation. In addition, 26 per cent felt that the Theory Online (TOL) modules should be a prerequisite completed prior to beginning the programme, rather than be treated as optional before commencement. The same proportion (26 per cent) felt that Pinnacle meetings needed to be better structured and more closely linked with the TOL modules. In addition, 16 per cent of participants suggested that they would like to see TOL extended.

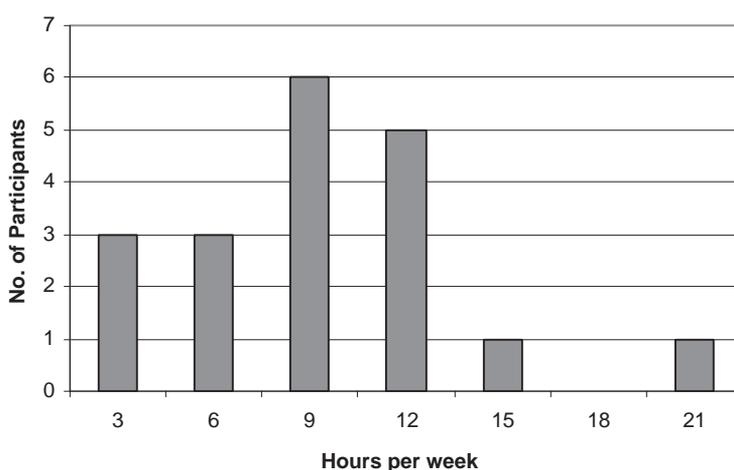


Figure 2: Participants' reports on hours spent on Pinnacle per week

Workload was an area that the survey was particularly interested in measuring. Most participants did between 9 and 12 hours of work for Pinnacle each week. Whilst most felt that the workload was 'about right', a sizeable minority – 27 per cent of participants – felt that the workload was too heavy. Figure 2 shows the spread of reported workload for former participants.

Figure 2 shows that there was wide variation in the number of reported hours spent on Pinnacle, with the highest reporting participants claiming to have spent between five and seven times as many hours on Pinnacle as the lowest reporting participants. This result may in part be due to differences in definitions. Anecdotal evidence suggests that the highest reporting participants counted all their lecturing and tutoring time as 'time spent on Pinnacle', whereas the lowest reporting participants included only time spent on Theory Online, which was the context of the survey. The median number of hours spent per week on Pinnacle was 8.0, or roughly one day per week. It is on this estimated time that the scholarship award is based.

From the evaluation of the quantitative data, it can be seen that Pinnacle was regarded in a positive light by participants who completed the programme, although different sexes and disciplines had different views on the most useful individual aspects.

Reflective feedback

The qualitative data gathered from the participants' final reflective assignment tells a similar story to the data gathered from the survey. The participants' responses described the changes that they had undergone through

the Pinnacle programme, and could be separated into three narrative 'threads' that were consistent themes in the reflective responses. These three areas of change were teaching philosophy, competency and confidence, and a change in the personal story of the respondent.

Interestingly, just over half of the participants felt that there was no real change in their teaching philosophy. Rather, they felt their participation in Pinnacle validated their approach to teaching. Most of the participants articulated that they had gained confidence, and felt more competent, in their teaching as a result of participating in Pinnacle. One participant commented:

It (Pinnacle) was a wonderful experience that will certainly help me to become a better teacher.

Most also felt that they had undergone a change to themselves - to their personal story - through participating in Pinnacle. Another participant related:

Not meaning to sound pretentious, the course's meta-thinking has allowed me to approach other aspects of my life like piano teaching and relationships with other people from a fresh, more self aware perspective.

In a similar way to the quantitative data, the qualitative material collected from the participant's final reflective report clearly showed that Pinnacle was experienced as a positive event. It effects a change in the way that participants conceptualise themselves as teachers, and provides them with a greater sense of competence and confidence when approaching the classroom and lecture theatre.

The overall results of the data analysis of the survey, and of the reflective final reports, give a comprehensive picture of a programme that is regarded as a highly effective tool for building confidence and skills in early career teaching academics. Participants found that the opportunity to deliver lectures, to work closely with their guide lecturer, and to reflect on their own teaching philosophy and practice gave them a sense of being confident and competent teachers.

Conclusions

The surveys discussed here must be understood as providing feedback in the context of the course. There

may have been different assessments of the learning process if the feedback had been gathered independently of participation in the course. Also, the numbers are small due to the limited number of people who have completed Pinnacle and were thus able to participate in the survey and reflective exercise. As further groups complete the programme, it would be of interest to compare their experiences with the experiences of the limited group whose responses were considered for this article. This being said, however, Pinnacle

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has been rated as a positive experience which participants believe will contribute to the effectiveness of their teaching at a tertiary level.

Currently many lecturers, when teamed with an inexperienced tutor, will seek to provide support and some degree of training (Gaia

et al 2003; Hickson & Fishburne 2006; Ligadu 2008). This situates Pinnacle-type courses at the centre of a much larger debate regarding communities of practice; social learning; and, the professionalisation and formal accreditation of teachers in the higher education sector. In some cases the mentoring alone might have similar outcomes for the student teacher as a programme such as Pinnacle. The strength of Pinnacle is that the mentoring model does not seek to supplant such an arrangement, but to formalise and support it. It also ensures support for postgraduate student teachers that might otherwise have to fend for themselves, and provides a comprehensive mix of theory and practice.

The interactive and reflexive model of Pinnacle helps to shape the teaching of those trained. As well as being introduced to educational theory and putting it into practice in the courses that they are teaching, participants also experience it in the way that the course is delivered. This encourages empathy with the experience of undergraduates and reflective consideration of teaching practices.

The mentoring element of Pinnacle is key to its role within the university. An area for future investigation is the impact that such mentoring has on the teaching practices of the mentor as they are challenged to explain why they do things the way they do. It is reasonable to suggest that such a mentoring model has a positive effect on teaching that extends far beyond the gains in confidence and skill of the participants. The

mentoring model could have a two-fold effect, both in helping postgraduate student teachers to come to grips with all the elements of running a course and in raising the profile of careful, reflective thought about teaching in the minds of all academic staff.

For many, Pinnacle provided an opportunity to reflect on the practice of teaching and change their thinking on the subject, perhaps before habit and academic pressures have permanently shaped their teaching practices. For others it was an opportunity to gain confidence and experience in a supportive environment that fostered improvement and reflection. Though such a course is arguably not a substitute for formal and extensive teacher training it does fulfill a clear need and provides the first step for developing skilled, thoughtful, tertiary educators.

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