Curriculum integration as process and product: Authentic learning in teacher education

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Middle schooling poses new challenges for discipline based secondary teachers. The new order of teaching requires student teachers to teach outside their comfort zone of their own subject. Of necessity they need to plan collaboratively and also mentor their peers in their respective areas of expertise. The process simultaneously unsettles established identities and provides exciting opportunities for new learning and skill development.

A parallel series of challenges confronts teacher educators in their endeavours to practices what they preach and to make this practice transparent to university students. Some of the strategies employed by lecturers and required of the students include collaborative planning, using an outcomes approach which caters for the needs of students with very different backgrounds, authentic assessment and an iterative approach to curriculum development.

This paper looks at the ways the authors have seized these parallel challenges and includes reflections from student teachers and academic staff involved in the program.

Introduction

Teacher educators working in traditional undergraduate programs face a responsibility and a dilemma. From within old order frameworks they need to prepare student teachers to thrive on new order thinking, even to develop as potential leaders in these emerging environments where many teachers struggle just to survive. They need to prepare the student teachers to embrace what Peter Ellyard terms the twenty-first century learning culture, and capitalise on opportunities this provides (Ellyard, 1998).

The authors of this paper take this responsibility seriously as we plan for and teach a compulsory final year unit, Organising and evaluating learning. The unit (EDS4110) has now been taught on three successive years to all students in the secondary Bachelor of Education programs. Whilst evaluating the unit ourselves this year, we focussed on the extent to which our teaching modelled the learning we hoped for from our students and ways in which we could further this intent. In this paper we share our reflections of past practice and future intent.

First, we outline the challenges experienced in teaching the unit. Then we provide the reader with rudimentary information about the structure of the unit to provide contextual information for the discussion which follows. In that discussion, we draw on our own perceptions and the comments of our students to elaborate on the parallel issues for (student) teachers and teacher educators. In particular, we discuss the challenges of catering for diversity, a pot pouri of issues associated with collaborative work practices and the duality of intended and experienced assessment. The final section of the paper includes ruminations on the issue of making practice transparent, outlining some lessons learned and issues which are the focus of current decision making and planning.

The challenges

Organising and evaluating learning occupies a privileged but challenging position as the only course work unit studied by all students graduating with a secondary Bachelor of Education
degree. It is taught in a compacted (seven week) semester in the fourth year of the B Ed prior to students’ Assistant Teacher Program (ATP – the final long term professional practice – a term in a secondary school) and has the dis/advantage of being the designated ‘carrier’ unit for the ATP.

The cohort of around 120 students have diverse curriculum and educational backgrounds. The students study 12 different major teaching areas ranging across all of the learning areas currently studied in WA schools. They emanate from programs with different structures where the curriculum studies and education components span from two to four years. The knowledge, skills and needs of these students are very different. To give but one example of relevance, approximately half the students have a good preparatory knowledge of ‘duty of care’ and the legal responsibilities of beginning teachers, whilst the remainder of the cohort have, at best, only a passing knowledge of the issue. Yet all will need at least a rudimentary understanding of these issues on their ATP.

Assessment holds a potential key to the challenge of catering for diversity, albeit a poorly fitting one. We know our students adopt a functional approach to their studies. Somehow we have to arrange the assessment in such a way that the students need to learn what we want them to know. Compromise seems inevitable, but a mixed strategy of portfolio work, assignment and examination has shown potential here.

Because the unit focusses on student evaluation, almost automatically our own ‘preaching’ is positioned along the pedagogy of our teaching and judged accordingly by the students. There is a major dilemma here. All Western Australian schools are required to implement the Curriculum Framework, which is founded on an outcomes approach to learning and assessment (Curriculum Council of Western Australia, 1998:14-39). The expectation is that we will prepare students for this new order. In contrast, the university records a mark and grade for each unit studied, and advises that the distribution of grades should approximate a normal curve: a common practice in universities, but one which is increasingly coming under scrutiny (see for example Sadler, 2000).

The teaching team (the authors) came together three weeks before the unit ran for the first time. A fortuitous combination of complementary professional knowledge and a shared desire to act as ‘curriculum makers’ not ‘curriculum takers’ enabled the team to become both the ‘place’ and the ‘space’ for devising locally appropriate endeavours (MacPherson, Aspland, Brooker, & Elliott, 1999). Building on three cycles of collaborative planning, monitoring and evaluation, we are now moving into a phase of deliberative action research with the dual intent of practicing what we preach and of making that practice transparent to students.

The unit presents new concepts as well as unfamiliar processes. The initial intent of the unit is to focus the learning program on ‘new order’ learner centred curricula, assessment and pedagogy, rather than ‘old order’ content centred practice. Middle schooling emerged as a strategic focus for Organising and Evaluating Learning. However the focus on curriculum integration took the teaching team into the ‘penumbra’ of the contested boundary between Education Studies and specialised curriculum studies (Harvey, Leggett, Newhouse-Maiden, & Lichtenberg, Forthcoming). Students and lecturers experience parallel challenges as they seek to negotiate new territory.

**Organising and evaluating learning**

The major assignment for the students of EDS4110 is centred on a curriculum integration challenge. In 2000, students were required to work in groups of two or three on a simulated
curriculum integration project for a year 8 class. To prompt lateral thinking and based on our analysis of more and less successful projects the previous year, we specified that the integration must accommodate one class based area (English, Mathematics, Science or Society and Environment) and one performance or product based area (the Arts, Health & Physical Education, Technology & Enterprise). A range of approaches to integration were suggested through readings and locally made videos (Kysilka, 1998) (Harvey, 2000). Student groups were expected to plan a teaching program as the basis for the main focus of the assignment, which was to plan the evaluation of the students’ learning using a portfolio approach.

Students are also required to complete one artefact per week, and an end of unit examination. There is a direct link between the artefacts and the examination questions and students have to attach the relevant artefacts to their scripts. Both are then marked. This strategy was introduced in 1999, following the lead of our colleague, Richard Fuller, and is evolving into a dual purpose strategy. As well as identifying essential components of learning for the students, some of the more reflective tasks encourage students to be self conscious learners. These provide insights for lectures into the experiences and reactions of the students, data which is invaluable when revising the unit. We plan to review the weekly tasks with this agenda in mind.

**Organising learning to cater for diversity**

The major challenge in teaching the unit is undoubtedly that of catering for the diversity of students’ curriculum and educational knowledge in an equitable and engaging manner. Comments at team meetings included the following:

*It looks as if (curriculum area) students have no knowledge of the Curriculum Framework. Can you keep an eye out to see if I am correct?*

*(Curriculum area) students have acknowledged paucity about adolescent development and assessment methods, but are strong in the area of the portfolio process.*

*(Curriculum area) are strong in the area of duty of care and legal issues. They don’t see why they need to cover this again.*

In the first set of unit evaluations, students confirmed our concerns that diversity of background was indeed an issue. They left us in no doubt that the record card should be scored – at best – as ‘needing further attention’ with comments such as the following:

*The unit was designed for learning areas other than [ours]. We would benefit from being in our own learning area and learning relevant information. We had to work twice as hard to adapt the information our own learning area as other students …*

*Much of the content has been covered in the major learning areas to an appropriate extent. I would rather have been involved in another more relevant and useful unit.*

Other students were more positive:

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1 In 2000 there were no LOTE students in the cohort.
Relevant, useful, up to date. Covers areas not touched on before, eg how you apply for jobs, education and the law.

**Curriculum integration**

The design of the assignment as a group project with a curriculum integration focus was one of the strategies adopted to tackle this issue of diversity. We hoped that it would persuade students to capitalise on diversity as a resource, rather than framing it as a problem. For the integration task acknowledges that valuable peer teaching will occur at point of need. Students are expected to share their knowledge and use their skills, strengths and experience to the advantage of their group. ²

This was acknowledged by some students in their artefacts. For example:

Integration across learning areas takes considerable time and effort from all members of the teaching team. If the team is dedicated to making the program work, there is a strong requirement to set goals and ensure that the planning of activities and assessment strategies are suitably addressed. The reward for putting in the extra effort can be seen through the performance of the students, maybe not straight away but in the months and years to come.

One student identified that the strength of her own professional contribution to the group project came from her experience working in a teaching area which depends on integrating outcomes from different learning areas:

*Home Economics is a subject area that has no distinct learning area of its own. Instead, content taught in Home Economics makes use of outcomes from a number of learning areas including Technology & Enterprise, Society & Environment, and Health & Physical Education. In fact it is possible that a Home Economics lesson might employ outcomes from different learning areas in the same lesson!… I believe I would be an asset to a curriculum planning teach in a middle school teaching / learning environment.*

There were comments, too, in the formal unit evaluations:

*I got a lot out of the assignment as it was very practical for my major learning area.*

*[The] assignment was an exceptional idea. It will be very valuable for the coming ATP.*

Not all were as positive, as the earlier extracts indicate.

It is our shared perception that catering for diversity is also one of the major challenges which secondary school teachers will have to address in an outcomes based approach - one which is frequently ignored in content driven curricula. So as well as meeting the challenge ourselves, we need to prepare our students for it.

２Such an approach is not limited to curriculum integration projects. It happens to epitomise the collaborative practice of the teaching team. However this would not be evident to students, and perhaps it does not need to be. Suffice to know, ourselves, that our advice to students is practicable.
Negotiating the curriculum

Associated with the challenge of catering for diversity is the issue of student engagement with the topic. Initially, resistance came from both ends of the spectrum: those who felt they did not have the relevant background for the tasks set and those who thought they had covered the work before and so did not need to attend the tutorials. Whilst the strategy outlined above was one response, there are others which need to be considered.

An outcomes based approach opens the door for the negotiated curriculum. If the outcomes for the unit were appropriately framed and the learning opportunities carefully articulated, it might be possible for students to self assess, set goals and choose their learning program accordingly. There are ‘known unknowns’ to be negotiated here: how students would respond, how willingly they would take responsibility for their own learning; the feasibility of managing the process within a seven week unit; how to assess equitably without disadvantaging the students who set their sights on new learning and difficult targets... It is easy to find excuses for not developing this line of thinking. But it does demand further consideration.

Collaborative projects

The assignment requires students to work in groups or teams – simulating the reality of curriculum integration in middle schooling, and indeed curriculum development in may other contexts, too. Whilst working in teams, per se, was not new to students, working with students from different learning areas extended their previous experience. Many commented on the challenges this brought, identifying communication as an issue.

*I found it harder to relate to people from different learning areas because [there is] less common ground in terms of content teaching and teaching approaches.*

*I think you need to be open to challenges presented by communicating knowledge and experience. I think I could learn to be a little more tolerant sometimes.*

*My weakness was definitely in my comprehension of jargon in the curriculum framework... this limited my input.*

*Limited knowledge of other learning areas, this tends to lead to narrow minded ideas of other learning areas. Stereotypical.*

Students were also able to identify conditions for more and less successful collaboration, and skills they felt they needed to develop:

*Another area that all people could use some improvement in is public relations. It is my experience that most meetings between ‘real experts’ seldom run completely amicably. There is often a ‘butting of heads’. This form of interaction is not conducive to a solid and workable outcome. I would like to learn how to run a meeting where all members felt their contributions were valued and where the end result was a curriculum package reflecting all learning areas equally. I feel that a meeting like this would empower the teachers involved and subsequently the students would benefit as well.*

*One of the areas that I wish to improve on is my tendency to become stressed if a situation isn’t working well. At times individuals in the group had different stances on the level of work they intended to put into the assignment. I found this*
difficult to accept and became somewhat stressed as I felt the burden of the assignment might fall on my shoulders. This could have caused tension in the group but surprisingly it didn’t. In future I need to be aware and accept that others have different priorities.

Part One of the unit assignment was a learning experience which required effective communication skills in order to integrate across the learning areas of English, Science and HPE. In this time I have gained and developed a number of assets which would make my professional contribution to the curriculum planning process highly valued. Integration requires people that are able to build working relationships with each other. It will not work with individuals. As teachers, this is a skill that we must have or we are not suitable for the job or teaching in general.

Some also commented on the outcome

Students were required to make and market a soap product and use their knowledge of science, maths and economics to do so. This type of curriculum provided the students with meaningful and purposeful processing and metacognitive skills of different disciplines. Curriculum integration, as it was used in the school, prepared students for real world situations.

Education that is organised in such a way as to bring together different aspects of the curriculum also requires [you to] view teaching and learning in a holistic fashion. In order to reflect the real world, my own teaching must adopt a framework that addresses the various forms of available curriculum integration.

Evaluating learning

As noted earlier, Organising and evaluating learning teaches about assessment. So it is here that the lecturers are most vulnerable to criticism if they do not ‘practice what they preach’. This was picked up by students in the first round of unit evaluations:

No use of authentic assessment in an exam.

Developmental assessment then an exam.

Assessment methods used in the unit should practise what you preach.

Considerable discussion ensued within the team about the ongoing commitment to an examination. Here we had to acknowledge that our views, as lecturers, would inevitably differ from those of our students. Pragmatic considerations prevailed and two linked arguments in favour of keeping the examination proved decisive. Firstly, we had sufficient local ‘intelligence’ indicating that a small but significant number of students would find ways to apportion the workload and depend on others’ work rather than covering the unit requirements. Secondly, we accepted that the university had an accountability to the profession for ensuring that students had at least a rudimentary understanding of some essential knowledge, and we felt this needed to be tested.

The introduction of weekly artefacts which were then linked to examination questions provided students with additional opportunities to record and evaluate their learning. It was also considered to move the examination one step closer to authentic assessment. But this did not address the issue of ‘developmental assessment then an exam’ – particularly pertinent
since one of the topics and texts (Forster & Masters, 1996) for the unit is developmental assessment.

**Assessing outcomes: acknowledging achievement**

In their assignment, students were expected to identify the intended outcomes for the learning program and ensure that there was a high level of consistency between the intended outcomes, the learning experiences and the assessment requirements. They were expected to include strategies for recording outcomes and acknowledging achievement. Assessment rubrics were covered as part of the unit and had to be designed as part of the assignment.

When marking the assignment we applied these expectations to ourselves. A rubric was designed and used to guide marking and feedback. One team member even recorded the information on spreadsheet to analyse comments in each area and provide each group with an individual analysis of the comments as well as population data to use as the basis for a developmental continuum for the assignment. It proved a time consuming experiment, the value of which was summarily dismissed by the students. The typical response to detailed information about what they had achieved was:

> Where did we lose the marks?

Entrenched behaviours are hard to change! The typical student in our current cohort came straight to university from school. They have experienced 8 or 9 years of a secondary and tertiary education where assessment is continuous, marks dominated and based on 30 – 40 hour modules or units of study which are relatively isolated and insular. The only significant exception is that of the tertiary entrance examination, where a full year’s study is examined. EDS4110 unit has deliberately moved in a different direction, stressing connection, achievement, integration. As one student commented

> Everything I have been taught in education so far seems to have been blown out of the water by this unit.

How important is the reflexive impact of assessment; how naïve to expect a more positive response to achievement driven information!

**Making practice transparent**

In 2001 students were posed the following question in their first workshop:

> What do lecturers of EDS4110 value?

The purposes of asking this question were to get the students to critically engage with the unit outline, the assessment tasks, and start to understand the maxim ‘Assess what is important, because what you assess becomes important’ so that they could apply it to their own teaching. It was also an opportunity to open the conversation about the logic underpinning the choice of content – to start to make our practice transparent.

**Did we succeed in making our practice transparent to students? We’ll yes… and no… and perhaps…!**

Yes, our opening question provided an opportunity to talk about what ‘we’, the team, valued. But no, there were not many natural opportunities to explore the team deliberation and collaborative practice. Perhaps we are just typically reticent about talking up our own
commitment to their learning. *Or perhaps* it is not important that the students are aware of this, just that we are in a strong position to facilitate collaborative learning and planning.

*Yes*, students did acknowledge the value of the curriculum integration assignment after the event. *But no*, a number of students are not aware that all students (irrespective of their curriculum majors and minors) will need to be teachers and learners in the unit. *Perhaps* we need to assist students in articulating this early in the unit, with an workshop based analysis of contributions and needs in the context of the assessable items. *Perhaps* we ourselves first need to take on this task and check out that, indeed, each curriculum area can expect to be givers and takers!

*Yes*, we now acknowledge to the students their varying backgrounds and explain the ways we have structured tasks to accommodate, even capitalise on these. *But no*, one group of students still feels that further study of duty of care is redundant. There is still a need to ensure that essential knowledge, known by some, is foundational to the tasks set, and opportunity exists to gain it for those who do not have it. *Perhaps* this will require a different structuring of the unit, with some targetted lectures as truly optional – trusting students’ own motivation to attend where appropriate.

*Yes*, we do develop rubrics for the assessment of students work and have them self assess. *But no*, we do not report within an outcomes framework, we give a mark for each assessment component and for the unit. *Perhaps* we will have to become proactive in suggesting changes to the university’s assessment structures.

**In conclusion**

Reflecting on his own career, Charles Handy’s designates the commitment to practice what you preach as a “masochistic principle” (Handy, 2001:7)! A wry smile crept across the face of one of the authors when she read this. We continue to need the energy to push the boundaries of our teaching, to aim for the future whilst building on knowledge, skills and experience grounded in the past.

Although the unit brings together teacher educators with complementary experience and fields of expertise, we are not curriculum researchers in the traditional sense of the term, at the cutting edge of curriculum development in outcomes based education (an edge which we would tentatively suggest may reside more usually with teachers in schools, rather than with academics). Hence an approach in which we ‘mimic’ and thence ‘model’ the changing face of the curriculum in (Western) Australia seems a fitting one.

We are conscious of the fact that none of us has first hand experience in implementing an outcomes based approach in schools, yet we are preparing student teachers to enter this arena. The commitment to practice what we preach creates the space and the place whereby we can experience in the tertiary setting what is involved in adopting an outcomes based approach to education. We share some of the curriculum challenges which teachers are experiencing in schools: the need to build the new order within an educational institution founded on the old; to do more with less; and to cater for diversity: the reluctant and engaged learners, high achievers and those barely passing, experts and novices in particular areas, the sociable and the independent...

Developing the curriculum for the unit has been more about process than product. The document (the unit outline) itself is almost incidental. What is crucial is the development of a shared understanding, actively constructed at weekly meetings where the purpose is
negotiated, resources are exchanged, contextual factors are considered and experience is reinterpreted.

In making a commitment to use an action research approach to further develop the unit, we are committing ourselves to more rigorous collection of data (Grundy, 1995). The foundation is prepared: team collaboration and a critically reflective stance are established and ‘taken for granted’. But, apart from specific products, the records of our deliberations are cerebral. And we need to have a better information base from graduating students and first year teachers as to the impact of the unit in the medium term, not just the initial responses of the student teachers in their last workshop for the unit. Team synergy has got us thus far and we are not done yet!

References


