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Learning the subject matter in secondary teacher education  
courses: Teacher education practice and experiential learning.

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#### SUMMARY

This presentation focuses on the influence of initial teacher education programs on changing practice in schools. I argue that through the application of experiential learning theory to the subject-matter subjects the future practice of teachers can be strongly affected. Through the action research of a subject preparing second year secondary pre-service teachers in their history subject-matter, I am investigating the learning outcomes that could result from an adaptation of the experiential learning cycle to the design of the subject. In particular the focus is to identify to what extent it will influence teachers' practice. The research that has informed this design is drawn from experiential learning theory and critical pedagogy. As the theme of this AARE Conference is "Educational Research: Innovation and Practice" the presentation will focus on an argument for experiential learning theory informing teacher education practice in the university setting, rather than only in the school setting and the practicum.

#### KEYWORDS

History education, experiential learning, action research.

#### INTRODUCTION

In recent years, directions in initial secondary teacher education in Australia have been moving towards a model which consists of a first degree in a discipline area. This suggests that teacher education programmes will consist only of subjects related to pedagogy not subject matter. I challenge this current trend in secondary teacher education. In the light of these current moves in Australian universities, the area of subject-matter preparation must be re-thought for the design of teacher education programs. The subjects completed during the first

degree will have a strong influence on the understandings of subject-matter that pre-service teachers bring to education. Initial teacher education programs must not neglect subject-matter preparation. Research indicates that, particularly in secondary schools, the subjects influence the professional identity and practice of teachers (Grossman,1989; Marks,1990; Tamir,1988). Shulman's research (1986), above all, highlights the significance of different types of undergraduate subject-matter learning experiences to the different organisations of understandings for subsequent teaching. The focus for my study therefore has become the learning experiences of student teachers in their subject-matter, with the emphasis being that while focussing on the subject-matter, student teachers should

experience their learning in a critically reflective way. From this, a design approach that emphasises learning the subject matter as experiencing, reflecting, and inquiring was applied in order to investigate the extent it might influence future classroom practice.

#### COMMON FEATURES OF TEACHER EDUCATION PROGRAMS

Cheryl Sim, 14 November, 1994.

Reflection as a practice for teachers is emphasised in teacher education research as important to enable student-teachers to consider the implications of theory to practice. Moore (1991:33) wrote that "confidence in beginning teachers springs from a sound knowledge of subject-matter and of pedagogy". The issues of knowing what to teach and knowing how to teach often lead to programs of initial teacher education which focus on the "technical" aspects of teaching. In this way there develops within the program a tension related to the role for teacher education. This tension is best expressed as the need to prepare teachers for existing classrooms ("maintenance" role) while at the same time providing student-teachers with the professional confidence and knowledge that will enable them to change those classrooms ("transformation" role). Over time, teacher education courses have been redeveloped in efforts to address this tension.

The intellectual preparation of teachers rather than the technical, functional preparation has become the focus of researchers such as Giroux (1988), Shulman (1986), and Kirk (1986). The approach for initial teacher education that would achieve the intellectual preparation could be broadly described as having an inquiry orientation. In 1994, it should be expected that student-teachers are experiencing tertiary learning which enables them to become reflective practitioners.

However, beyond the practicum, specific approaches to designing tertiary subjects which would enable the development of student-teachers towards becoming reflective practitioners are not readily available. The tensions of balancing subject-matter knowledge with pedagogical knowledge, and theory with practice are still not well addressed by the research. The struggle for a balance involves the three broad knowledge areas necessary for effective teaching : educational/pedagogical knowledge; teaching practice knowledge; and subject-matter knowledge. The research tends to focus on the teaching practice as the setting where the theory/practice tension can be best addressed through a reflective inquiry approach to the practicum. This focus assumes much about the practicum, which currently it does not fulfil. As a result student-teachers tend to become convinced that there is little that they can do to influence schooling.

My argument is to focus on the subject-matter preparation in teacher education: prepare student-teachers using the subject-matter that they will teach, in subjects designed through more experientially based and critical pedagogical principles. This would provide opportunities for these tertiary based subjects to address the transformative role of teacher education. An underlying principle for my study is the essential contribution that subject-matter knowledge makes to the development of a teacher who identifies his/her role as one which involves going beyond "fitting in" to existing practice.

Kennedy emphasised that "the essence of good teaching is to be able to think pedagogically about the subject matter" (1991:3). To provide teacher educators with a means to facilitate this thinking, I would first suggest that it could best be achieved through a subject incorporating subject-matter. Personal understanding of the content has strong implications for that person's teaching of that subject-matter (Shulman,1986; Wineburg & Wilson,1988). The notion of the link between personal understanding and giving meaning to the subject - matter in terms of teaching is most often viewed as belonging to other courses that are pedagogically focussed. However if the purpose of education is to develop understanding within a particular subject area, then the means by which this understanding can best be achieved by the student must be addressed. Often the design of discipline based subjects in tertiary institutions does not recognise the significance of personal understanding. Importantly this has implications if proposals to have all future teachers complete a first degree before completing their teaching qualifications do become reality.

The lecture and seminar weekly format is not an uncommon design for the teaching of future teachers in university subjects. Transmission to classrooms of the significant features of social education subjects (specifically critical thinking and active learning), tends not to occur where teachers have learnt their subject-matter in the passive tertiary environment (Sirotnik,1983; Stevenson,1990). Therefore in the design of a tertiary history subject, I incorporated student reflection in the context of critical theory, through the key concepts of experiential learning theory. The design that has emerged is being analysed through the action research of the subject. Part of the purpose of the action research study is to identify the extent to which Tamir's conclusion (1988:102) can be achieved:

While teaching, most teachers draw heavily on their experiences as students. If we can provide learning experiences which emphasise the variety of perspectives of a particular subject matter area there is a higher probability that these students will apply these various perspectives later on in their teaching.

In the design suggested in my presentation, reflection is not only about the content but also looks to the extent to which understanding of that content is reached for future teachers. This is important because as qualified teachers, their role will be to assist understandings to be developed by students. Therefore, it is important for student-teachers to reflect on their own understandings while establishing their content knowledge. Ross & Hannay's research (1986:9) indicates that

Although reflective inquiry has influenced social studies theory, it remains questionable whether this influence has been translated into educational practice .

The subject-matter subject can provide the setting for the consideration of the implications of that content to the future classroom practice of the student teacher. In fact my research tends to support the notion that teacher education programs would be more effective if there was the provision for analysis of learning and teaching theories through the subject-matter of the school curriculum . However, at this point in the research, I am

gathering evidence to identify the extent that such an approach to the design of a history subject-matter subject can develop the student teacher's understanding of what it would mean to teach that content.

DESIGN FEATURES OF THE SUBJECT-MATTER SUBJECT AS IMPLEMENTED.

To investigate the issues raised I have focussed on secondary pre-service teachers in their second year of a four year Bachelor of Education. In order to teach the subjects encompassed under the teaching area of Social Education, these students must complete a subject focusing on modern world history. The reality of the four year education degree is that there is only one semester with a subject devoted to teaching the content of the history of the modern. In no way is it possible to suggest such a subject could succeed in providing this for students. However if the design of the subject was one focused not only on content but on the issues of learning such content, the overall learning outcomes could be much more satisfying and transferable for future teachers of history. Thus the approach to the design of this subject centred on enabling student-teachers to become self-consciously critical of the issues related to teaching history, while at the same time experiencing the nature and some of the content of the subject. To develop such an approach I have looked to the theories of critical pedagogy, the inquiring teacher movement, and experiential learning.

The initial development of the design was drawn from the experiential learning cycle as proposed by David Kolb and Ronald Fry (1975). Diagram One represents the application of the parts of an experiential learning cycle to the tertiary classroom. What follows is a discussion of each of the concepts within the experiential cycle as they relate to the teaching of subject-matter in the tertiary setting.

### Concrete Experience

In one semester, second year Bachelor of Education students study through an historical investigation of contemporary issues in Europe, the African and American continents, and the Middle East. The subject is organised around three hours per week divided into one hour and two hour blocks. Traditionally, university teaching tends to automatically look to using these blocks as lecture, followed by seminars or tutorials presented by students. These are most often fairly passive learning environments for the participants. Such experiences, research findings indicate, can actually reinforce in student-teachers that this style of teaching is appropriate to use in their own teaching positions. Clearly such teaching limits student-centred learning and is, unfortunately, most commonly associated with the teaching of history as a secondary school subject. So the design implemented for this study, was organised around discussion and activities which would enable students to become actively involved with the content and the processes for teaching secondary history. In the preliminary collection of evidence, some comments from student-teachers illustrate the types of reactions to this particular experience of learning history:

## DIAGRAM TWO: FEATURES OF THE EXPERIENTIAL DESIGN

### CONCRETE EXPERIENCE

The tertiary classroom: one hour devoted to information giving to cover a particular theme. The remaining two hours were focussing on collaborative group work.

ACTIVE  
EXPERIMENTATION  
Practicum to  
apply and adapt  
experiences.

REFLECTIVE  
OBSERVATION  
Consideration of social  
and political influences  
of what they are learning.

### ABSTRACT CONCEPTUALISATION

Increasing the awareness of their experience in terms of the teaching procedures they might adopt with secondary students.

### Reflective Observation

To enable the students to make sense of the various types of experiences I was to place them in, it was important that they use reflection during their involvement in the subject. To do this I encouraged the students to use their "notes" more as a Journal. I emphasised the importance of not only writing down factual information but also notes on their reactions to the way they were involved in the learning during that time. Although this idea of critical reflection is not new to education, student teachers often apply it only in their practicum or in specific pedagogically centred subjects. Seldom is it used in terms of their personal experiences of learning subject matter.

Students were also encouraged to consider the implications of the procedures they experienced in terms of their own notions of what history is, and how they might teach it. On expressing their reactions many commented on how difficult it was to decide what to write down. They were, from their school experiences of history in many cases, more accustomed to being given directions on what to write and when. What follows is a selection of comments that illustrate the types of reflective observations students made about the subject-matter and its implication socially and politically.

#### Abstract Conceptualisation

The question of "truth" and the role of the history teacher became something for them to consider seriously when discussing issues related to political or religious ideologies, which are central to studies in modern world history. The reflection on issues of which they as future teachers of history should be aware created

opportunities to discuss the importance of the teacher as a critical practitioner who should examine his/her practice.

I emphasised to the student-teachers throughout the subject, that I would model practices which they would be encouraged to critically reflect and comment on. As the implementation of the subject was part of an action research study, for my purposes it was important that I be self critical. To assist this, I maintained a detailed journal from the time of submitting the subject design for approval by the university, and throughout the second year of the study. The students were encouraged to approach note making as including critical reflection. I presented these factors as integral to them as learners of content as well as learners of the profession that is teaching. They were encouraged to approach their note-making as providing the medium to comment on the content and on the procedures they experienced while learning that content. Thus there were some comments that relate to an awareness of their experience in terms of teaching secondary students:

#### Active Experimentation

It is in this area that the practicum provides opportunities in the experiential learning cycle of learning to teach history. The practicum is the site where students should have the opportunity to practise, observe, and reflect on teaching. For secondary pre-service teachers, their school experience is focussed on the subjects they teach. Quite often it is the students in those subjects and their reaction to that subject which is not

reflected on. Through the application of experiential learning to the subject preparation of these student- teachers, they should be better able to reflect on and analyse the relationship between the nature of the discipline, the content and procedural knowledge of the teacher, and the learning experiences of the students. A smaller experiential learning cycle associated with the practicum becomes an integral part of the larger experiential learning cycle of the student teacher's subject-matter preparation at the university.

## CONCLUSIONS

Importantly with the discussion occurring not only in Australia, but throughout the world, regarding the future of teacher education programs, the issue of discipline knowledge and its relationship to effective teaching is again a current area of discussion and debate.

The subject-matter setting of the teacher education degree represents an area of secondary teacher education research and practice that has been part of the research into teacher education since the late 1980's. The importance for pre-service secondary teachers to acquire competence and confidence in their teaching subjects has not lessened. The developments in Australian school curriculum continue to have important implications for the way in which we prepare teachers in their subject matter.

Teacher education courses can range from the preparation of future teachers to "fit in" to the existing culture and curriculum of schools to encouraging reflection on existing practices that would enable them to "transform" learning and teaching in schools. The school experiences of future secondary

teachers would indicate that many classrooms have yet to move from traditional, passive learning environments. This places an important responsibility on the teacher education programs to design subjects within their programs in such a way as to influence change in classrooms. The subject-matter setting in these programs continues to need closer examination in order to identify the essential elements that it could contribute.

Finally, there is the growing trend that suggests that teachers gain a first degree in a discipline area before completing their "teacher preparation". It would be dangerous to assume that the subject-matter knowledge of future teachers would thus be "covered" and that the two year teaching program that would follow need not include subjects that focus on subject-matter. Certainly such a direction would mean a different approach to the

design of those subject-matter subjects. To this purpose, the discussion of this paper provides one approach to the design of a subject which may go beyond just pedagogical content knowledge and incorporate content, pedagogy and experience. The extent to which such an approach will have a strong enough influence on these future teachers to transform classroom practice is yet to be determined from the evidence being gathered. At this early stage it would indicate that the early development in student teachers of a positive and professional approach to the subject-matter could occur through the application of experiential learning principles to subjects in the university setting.

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