

DEVELOPING A PRE-SERVICE TEACHER EDUCATION MODULE: CHANGING PRACTICE THROUGH RESEARCH AND POLICY

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Abstract

The Tertiary Entrance Procedures Authority's 1997 *Evaluation of stakeholder perceptions of TEPA information materials* (TEPA 1997) found that many Queensland teachers feel they lack an adequate understanding of Queensland's tertiary entrance system. Further research indicated that tertiary institutions and the Queensland Board of Teacher Registration (BTR) recognise the importance of providing such information for intending teachers, yet lack the infrastructure and resources to support the provision of instruction on these topics.

TEPA has a legislated responsibility to inform Queensland students about tertiary entrance and related issues. As a result of the findings of the evaluation, the Board of Senior Secondary School Studies and the Queensland Tertiary Admissions Centre Ltd were invited to develop cooperatively a program to familiarise pre-service teachers with Queensland tertiary entrance and related procedures. With the assistance of the seven Queensland universities offering teacher education courses, a training package has been developed for trial this year. In recognition of the initiative, BTR has expressed its willingness to include it in the Professional Experience component required for teacher registration.

This paper will explore the processes involved in achieving changes to existing practice as the result of policy-focussed research. It will also review some of the challenges associated with implementing the recommendations of such research and the conversion of policy to practical change. Implications which arise from attempting to do this in cooperation with government and educational institutions will be discussed.

This paper illustrates how a statutory body can play an important role in facilitating changes in practice at the school and tertiary level; and demonstrates that policy-driven research and subsequent recommendations can result in practical and beneficial outcomes for all stakeholders. This project involved cooperation and collaboration with a diverse group of stakeholders from a range of government and non-government organisations.

The aim of the project was to develop an integrated resource for use with pre-service teachers at Queensland universities to ensure that teachers entering the profession have a comprehensive and accurate understanding of tertiary entrance procedures and processes.

Background

The Queensland context

The Queensland Tertiary Entrance Procedures Authority (TEPA) was established in 1990 under the *Education (Tertiary Entrance Procedures Authority) Act*, as a result of the recommendations made by Professor Nancy Viviani in *The Review of Tertiary Entrance in Queensland 1990*. TEPA was charged with the short-term responsibility to oversee the implementation of a new tertiary entrance system and, in the long term, to manage the transition of students from school to university. This was to be achieved by providing students with the information they require to enter university and by monitoring and reviewing tertiary entrance procedures in Queensland in order to provide advice to the Minister for Education.

The functions of the Authority are set out in the Act as follows:

- *to keep tertiary entrance under continuous review and make reports and recommendations to the Minister;*
- *to monitor, review, negotiate and recommend adjustments as necessary to tertiary entrance procedures;*
- *to issue Tertiary Entrance Statements;*
- *to monitor the supply of, and demand for, student places in tertiary education;*
- *to confer and collaborate with universities, school systems, schools, the Queensland Board of Senior Secondary Schools Studies (BSSSS), the Queensland Tertiary Admissions Centre Ltd (QTAC), Education Queensland (EQ), the Queensland Board of Teacher Registration (BTR) and the Department of Employment, Training and Industrial Relations (DETIR) (TAFE Qld);*
- *to provide students and the community with information on tertiary entrance; and*
- *to undertake or commission review and research projects.*

As recent media interest has highlighted (*Weekend Australian*, 1998; *The Australian*, 1998), the process which leads to certification of Queensland Year 12 students and their selection for tertiary study differs from that in most other Australian states. Queensland uses a system of school-based assessment in secondary schools and selection for tertiary study is based on an Overall Position (OP). Public exams were replaced by school-based assessment in the early seventies (Radford 1970, Scott 1978, Viviani 1990) and since 1992 students' tertiary entrance ranks have been determined by comparing their performance in senior subjects to those of all other students in Queensland using the Queensland Core Skills (QCS) Test.

Policy perspectives

As TEPA's primary responsibility is to advise the Queensland Minister for Education, it does not have a direct role in developing education policy. It is also not appropriate for TEPA to make policy for Queensland secondary

schools, or for Queensland's tertiary institutions. TEPA is not the Queensland Board of Senior Secondary School Studies (BSSSS) and does not have a direct role in the everyday school life of students or teachers. TEPA is not the Queensland Tertiary Admissions Centre Ltd (QTAC) and does not have a role in selecting students for tertiary entrance. TEPA is, as Viviani (1990) intended, a neutral body with responsibility for issuing the Tertiary Entrance Statement, for providing information to students, parents and teachers, and for monitoring the tertiary entrance system to ensure that it is as effective and equitable as possible. TEPA is, therefore, uniquely placed in Queensland and unique in Australia, to provide a forum for all stakeholder groups. The Authority's active role is to inform the community about Queensland's tertiary education selection process and any changes to that process in order to facilitate greater understanding.

An important part of TEPA's mission is to ensure that tertiary entrance procedures in Queensland continue to evolve through proactive and on-going communication, cooperation and negotiation with and between stakeholder groups regarding the management and monitoring of the transition to tertiary education (Viviani 1990, *Education (Tertiary Entrance Procedures Authority) Act 1990*). In order to fulfil this mission, TEPA has specified a number of policy objectives, including the monitoring of stakeholders' access to tertiary entrance information, their decision making and actions. More specifically, it is one of TEPA's primary objectives to research the use and effectiveness of tertiary entrance information materials. TEPA has, therefore, consistently evaluated aspects of its Information Program since the Authority's inception in 1992.

The OP system was introduced in 1992 and required, as any new scheme does, a substantial information campaign to support its implementation. The loss of confidence by the community in previous tertiary entrance procedures was a major factor in the decision to move to the use of a Student Education Profile (SEP). A series of investigations was initiated to monitor community support for the OP system. The initial study undertaken by TEPA resulted in the publication of *The Student Education Profile: Studies of community perceptions (Research Report No. 5)* (1993). This report examined levels of community understanding and acceptance of the current Queensland tertiary entrance system through analysis of press items in Queensland newspapers. It appeared that both the Student Education Profile and the Tertiary Entrance Statement (TES) were well received within the press. It was noted that there was some confusion in the community about the relationships between school results, results on the Queensland Core Skills (QCS) Test and OPs. It was suggested that students be sent further information to clarify this matter.

While TEPA's research has shown that there is now general community acceptance of, and satisfaction with, the OP system, discussion with schools, parents and students revealed a number of widespread myths regarding the

operation of the current system. As all relevant government and non-government organisations operate substantial information programs within schools for interested parties, it was obvious that something was missing.

Teachers access to tertiary entrance information

As a result of the policies of some schools, it was apparent that not all teachers have access to information regarding the current tertiary entrance system. The most recent and comprehensive evaluation of information provision, the *Evaluation of stakeholder perceptions of TEPA information materials* (1997), found that teachers appear to read fewer TEPA information publications than other school staff, and many would like access to a greater number of the publications available. Given that many teachers would have completed their senior schooling prior to the advent of the OP as a tertiary entrance selector, it is not surprising that they expressed some confusion and a lack of understanding of the current procedures, as indicated by the findings of the evaluation.

As part of the recommendations of the evaluation, each of the Queensland universities offering a pre-service teacher education qualification was contacted regarding the nature and amount of information supplied to teacher education students concerning the certification of senior school students and tertiary entrance issues. It was discovered that there was no consistent provision of this information on these matters by universities in pre-service teacher education courses, despite a requirement by the Board of Teacher Registration (BTR). Universities stated that they had largely been relying on schools to provide this information to students during their teaching practicum, either formally or informally.

This latter finding represented a major concern for TEPA when consideration is given to the fact that many first year teachers will take up positions in small or rural and remote schools. It is often the case that these students may not have a Guidance Officer stationed in the school, or may not have access to a Guidance Officer at all. In these cases, where teaching staff do not have a sound knowledge of the system, serious inequity for already disadvantaged students in terms of information regarding tertiary entrance can result. It was decided that the most effective way of approaching the problem would be to work with universities and other educational organisation to develop a flexible package for use with pre-service teachers.

Preliminary research and collaboration

Having identified a need for the provision of comprehensive and accurate tertiary entrance information within pre-service teacher education courses, the Authority developed a strategy which would involve the major education organisations and a number of the universities in Queensland which offer

teacher education courses. These organisations would participate in the development of multi-media information materials to address this gap in the current teacher education curriculum. In particular, TEPA aimed to persuade at least one university to trial the materials, in order to evaluate their effectiveness and provide a foundation for the recommendation that they be included in all Queensland teacher education courses.

The aim of the project, therefore, was to develop a set of materials to fill an identified gap in the existing pre-service teacher education curriculum in Queensland. BSSSS and QTAC both recognised the value of such a resource, and agreed to the participation of their Information Staff in the development of the materials. BTR also felt the project was important, and offered to assist in the provision of specific advice regarding the suitability of the materials in relation to the requirements of teachers for registration. As the registering body for teachers in Queensland, the participation of BTR was invaluable to the perceived credibility of the materials. TEPA was to act as the coordinator of the project. Each of the seven Queensland universities approached was keen to participate in the development of the materials, although unsure of its ability to assist in trialing them.

The organising concept for the project was the development of a resource package that would be flexible enough to provide for the varying needs of individual universities. It was decided that a series of three PowerPoint presentations would best facilitate this aim. Each organisation assumed responsibility for the design of a presentation that would cover its role and functions in the Queensland education system, as well as providing content knowledge relevant to processes which were likely to affect teachers. In the ensuing months, TEPA, QTAC and BSSSS collaborated to develop a resource which would maintain the identity of each organisation while providing a coherent overview of the tertiary entrance system. Feedback from university representatives during the process resulted in the inclusion of a workbook as an additional component of the resource.

The final package of materials included:

- Set of three PowerPoint disks with notes for the presenter on: BSSSS, TEPA and QTAC;
- Web site access;
- Three sets of Activity Sheets — BSSSS, TEPA, QTAC;
- Common Curriculum Elements matrix poster (BSSSS supplied); and
- Pre-service Teacher Training Workbook.

Universities were also requested to assist TEPA by participating in a research project in conjunction with the development of the Pre-service Teacher Training Package. It was proposed that the participating institutions would distribute a questionnaire to students involved in the trial on behalf of TEPA. The aims of the research were twofold. In the first instance, it was intended to

use the students' responses as a means of gauging additional information requirements of which the universities were not already aware. It was also intended to administer a follow-up questionnaire after the materials had been trialed. This would enable TEPA to evaluate the level of effectiveness of the Package and the degree to which the pre-service teachers themselves found it useful. All universities agreed to assist with the research project. In the case of one university, which was unable to trial the materials, this meant acting as a comparison group.

Method

Measures

A questionnaire was developed which aimed to determine pre-service teacher perceptions of the roles and functions of each of the organisations involved in senior schooling. In addition to gathering information about knowledge and understanding of the issues, questions were also asked regarding perceived confidence in their ability to discuss or explain these matters. Respondents were also asked to provide information in relation to their views of the role of pre-service teachers in providing tertiary entrance information to secondary school students. General demographic information was gathered at the conclusion of the survey.

The majority of responses were made on a five-point Likert scale, with the opportunity to indicate that the question was 'not applicable.' Space was also provided for students to make additional comments concerning any of the issues raised by the questions or make suggestions about the type of information they would like to receive in relation to senior schooling and tertiary entrance.

Procedure

Each university was requested to select a relevant group of students to participate in the research project. For most institutions this meant that their final year cohort was involved in the study. Questionnaires were sent to the universities in April and distributed during class time by the pre-service teacher education course coordinator or the subject lecturer. Students completed the questionnaires in approximately 15 minutes and returned them before leaving the class.

The Pre-service Teacher Training Package was trialed between late July and September according to each institution's course timetable and practicum commitments. Individual institutions were able to decide which elements of the package to use with students and the pace at which the material would be covered.

A follow-up questionnaire was distributed to universities in September. This questionnaire was identical to the initial one, with an additional section asking them to identify which components of the package they had seen.

Results

Sample characteristics

Three hundred and eighty-five pre-service teacher education students in seven universities across Queensland took part in the first phase of the study. The majority of respondents to the survey were female (245: 70%), to some extent reflecting the gender composition of education courses. Students ranged in age from 18 to 49 years, with 70% aged 24 years or younger. While the average age of those who completed the questionnaire was 24, this differed markedly across institutions.

The majority of respondents had completed their senior schooling in Queensland (339: 88%). Fewer had finished school in NSW (21: 5%) or Victoria (8: 2%), with the remainder having undertaken their senior studies in another state or country (16: 4%).

Only four per cent (17) of students spoke a language other than English at home. Eight of these students spoke a European language at home, with the balance speaking either an Asian or African language.

Board of Senior Secondary School Studies (BSSSS)

Students made neutral ratings when asked to indicate their current level of knowledge and understanding of the tertiary entrance issues relating to (BSSSS), as can be seen from Table 1. While slightly higher ratings were made with regard to the QCS Test, those made in response to questions about more complex BSSSS responsibilities, such as moderation and the function and use of Subject Achievement Indicators (SAIs), were markedly lower.

Table 1. Student agreement with statements about issues relating to BSSSS.

	Average
I understand the purpose of the Queensland Core Skills (QCS) Test	3.4
I have a good knowledge of the purpose and functions of BSSSS	3.0
I have a good knowledge of the moderation process.	2.7

I understand the function and use of SAIs.	2.5
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Note: Ratings were made on a five-point scale, with higher ratings indicating stronger agreement with statements.

When asked to rate their confidence in relation to approaching BSSSS and discussing and explaining relevant matters, pre-service teachers showed a general lack of confidence, as is evident in Table 2. While many students agreed that they understood the purpose and functions of BSSSS, they appeared to lack confidence with regard to discussing such issues with colleagues or explaining matters to students. Respondents appeared to have particularly low levels of confidence in relation to explaining SAIs to students. It was also observed that pre-service teachers did not display high levels of confidence in relation to a question about approaching BSSSS for any additional information they may have required.

Table 2. Student confidence in relation to BSSSS matters.

	Average
Approaching BSSSS for additional information	3.2
Explaining the use of the QCS Test to students	2.9
Discussing the moderation process with students	2.5
Discussing the purpose and functions of BSSSS with colleagues	2.4
Explaining the purpose and functions of BSSSS to students	2.3
Explaining the rationale for SAIs to students	2.1

Note: Ratings were made on a five-point scale, with higher ratings indicating greater confidence.

Queensland Tertiary Admissions Centre Ltd (QTAC)

Overall, pre-service teachers agreed that they had a good understanding of tertiary entrance issues which are the responsibility of QTAC, as can be seen from Table 3. While, on average, students were slightly less likely to agree that they understood the purpose and functions of QTAC, most felt that they had a sound knowledge of the importance of preferences and the means of applying for tertiary courses.

Table 3. Student agreement with statements about issues relating to QTAC Ltd.

	Average
I understand the need to order preferences when applying for tertiary study	4.1
I have a good knowledge of how to apply for tertiary courses	3.9
I understand the offer process	3.7
I have a good knowledge of alternative pathways to tertiary study	3.6
I understand the purpose and functions of QTAC	3.5

Note: Ratings were made on a five-point scale, with higher ratings indicating stronger agreement with statements.

Despite the fact that many pre-service teachers agreed that they understood a range of issues relating to QTAC processes and procedures, they were only confident about approaching QTAC for further clarification, or discussing tertiary applications with students. As can be seen from Table 4, students had less confidence in their ability to explain and discuss QTAC's purpose or functions.

Table 4. Student confidence in relation to QTAC matters.

	Average
Approaching QTAC for additional clarification	3.7
Discussing tertiary applications with students	3.6
Exploring alternative pathways with students	3.4
Explaining the purpose and functions of QTAC to students	3.2
Discussing the purpose and functions of QTAC with colleagues	3.2

Note: Ratings were made on a five-point scale, with higher ratings indicating greater confidence.

Tertiary Entrance Procedures Authority (TEPA)

It is clearly evident from Table 5 that, despite the fact that most pre-service teachers in the sample are young and had completed their senior secondary studies in Queensland, the vast majority had a poor understanding of issues relating to TEPA. Students' tertiary entrance knowledge of issues which are the responsibility of TEPA were lower than issues relating to BSSSS or QTAC.

Table 5. Student agreement with statements about issues relating to TEPA.

	Average
I understand the purpose of the SEP	2.5
I understand the manner in which OPs and FPs are calculated	2.4
I understand the purpose and functions of TEPA	2.0
I have a good knowledge of the information provided by TEPA	1.9

Note: Ratings were made on a five-point scale, with higher ratings indicating stronger agreement with statements.

As would be expected given that pre-service teachers indicated that they had a limited knowledge of matters relating to TEPA, average ratings with regard to their confidence in discussing and explaining such issues were low. These respondents also appeared to lack confidence in relation to approaching TEPA for additional information, as shown in Table 6. Given that the majority of students were unaware of the TEPA information publications available, it is not surprising that they lacked the confidence to refer students to an appropriate resource.

Table 6. Student confidence in relation to TEPA matters.

	Average
Approaching TEPA for additional information	2.6
Discussing the calculation of OPs and FPs with students	2.1
Referring students to the appropriate TEPA information publications	1.9

Explaining the purpose and functions of TEPA to students	1.8
Discussing the purpose and functions of TEPA with colleagues	1.8

Note: Ratings were made on a five-point scale, with higher ratings indicating greater confidence.

Perception of the teacher's role

Those participating in the trial also responded to questions relating to the extent to which they felt issues regarding senior schooling and tertiary entrance were relevant to pre-service teachers. When asked whether, as a teacher, they needed to know about the roles of QTAC, BSSSS and TEPA most 'strongly agreed' (mean = 4.4). In response to a question asking if it was helpful to know more about the functions of QTAC, BSSSS and TEPA the majority again showed strong agreement as shown by the high average rating (mean = 4.5). Further ratings also indicated that pre-service teachers felt it was important to be able to understand and explain processes and procedures relating to senior schooling and tertiary entrance to students and others (mean = 4.6). Overall, this pattern of responses suggests that pre-service teachers recognise the value of information regarding senior schooling and tertiary entrance and are also able to see the direct relevance of this information in relation to their role as teachers.

Differences across age groups

Respondents were divided into three approximately equal groups based on their current age. The three groups were composed of students aged 18 through 21 years, 22 through 24, and those aged 25 through 49.

Across the range of questions concerning the tertiary entrance responsibilities and functions of BSSSS, QTAC and TEPA a number of differences emerged. Students in the younger age groups systematically gave higher ratings in response to all but two of these questions. In both these instances, the pre-service teachers had been asked to rate their confidence in requesting additional information from BSSSS and QTAC.

Discussion

It is evident from the results of the survey that current pre-service teachers have little knowledge of the policies and procedures of the organisations involved in the tertiary entrance system in Queensland. As would be expected, these intending teachers also lack the confidence to explain and discuss such matters. Students' age and previous participation in the existing system appeared to make some difference to their level of confidence and understanding, especially for those who have completed senior studies

relatively recently. However, the overall low levels of understanding and confidence strongly suggest it is not enough to assume that, because this is the case, younger pre-service teachers will be knowledgeable about the issues, processes and procedures related to the transition between secondary school and university.

While it is too early to tell if the Pre-service Teacher Training Package has enhanced intending teachers' understanding of, and confidence in, communicating with others about tertiary entrance, the early results and feedback are positive. Questionnaires from the second phase have not yet been returned by all universities, however, qualitative responses so far have been positive. It appears to be the case that students have found the materials relevant, interesting and easy to understand. Comments have concluded that the "presentation was interesting, comprehensive, straightforward and worthwhile." Similar recognition was given to the PowerPoint presentation — "concise, logical and easy to follow." Another student described the materials as a "one-stop-shop resource".

Feedback received from university representatives has also been extremely positive. Although some practical difficulties were encountered in the trial of the materials, course coordinators and lecturers found the package interesting, informative and useful. All universities plan to incorporate the Pre-service Teacher Training package in their course structures from 1999 or 2000. At least one university is designing subject units around the package so that it can be utilised more effectively.

The Board of Teacher Registration has described the materials as 'excellent'. BTR has also expressed its willingness to consider recognising use of the package by universities within the requirements of Professional Experiences for teacher registration.

Conclusion

Since 1991 TEPA has fulfilled three main functions: the issuing of the Tertiary Entrance Statement to all eligible Queensland Year 12 students, monitoring Queensland's tertiary entrance selection procedures and processes, and providing students and the community with information on tertiary entrance.

Policy articulated in TEPA's Strategic Plan requires continual monitoring of community perceptions and understanding of the OP system. TEPA's research, and discussion with stakeholder groups, including BSSSS and QTAC, led to the identification of gaps in community knowledge and found that myths about all aspects of the current system were widespread. Further investigation of possible causes resulted in increasing awareness of shortfalls in information provision to teachers at the school and tertiary level. The *Evaluation of stakeholder perceptions of TEPA information materials* recommended, among other things, the development of a pre-service teacher

training package to ensure that teachers entering the profession have a comprehensive and accurate understanding of tertiary entrance procedures and processes.

The support of the Queensland Board of Senior Secondary School Studies, the Queensland Tertiary Admissions Centre Ltd, the Queensland Board of Teacher Registration and the universities involved has enabled the development an integrated resource for use with pre-service teachers at Queensland universities which will change practice at the school and tertiary level and facilitate greater understanding of Queensland's tertiary entrance process.

Future Directions

Due to the demands of the final semester of teacher education courses, the second round of questionnaires have been returned later than anticipated. Despite the fact that fewer than expected responses were received for the second survey, it is expected that the questionnaires will still provide an indication of the effectiveness of the Pre-service Teacher Training Package. Results of the second questionnaire are currently being collated, with analysis planned for December 1998.

Modifications to the package suggested by universities after the trial were relatively minor, although each of the educational organisations involved with the development of the materials has planned some changes. The most significant of these include the development of a component dealing with vocational education and training in schools and alternative post-compulsory pathways.

In addition it is planned to develop an in-service resource for teachers based on the materials developed for the Pre-service Teacher Training Package. Schools throughout Queensland are currently involved in an evaluation of the suitability of the existing materials for use with practising teachers.

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