Innovation in Open and Distance Learning and Teacher Education:

The Case of Pre-Service Secondary Vocational Education and Training at an

Australian Regional University

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Abstract

Debate continues about the appropriateness of open and distance learning as a delivery mode for teacher education. Nevertheless, as with other manifestations of open and distance learning, there is a growing recognition that the potential flexibility afforded by new communication technologies can be aligned with new approaches to curriculum, pedagogy and assessment to provide educational opportunities to prospective and/or current teachers who would otherwise not be able to attain such opportunities.

Despite these distinctive advantages, the pressure on open and distance learning approaches to teacher education is undoubtedly greater than with face-to-face models, not least because the latter constitute the default mode of formal education. UNESCO's recent report *Teacher education guidelines: Using open and distance learning: Technology, curriculum, cost, evaluation* (Perraton, Creed & Robinson, 2002) provides a useful synthesis of the main elements of this pressure.

This paper takes up that challenge in relation to a program of pre-service secondary vocational education and training teacher education (itself often considered marginal to 'academic' or 'general' secondary teacher education) at Central Queensland University, an Australian regional university. The program is interrogated from the perspective of three of the UNESCO report's principal concerns: planning; technology; and teaching practice. Denning's (2004) recent distinction between innovation as a novel idea and as a transformation of practice is used to argue that the program is an educational innovation in both of Denning's applications of the term, with significant implications for understanding and valuing open and distance learning and teacher education in the early 21st century.

Introduction

In this paper, we adopt Perraton and Creed's (2000) useful definition of 'open and distance learning' as "an umbrella term covering distance education, open learning, and the use of [information and communication technologies] in education" (cited in Bradley, 2003, p. 2). Understood in that sense, open and distance learning has made tremendous strides in recent decades, particularly in relation to what many see as its central mission: bringing formal education to people who for a wide variety of reasons would be otherwise unable to access such education. While open and distance learning is associated popularly with higher and further education and training, it has also been deployed to teach primary and secondary school students, and it has a surprisingly long history in doing so (Jenkins, 2003, pp. 16-17).

Despite this success and longevity and its applicability to the school level as well as higher and further education, open and distance learning is not perceived as the automatic, and even necessarily as a legitimate, mode of preparing or upgrading teachers. Notwithstanding the increasing use of open and distance learning approaches to teacher education in developing and developed countries alike (Robinson & Latchem, 2002), questions remain for both managers and students about the desirability and even the possibility of an open and distance learning approach to pre-service teacher education.

Within pre-service teacher education, vocational education and training is likewise perceived in some quarters as 'other' to the more established 'academic' or 'general' subjects within secondary education. This perception reflects a deeper debate about the relative mixes of knowledge, processes, skills, and attitudes and values between academic and vocational subjects and about whether the latter have an epistemology generally regarded as the pre-requisite of an academic discipline.

In combination, both these binarised distinctions – between face-to-face and open and distance learning, and between academic and vocational subjects – would suggest that using open and distance learning to prepare pre-service secondary vocational education and training teachers would be doubly marginalised. In fact, we use this paper to argue the opposite viewpoint: that a specialised program for such teachers at Central Queensland University (CQU) has been effective precisely because the program has been implemented via open and distance learning, and moreover that it could not have been implemented in any other way.

The paper consists of three sections. First, the program is outlined in the context of both the university where it is offered and the state's teacher education legislation. Second, the program is interrogated in terms of three of the principal concerns of UNESCO's recent report *Teacher education guidelines: Using open and distance learning: Technology, curriculum, cost, evaluation* (Perraton, Creed & Robinson, 2002): planning; technology; and teaching practice (issues related to funding and assessment were too extensive to include in this paper). Third, the program is evaluated in relation to Denning's (2004) distinction between innovation as a novel idea and as a transformation of practice, as a means of suggesting some broader lessons for current and possible future engagements between open and distance learning and teacher education.

Central Queensland University's pre-service secondary vocational education and training program

Traditionally, CQU's teacher education programs were conducted solely in face-to-face mode with the purpose of preparing teachers for primary and secondary schools only. In 1999, a new pre-service teacher education program was developed. With evolutionary changes since that time, by 2004 it has become a unique program predicated upon the belief that educational provision in regional, rural and remote communities can be sustained from within those communities through teacher education (for details of the program, see also Harreveld, Danaher & Kenny, 2002, 2003). The program is designed to attract industry and/or trade qualified mature age people by offering them as much flexibility as possible to construct their learning around current part- or full-time jobs. This flexibility generates many versions of the students' 'learning and earning': learning full-time with part-time work, especially

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during university term breaks; learning part-time and working full-time; learning full-time with a partner agreeing to be the family's main breadwinner for the study period; and in some cases saving up enough money to live on the Australian higher and further education student allowance (Austudy) as a full-time student.

Enabling local people to participate in a teacher education program means that they are integrated into the educational community from the beginning of their studies and are thus more likely to be employed within that community upon graduation. Indeed, many of our students are offered jobs before they have finished their formal studies. In some cases, schools and colleges are successful in receiving permission to employ them as 'teachers under authorisation' in designated discipline areas (meaning that they have a reduced timetable and work closely under the supervision of a more experienced teacher until they finish their pre-service education and graduate as a teacher in their own right).

A second fundamental belief that underpins the development of the program is that, given the nature of the students' discipline knowledge/s and particular work experiences, they can become mobile, boundary-crossing professionals accredited to work across the sectoral divides of formal education. This means that the program is designed to foster educational sustainability within these communities by providing a teaching workforce that can move into and out of secondary schools, technical and further education (TAFE) colleges and/or registered training organisations operating at industry training sites.

Such cross-sectoral mobility is possible only if the pre-service teachers already have credibility within their own community as possessing knowledge, skills and life experiences that are needed by the employing education authorities. For this reason, we target only those people who have substantial work experience and who already have either a trade or vocational qualification (for the undergraduate pathway) or a degree in a vocational area (for the graduate entry pathway). If adults with work experiences and professional skills can live in their own community and study for a new career as teachers, then they as individuals benefit, their immediate families benefit (because they would not have to be uprooted to live in a far distant town during the study period) and ultimately the community as a whole benefits.

From these beliefs, planning for the program delivery is premised upon an open learning concept that utilises a range of information communication technologies (ICTs), distance education materials, residential workshops, tutorial study groups and fieldwork practicum sites (schools, colleges and/or industry training organisations). Central to the curriculum planning processes are the key employing requirements of the two main educational sectors for which the students are being prepared: the Queensland Board of Teacher Registration (BTR) for teachers in secondary schools; and the vocational education and training sector's particular industry and instructional requirements for teachers in TAFE colleges and/or registered training organisations. The study program is accredited with the BTR for graduates to be registered to teach in Queensland secondary schools, and through an innovative articulation arrangement with TAFE Queensland for workplace training and assessment qualifications embedded within the university courses, it is also recognised as a Beginning Teacher program with that organisation.

CQU was established already as a provider of distance education and in the early years it was this institutional capacity to support students learning at a distance that made the program possible. Over time, access to technologies changed as the Internet become more readily available in country areas throughout Queensland and other Australian states. However, the basic premise that frames all planning and delivery in the program is the facility for students to be able to access their learning from within their own communities and/or if they were travelling as a result of their current work requirements. The following figure (*Figure 1: A multi-modal, flexible delivery plan for teacher education*) depicts the blending of the range of communication modalities that facilitate students' learning in the program.

INSERT FIGURE 1

Central to this learning is the fieldwork, the teaching practice on-site in students' local schools and/or colleges. Through this process, the courses being studied are contextualised. These courses are chosen from the distance education offerings available to teachers who are upgrading their own qualifications (from three-year Diplomas to four-year Bachelor degrees). Thus the program is cost effective in the sense that it uses existing courses supplemented with newly written courses for the uniqueness of the cross-sectoral learning plus a distributed infrastructure (as per Figure 1), with a blend of full- and part-time staff as tutors (who are also teachers in schools and/or colleges).

UNESCO's guidelines and Central Queensland University's program

The UNESCO guidelines (Perraton, Creed & Robinson, 2002) have identified a number of challenges for teacher education with which CQU's secondary, vocational education and training program is grappling, and in some instances we are discovering opportunities emerging from these challenges. The following list depicts some of the key challenges that we also experienced. There was the need to:

- find ways of using existing resources differently;

- expand access to learning opportunities at affordable cost;

- provide alternative pathways to initial teacher training;

- draw on new constituencies of the population to work as teachers;

- use technologies appropriately to enrich teaching and support practice;

- stimulate and support teachers' active learning; and

- reconceptualise the traditional organisation of initial teacher education and continuing professional development. (Perraton, Creed & Robinson, 2002, pp. 7-8)

If learning in a community becomes the centre of the curriculum and delivery (including assessment) processes, then it follows that traditional binaries and boundaries in teacher education are challenged. First there is the binary of pre-service, initial teacher education on the one hand and ongoing professional development for existing teachers on the other. These boundaries are artificially maintained by educational institutions such as universities which distinguish between undergraduate and postgraduate studies. Through necessity, we found that pre-service and in-service teacher education can occur simultaneously with benefits for both groups of learners.

One example that illustrates this point is the discipline studies component of the degree program. Feedback from students and supervising teachers in schools identified a need for contextualised discipline courses in food technology and textiles technology (for home economics) plus woodwork, metalwork and graphics technologies for junior secondary school (or middle school) years. Through a series of joint venture arrangements with local secondary schools, courses are written and delivered in an intensive mode on-site at two schools during the holiday period when kitchens, sewing machines and workshops are available. Invitations are sent out to all secondary schools throughout the state because the courses are also offered as professional development for teachers who wish to multi-skill into new teaching areas. Participants travel to Rockhampton for the five day, face-to-face, theory and production component then, if they wish to be formally assessed, they complete a project in their home community and submit it for marking as part of a university course. If they do not wish to participate in a formal assessment, then they receive a 'statement of attendance' for their teaching profile record. Thus in-service and pre-service teachers are learning together, and are taught and assessed by their school-based colleagues who function in the dual roles of teachers and university lecturers.

A second binary that is challenged through this program is the distinction between vocational knowledge and academic knowledge, which we argue is not only false but futile because both types of knowledge are needed for states and nations wishing to build capacity for civic life in peace and security for all citizens. To be qualified to teach in Queensland schools, teachers have to complete thirty-two courses in their teacher education degree. Crucially for secondary schools and TAFE colleges, within this degree it is necessary that students have thorough discipline knowledge as well as

pedagogical knowledge. Therefore the program is constructed with a flexible entry process which meant that students could use *either* trade and/or industry specific qualifications at a minimum of a Certificate level towards their discipline studies (eight courses) *or* vocational knowledge at a Bachelor level (e.g. an engineering degree would be equivalent to sixteen discipline studies courses). To make this accreditation process work, the full extent of the Australian Qualifications Framework (Australian Qualifications Framework Advisory Board, 2002) is utilised within the institutional rules and regulations of the university.

These two examples serve to illustrate that alternative pathways to pre-service teacher training can draw on previously untapped constituencies of local communities to work as teachers. Access to learning opportunities is expanded if the choices of technologies used to support learning are kept to those which individual students can afford and which have reliable infrastructures and technical support mechanisms. A teacher education program conceptualised around open learning can incorporate a range of authentic learning tasks which engage students as active learners while at the same time establishing and maintaining standards of scholarship commensurate with university level studies.

Innovation in open and distance learning and teacher education

Denning (2004) clarifies misconceptions about innovation and argues that "an innovation is a transformation of practice in a community" which is not necessarily the same as "the invention of a new idea or object" (p. 1). Furthermore, he contends that "a transformation of practice in a community won't happen unless the new practice generates more value to the members than the old", and that the "value may

not be economic; it may be pride, reputation, health, safety, freedom" (Denning, 2004, p. 2). In the context of open learning and teacher education, this secondary vocational education and training program fits Denning's definition of an innovation because it generates more value to these particular students than other teacher education programs. For those students who complete their studies and secure teaching positions, the value is "economic" as well as "reputation", "pride" and in some cases "health" (where previous work may have been injurious to health and safety).

The program incorporates a novel idea of combining technologies to support teaching and learning because at no time has there been a sole reliance on one particular combination, e.g. teletutorials with print-based study guides and resource materials (readings, audio-tapes, CDs and the like). Rather, as access to different technologies has developed over time, so too has the variety of technological combinations increased (within funding guidelines). The novel idea of students mixing and matching the technologies available at any given time emerged from the transformation of teaching and learning practices within both students' local communities and the university.

Program planning processes are also innovative in terms of Denning's conceptualisation. Together with local participating schools and colleges, the student community sees the value in this program. Via an Industry Reference Group, representatives from these constituent communities are involved in an ongoing action learning process (Kember, 2002), by which the program and its courses are refreshed through an iterative cycle of critical reflection, planning and enacting.

Denning (2004) perceived there to be both personal practices and organisational processes necessary to inculcate a culture of innovation. Participants' personal practices (students, teaching colleagues and faculty managers)) are changed through the open learning conceptualisation of this program. Organisational processes within the university are not currently as supportive of this conceptual basis for teacher education programs as they could be. However, it is hoped that in the near future the management's values, rewards, encouragement of risk-taking and new ideas will reflect the support received from the accrediting authorities and the school and college organisations whose representatives are our valued partners in program delivery.

Conclusion

It is a privilege to work with adults who want to learn and who want to teach young people how to learn. The pre-service secondary vocational education and training program provided via Central Queensland University has afforded us this privilege. Through our analysis of the program's planning, technology and teaching practice framework, we have shown that it is possible to educate teachers for the profession using this conceptual basis and the program delivery mode.

The pedagogical implications of this innovation in open learning and distance learning and teacher education are important and far-reaching. Yet from the literature reviewed to date, they remain under-theorised and minimally researched. Further research in this area, especially comparative cross-cultural research, would be of

assistance to individuals and organisations striving towards an educational sustainability for all communities.

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Author notes

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Figure 1: A multi-modal, flexible delivery plan for teacher education

Telephone group tutorials for all courses

School-based discipline specific residentials

Residential Program Orientation (3.5days)

For some courses: Video-conferencing

Teaching practice on-site (schools, colleges)

From 2003-4: Internet-based learning

Fax & Telephone 1:1 as needed

Study Guides & Resource Materials

Tutorial Study Groups

Emails 1:1 & Email discussion groups