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Interdisciplinary Curriculum: A Sustainable Future or an Unattainable Vision in a Changing Educational Climate?

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Abstract

The aim of this paper is to provide snapshots of the findings of a small research project that explored the implementation of interdisciplinary curriculum in Year 8 classes in a co-educational, independent school. A qualitative case study (Stake, 2005) strategy was adopted to seek teacher and student perspectives on the implementation of an interdisciplinary unit, which were elicited from video-taped focus group interviews. The dialogic stance used for the focus groups aligned with the dialectic — a more formalised inquiry approach that encouraged participants to theorise their perspectives (Thomas & James, 2006). The interdisciplinary unit generated excitement and intellectual stimulus among students and teachers. We believe, however, that the success of the unit can be attributed to the curriculum learning experiences crossing but not transcending disciplinary boundaries (Strathern, 2006). It is the process of honouring disciplinary understandings before the interdisciplinary connection that suggests the likelihood of this curriculum design being sustained.

Introduction: situating the study

This paper explores one school's vision of embedding interdisciplinary curriculum in Years 7-9. It is within this context, that we undertook a study of a Year 8 teaching team introducing an interdisciplinary unit in a P-12 independent, coeducational school located in Melbourne. The unit, '*Reality Bites*', sought to integrate knowledge and thinking modes across three disciplines: English, Science and Religious Education (RE).

Our study, funded by the University of Melbourne, was intended as a scoping exercise for a large-scale research project on the enactment of interdisciplinary curriculum in the Middle Years of schooling. Data collection occurred over a three month period and included video-taping of planning processes, classroom lessons and focus group interviews with teachers and students. In addressing the question that frames this paper, we draw on the perspectives of the teachers and students that emerged from the focus group interviews. The findings from other data sources will inform future papers, as data is progressively analysed.

In the very broadest sense, interdisciplinary curriculum attempts to address the fragmentation of knowledge and recognizes that learning in the 21st century 'is distributed across the learner, object, schools, symbols, technology and the environment' (Gee, 2003, p. 211). Crossing the discipline divides has been viewed as a solution to student disengagement in the Middle Years (Beane, 1997, 2006; Kruse, 2001; Wallace *et al.* 2005) by making learning more relevant and cohesive, and by cultivating student voice and civic engagement (Apple & Beane, 1995; Blythe *et al.*, 1998; Littky, 2004).

Curriculum frameworks nationally have embraced the idea of crossing the disciplinary boundaries, notably in Tasmania (Department of Education, 2000, 2006), in Queensland (Education Queensland, 2002, Education Queensland, 2001a, 2001b) and in Victoria (Victorian Curriculum Assessment Authority, 2005), as does the International Baccalaureate's (2007) globally focused, inquiry-based transdisciplinary curriculum: the Primary Years Program (PYP) for children aged 3-12 and the Middle Years Program (MYP) for students aged 11-16.

In the case study school, the PYP transdisciplinary curriculum is implemented in Years P-6, and the International Baccalaureate (IB) is offered in Years 11-12. The International Baccalaureate's Middle Years Program (MYP) has not, however, been adopted for Years 7-10. The MYP is yet to experience the same popular uptake in Australian schools as the IB and the PYP, and was not deemed appropriate by the school's leadership team. At the commencement of this study, the school was in the process of introducing interdisciplinary units in Years 7-9, framed by Howard Gardner's notion of disciplines serving as 'points of entry for considering the deepest questions about the world, questions about beauty and morality' (1999, p. 157) that he suggests should animate education. The Year 8 '*Reality Bites*' unit explored the perennial question 'How do I know something is true?' Prior to commencement, teachers planned the unit collaboratively, developing a booklet where students would record responses to guiding questions and prompts in their English, Science and Religious Education and Media Studies classes. For example, after viewing the *Truman Show* the key questions that framed the learning experiences were: How real was Truman?, and What is it to be human? (English); What is reality and how can we be sure? (Religion); What is real and how do we know? (Science); and Is there more to the media than meets the eye? (Media). The implementation of the unit over a three

week block begged the question: Is this interdisciplinary approach sustainable or an unattainable vision?

Interdisciplinary curriculum

Interdisciplinary curriculum is identified with a plethora of terms that are often used interchangeably, albeit inappropriately. Interdisciplinary curriculum (Gardner, 1999; Strathern 2006; Wineberg & Grossman, 2000) integrates knowledge and modes of thinking to solve problems, or consider issues that cannot be adequately addressed by any one discipline alone. Multidisciplinary curriculum (Reisberg, 1998), however, is first examined through a specific discipline focus with content from other disciplines added. The distinction between interdisciplinary and transdisciplinary curriculum (IBO, 2007) is more blurred, but the latter transcends discipline boundaries, emphasising the fluidity of the curricular framework, the juxtaposing of disciplinary perspectives and the interrelatedness of the disciplines. By contrast, interdisciplinary curriculum regards the disciplines as discreet lenses through which to view the world that orient and enrich student perspectives, by offering different methods and content knowledge (Boix-Mansilla *et al.* 2000). Veronica Boix-Mansilla argues that disciplinary standards must be upheld but that 'leverage is gained from combining the disciplinary lens' (2004, p. 4). The 'integration is not an end in itself but a means of cognitive advancement, e.g. — a new insight, a solution, an account, an explanation' (2004, p. 6). As such, interdisciplinary knowledge is deeply informed by disciplinary expertise — a view supported by Marilyn Stather (2006), who attests that disciplinary boundaries can be crossed but not transcended.

Many primary teachers, by virtue of being generalists, have long embraced approaches that integrate the disciplines. Subject-oriented secondary teachers have been less inclined to do so, seeing their role as gatekeepers acting to ensure that discipline knowledge is not devalued, diluted or subsumed. Resistance has also been attributed to pragmatics:

- the logistics of time-tabling (Boix-Mansilla *et al.* 2000);
- the intellectual challenge of developing conceptual understandings that cross subject boundaries to create a connected, cohesive curriculum (Shulman & Sherin, 2004);
- the insecurity of abandoning text books (Chan Kin-Sang, 2006);
- the complexity of designing assessment tasks across subjects and the lack of professional development to support teachers in integrative curriculum planning processes (Shulman & Sherin, 2004); and
- the Commonwealth Government's requirement of reporting to standards and benchmarks (Moss & Godinho, 2007).

The inherent tensions created by mandating A-E reporting of student achievement levels (Moss & Godinho, 2007) is likely to have further exacerbated resistance to curriculum innovation. As Michael Apple (2001) sagely notes, the neo-liberal reforms and 'free' markets that are defining of our times demand greater surveillance of performance. The subsequent emphasis on accountability and evidence-based learning has focused attention on standards achievement rather than curriculum design.

A case study strategy

'Case study is not a methodological choice but a choice of what is to be studied (Stake, 2005, p. 443) — a qualitative concentration on the case. With this in mind, the epistemological question underpinning this study is 'What can be learned

about interdisciplinary curriculum from the case?' According to Stake's (2005) categorisation of case studies, this is an *intrinsic case* because essentially we wanted an understanding of how this school enacted interdisciplinary curriculum from the perspectives of students and teachers. There was no intention to generalize the findings beyond the case itself. The research was undertaken simply to gain insights into the particularity and ordinariness of the case. The boundedness of the case is its confinement to the Year 8 classes of teachers participating in the school's professional development program with Dr Julie Landvogt, a consultant whose presence in the school is longstanding. The case study is both 'a process of inquiry about the case and the product of the inquiry' (Stake 2005, p. 445).

Merriam (1998) assigns three characteristics to case studies: particularistic, heuristic and descriptive. It is heuristic in that as researchers we must interpret the data from the focus group interviews, it is descriptive because the end product relies on the analysis of words to provide a thick description (Geertz, 1973) of teacher and student perspectives, and it is particularistic in its boundedness to the Year 8 classes of specific teachers in one school. Finally, the research can be categorized as an exploratory case study (Yin, 1995; 2005) because in the wider context the study addresses the question: What does interdisciplinary curriculum look like in the *Reality Bites* unit implemented by the Year 8 teachers? Merriam (1998) emphasises the importance of case studies helping to develop the understanding of persons in their particular contexts and from their perspectives. The focus group interviews with staff and students provided opportunities for them to grapple with both theorising and evaluating the effectiveness of an interdisciplinary curriculum in a more formalised inquiry approach (Thomas & James, 2006).

Design of the study

The choice of the school site was twofold: its sustained involvement over several years in professional learning led by Dr Julie Landvogt, who supported staff in exploring what an interdisciplinary curriculum framework might look like in the classroom; and the backing of this approach by the school leadership team. The teacher participants in the study were from three disciplines and were at different career points as Table 1 reveals. All had expressed interest in the unit *Reality Bites* based on the concepts of truth and reality and the disposition to seek truth and understanding (Ritchhart, 2002).

Table 1: Teacher Participants

Teacher (pseudonym)	Discipline	Career Point
Janice	English	Mid-career
Nigel	English	Early career (first year of teaching)
Max	Science	Mid-career
Tom	Religious instruction	Late career
Mike	Religious instruction	Late career

Timetabling determined the two Year 8 classes that participated in the study. The students were representative of a broad spread of abilities and a diversity of cultural backgrounds. Their families would be categorized in the middle to upper socio-economic status band.

Methods

To collect data for this case study we undertook the role of 'observer as participants' (Gold, 1969) whereby we were permitted by teachers and students to observe and record planning and lessons associated with their enactment of interdisciplinary curriculum, but did not actively engage with participants until the focus groups took place. Informed consent was obtained from all participants and the study was approved by the University of Melbourne Human Research Ethics Committee.

Video data collection

Field work began with the videotaping of a planning day used by teachers to establish the scope and activities of the interdisciplinary curriculum. The data gathered from this development phase comprised approximately four hours of videotaped material. Next, we videotaped two classes of students as they participated in Science, Religion and English lessons associated with the interdisciplinary curriculum. Lessons were recorded using two digital video cameras with one focused on the class teacher while the second camera was directed at students. High quality sound equipment including a wireless lapel microphone (for teachers) and two microphones traditionally utilized for recording theatre productions (for students) were used to capture class discourse. Following suggestions by DuFon (2002) and others (for example, Iino, 1998) equipment was selected that achieved maximal recording quality while not being overly obtrusive.

Focus groups

An obvious and valid criticism of video and other observational approaches is that they cannot on their own disclose the perspectives and opinions of participants. With this in mind we invited a group of students from each class (total of 12 students), broadly representing a cross section of their peers, to give their thoughts on the experience of participating in the interdisciplinary curriculum (in two focus groups). Similarly, teachers who had taught lessons associated with the interdisciplinary curriculum (total of 5 teachers) were asked to take part in a focus group as well. Focus groups were audio recorded and videotaped, as this material (and indeed footage from classrooms) will be used for teacher professional development purposes.

In total, twelve hours of video material were collected over a three month period — with data collection occurring on four occasions. In this paper we focus on discussing participants' experiences of the interdisciplinary curriculum as disclosed in the student and teacher focus groups. Reporting on the observational data will be published in forthcoming articles and through future conference presentations.

Data analysis

Interview data were analysed using the system of codes developed by the researchers to identify key themes (Miles & Huberman, 1994). The process of sorting and analysing data enabled the researcher to carry out data reduction to make it more manageable and to identify essential features, themes, concepts, assertions and their relationships. Consistent with Patton's recommendations (2002, pp. 485-486):

- key phrases and statements were located. All data were given equal weight initially and then arranged in meaningful clusters or emergent themes.
- interpret key phrases and statements as an informed reader;

- the meanings were inspected for what they revealed about the essential recurring features of the interdisciplinary curriculum; and
- verification was sought of emergent themes from data collected.

What did we learn?

A focus group approach to interviews, as outlined above, was initiated to encourage dialogical thinking (Paul, 1987) that moved beyond the individual's view of the experience of interdisciplinary curriculum through listening and responding to other perspectives. We believed this approach would provide a more reciprocal space for considering the outcomes of the *Reality Bites* unit and had imagined a diversity of responses from the range of student participants. Responses were, however, overwhelmingly positive yet forthright in advancing suggestions to strengthen future units. The extended period of video-taping and observation gave us time to develop some rapport with students and teachers before conducting the interviews. But we are mindful of what Freebody terms the 'deceptive complexity of interviews' and have tried neither to generalize to the group statements made by individual people, nor let our own theoretical premises influence what we have taken to be common (Freebody, 2003, p. 132).

Personal and professional theorising of practice

A shared understanding among teachers was that crossing the curriculum boundaries presented an opportunity to redefine the middle school curriculum, and as Tom (RE teacher) noted a chance to identify what 'holds it all together'. What the focus group interview made explicit, was the personal and professional theorising that motivated these teachers' to engage with interdisciplinary curriculum. Several teachers had previously developed an interdisciplinary unit for Year 7 so this was a continuation of the dialoguing and identification of what Wenger (1998) refers to as a being community of practice. Tom, in particular, commented that the secondary Middle Years curriculum sat somewhat uncomfortably between the PYP and the IB and VCE in the senior years. He argued that there had been no clear focus on a curriculum design that met the needs of students in the interim years of 7-10, the school opting not to participate in the IBO's Middle Years program.

I think PYP program has seeded interdisciplinary thinking so the language and the concept is in the culture but we've noticed that there's a crisis. I think there is a crisis of learning as kids come up out of the PYP program. They hit the middle school and we're not clearly defined in the middle school about either who we are at a curriculum level or what really holds it all together. Junior school works the PYP and in the senior college there's the IB and the VCE so they're all strong but the middle school is tenuous.

Tom's 'working theory' is that their approach to curriculum design currently being implemented across Years, 7, 8 and 9 will assist in bridging the gap between the PYP and the IB.

For Janice (English teacher), interdisciplinary curriculum

means helping the students to make really authentic links between the various subject areas that will enable them to think beyond a particular sort of discreet discipline and with a view to really helping them to think, rather than just within the closed context of that particular subject.

The notion of the transferability of learning across the disciplines resonated strongly with all five teachers. Although Max (Science teacher), argued that timing was a consideration. He believed students were not ready for this approach before Year 8 as they must ‘understand the subject significantly before trying to make links across subjects’. This concurs with Gardner and Boix-Mansilla (1994, p. 208) who argue that ‘interdisciplinary work can be carried out legitimately *only* after the individual has become somewhat conversant in the relevant disciplines’. They describe the primary years as pre-disciplinary work that draws on commonsense, rather than discipline knowledge or content *per se*.

Mike (RE teacher) noted that he liked the ‘sort of cross discipline reactivity’. He believed this was helping to ‘break down compartments in our thinking and our mind so it enables new ideas to come to us more easily because we are not just boxing things in’. While Tom was more mindful of the specificity of discipline knowledge, he stressed the need for ‘deeper valuing, understanding and empathy of one subject for another’ and argued the importance of being able to draw on each other’s knowledge domains. Mike and Tom recognized that disciplines’ growth derives from boundary crossing: ‘the fruitful exchange of concepts or modes of thinking between and among the disciplines’ (Boix-Mansilla *et al.*, 2000, p. 25).

Nigel (English teacher) noted the importance of students realizing that they don’t have to ‘put on a different hat to go into science than they do when they go into English’ — a debatable point. For Mike the issue of covering the Science curriculum content was his foremost consideration, and as Janice asserted, ‘we sort of dragged science in kicking and screaming: not they didn’t want to be there but they were trying to get through their curriculum’. Although all five teachers in theory supported the idea of an interdisciplinary curriculum, Nigel’s remark that ‘it was great because we all had to move tables and speak to people from different departments’ is indicative of the challenges inherent in changing entrenched organizational structures that work against more fluid interactions across and between the disciplines.

Transforming practice: the teachers’ perspective

Notwithstanding the civic engagement component, teachers generally embraced the interdisciplinary curriculum’s theoretical underpinnings of working outwards from conceptual understandings, to making learning more relevant and cohesive by cultivating student voice (Apple & Beane, 1995; Blythe *et al.* 1998; Littky, 2004). From the teachers’ perspectives it was the quality of the classroom interactions, the deeper level thinking and the take up of the discussion space by students that was most noticeable.

For Nigel, it was the emphasis on intellectual character and engaging in dispositional thinking (Ritchhart, 2002), particularly through the thinking routines (Ritchhart & Perkins, 2008) that transformed discursive practice in his English classes.

[Students] ‘who would not normally speak up in class were saying quite profound things... the whole collective of who generally speaks in class opened up and across the board everyone spoke much more than they would in our other English units.

In Tom’s RE class, he too noted changes in discursive practices. Students were ‘switched on’ and the quality of their conversations was much richer. He also noted his determination to engage students in dialogue, ‘rather than just talking off the top

of my head', which resulted from the rich discussions in planning for learning and the team's own experience of wrestling to define reality and truth.

Although Max only took one Science lesson in the unit, he

enjoyed the planning process of trying to pitch this lesson at a different level to what I normally would for a year eight class, to try and get this higher order of thinking... a highlight was the fact that some kids took to that quite well and some of the questions they were asking were pretty good.

The notion of deeper level thinking was also referred to by Mike, who claimed evidence of student thinking in his RE class being more expansive and of students drawing more out of their thinking because of their intense engagement with the complex ideas being discussed. Of particular significance for Mike was the

cumulative effect taking place so that during my lessons the students were intentionally drawing on what they'd been working on in English and what they'd been working on in Science and the lesson became much richer.

Tom referred to a deeper respect for religious inquiry that came from the support of the other disciplines; whereas Mike believed students had pigeon-holed RE and that planning around big conceptual ideas meant students gave it a fairer hearing.

Janice noted the importance of cross curricular connections and referred to students coming to class after Max's science lesson with 'sort of glints in their eyes because they were so excited about how their thinking had shifted from a firm place to somewhere quite new'. She described this class as 'a goose bumping moment'. This interest in each others' classes was also picked up by Tom who stated 'there was genuine inquiry into one's own discipline area with permission being given to actually enquire into each other's learning spaces.' Janice recognized that working out from a big idea, or generalisation (see for example, Wiggins & McTighe, 2005) rather than focussing on direct teaching of the text features encouraged a sense of autonomy with students seeking to understand the film, *The Truman Show* — the unit's launching point — on their own terms.

There were challenges too in terms of embedding this way of teaching.

Assessment was highlighted by Janice, raising the question of 'How does one actually assess across the subject areas?' and 'How does a performance of learning across disciplines transfer to a report grade?' Another issue was bringing on board staff members from other disciplines. Tom also raised the issue of shifting students from focussing on completion of written tasks and becoming anxious if pages in their booklets were not filled, which resonates with Chan Kin-Sang's (2006) observation of the insecurity students feel when text books are abandoned.

Inevitably, the teachers referred to time as an issue; designing a unit that will cross subject boundaries to create a connected, cohesive curriculum is intellectually challenging (Shulman & Sherin, 2004) and time release was problematic. While eight hours of planning was dedicated to the unit, the people given release were not necessarily those teaching in it. A key challenge that is central to the sustainability of this approach was raised by Max and Tom. Max expressed concern that if this is a 'one off' unit, its effect would diminish with time. Likewise Tom asserted that an interdisciplinary approach ran the risk of being 'an island' within an organizational culture, and flagged the importance of safeguarding and holding together this way of planning and implementing the curriculum.

Transformative practice: the students' perspective

From the perspectives of the students in the two focus groups, the *Reality Bites* unit was largely seen as a transformative experience. For the students in Group 1 whose timetabled science lesson had been earlier in the day, this was a defining moment. Their comments supported Janice's claim of 'a goose bumping moment', a turning point in the students' thinking about reality. As one student noted:

Science mostly doesn't interest me personally but when they bring in stuff like that like it forces you to think, it really challenges you and it kind of pushes you to your limit and so you think well hang on there could be something more but I'm not thinking about. And in a way it sort of forces you to learn even if you don't want to. (Student, Group 1)

Across both focus groups, the students like the teachers' identified the significance of the classroom interactions, the deeper level thinking and how they took up the discussion space as transformative experiences. One student in Focus Group 1 felt that by dissecting the movie, *The Truman Show*, piece by piece, the philosophical discussion destroyed its enjoyment, but this view was not supported by the group with other students claiming the philosophical discussion 'deepened your understanding'. One student claimed 'through class discussion it's like a new movie sort of', while another insisted it 'expanded my view on reality and now it just covers so much more'. Other responses that focussed on how thinking was deepened by the unit included:

I don't think the purpose of this topic was for us to find the answer I think it was for us to only discuss it and just, because by discussing we have like deeper views on it and we haven't got the answer but we've come to a better understanding within ourselves. (Student, Group 1)

I thought it was good how we sort of would ask the question and we would go and do it by ourselves. And we'd think about you know how we perceived it and then everybody shared it. And then we came up with so many different things, so many ideas and stuff ... and yeah when you put it all together it was really good. (Student, Group 2)

My mum called it shopping trolleying where I kind of took little ideas from other people's views and I thought about them and I brought them together to create mine ... I had learnt that it's a really good skill to be able to pick up on what other people say and agree with it and then apply it to your understanding. (Student, Group 1)

A number of students across both groups mentioned taking these discussions home and continuing the development of their ideas with parents:

I actually had trouble sleeping some nights because I was just trying to comprehend all the different ideas that were going around through the class and I'd discuss it with my Dad and then I'd discuss it with my Mum and then I'd sort of toss up the similarities that my parents had said and I'd find the differences and it was just, it's been really great, yeah. (Student, Group 1)

Group 2 students also agreed that they took their thinking about reality home as it was constantly on their mind.

Two students in Group 2 commented that ‘A lot of people didn’t speak out’, a point not mentioned in the first focus group. Yet, the overall consensus was that learning was enhanced by this way of teaching, as this dialogic excerpt reveals:

A lot of people didn’t speak out and I don’t think they got very much out of this.

I thought quite a few people did speak out.

But they did, like they still learnt stuff.

Yeah, just because they didn’t speak out didn’t mean like they weren’t listening or something.

Yeah, but you learn the same with just listening even if you don’t speak up.

Everyone has a different way of learning. (Students, Group 2)

Concern with filling in the booklet, mentioned by one of the teachers was also raised by several students in Group 1 who said ‘it was too hard to write what you have experienced in your head’ and to ‘condense it into two sentences’. Group 2 students liked the idea of the teacher asking one person to type up the group responses instead of everyone writing in the booklet.

The students perceived the interdisciplinary aspect differently from the teachers. They generally felt English was over represented and wanted more upfront discussion of religion. As one student said, ‘we kind of tip toed around the edges ... and I think that we didn’t really nail it like we did with science or English’ (Student, Group 1) and another claimed we ‘we didn’t do much religion’ (Student, Group 2). In Group 2 the students dismissed the focus on thinking dispositions (Ritchhart, 2002) and metacognition, preferring the ontological discussion of what it means to be human.

Discussion

So ‘Is interdisciplinary curriculum a sustainable future or an unattainable vision in the changing educational climate?’ Several factors are working in its favour, in particular the school’s independent status. While mindful of the Victorian Educational Learning Standards (VCAA, 2005), as an independent school, this framework and its accompanying standards are not the driver for the school’s curriculum planning. Independent schools are privileged in defining ‘what counts as the important knowledge that is passed on to members of their community’ (Seddon, 2001, p. 326).

Assessment, however, is still a driving force in independent schools. Fee paying parents require accountability and place considerable emphasis on the reporting of student achievements. As Michael Apple (2001) has noted, ‘free’ markets are coupled with increased surveillance of performance. Parents will need to see some value-adding from an interdisciplinary approach and the school’s government funding is contingent on reporting of students’ achievement of standards, so assessment will need to be addressed.

As Janice acknowledged, there is a supportive head (Hargreaves, 2003), who is ensuring appropriate time is allocated for team planning (Shulman & Sherin, 2004), and importantly for the quality on-going professional development of staff. Throughout this unit teachers had regular access to professional development. Pivotal to the engagement with professional learning has been Dr Landvogt’s relationship with staff. She is perceived by the teaching team as ‘an outsider with an insider relationship’. Dr Landvogt has met every two weeks with the *Reality Bites* teaching

team, and facilitated the initial planning process that the staff undertook to identify their own conceptualisation of reality, described by Janice as:

the most amazing rich discussion that opened us up to what was happening in science and religion and media and you know the links between them became very obvious but the depth to which we were trying to wrestle with what reality actually was I think reassured us that we could build something quite meaningful around this (Janice, teacher interview)

Tom and Mike felt that Dr Landvogt provided a structure for the team meetings that assisted with the thinking processes of the group and deflected conversations that became ‘angular’, moving them back into the mainstream. Importantly, Dr Landvogt provided on-going feedback to individual teachers for the duration of the unit through face to face dialogue, email contact and managing the Wikipedia site where articles for professional reading and minutes from meetings were posted, in addition to providing a discussion forum. What the teachers are saying is consistent with the importance Fullan (2006) places on relationships, shared ideals and a strong learning culture in relation to changing workplace practices.

Indicative of the sustainability of the interdisciplinary approach is the teaching team’s notion of being an emergent community of practice (Schmoker, 2006; Wenger, 1998). Mike, Tom and Nigel refer to themselves in the interview as a ‘community of learners’, ‘a community of scholars’. Further, there is a shared commitment to see this interdisciplinary approach institutionalised as a whole school approach with units operating at Years 7-9 that build on and interconnect with one another.

We’ve got now support from management … the new Year 10 program will include the interdisciplinary units at some level and the Year 9s will be doing a new unit that’s going to incorporate trouble and conflict so that the group will have had one thinking unit at 7, 8, 9 and will move into 10 and then choose to either do IB where they’ll [take] theory of knowledge and if we can look at perhaps a possibility of theory of knowledge type unit that sits with the VCE as well then it will be right through the school which is a really huge step forward. (Janice)

The team has achieved what Andy Hargreaves (2003, p. 15) describes as ‘the new professionalism’: promoting deep cognitive learning, committing to continuous professional learning; working and learning in collegial teams; building a capacity for change and risk; developing and drawing on collective intelligence; and fostering trust in processes. This ‘new professionalism’ will, however, need to be embraced by other teachers in the school to ensure the team’s vision of interdisciplinary curriculum is sustained. The team believes that ‘the ripple effect’ will allow this to happen. Yet, acknowledgement is made that the size of the school, the pace of change and pragmatics, such as time tabling and staffing, will create tensions in regard to holding together and safeguarding what has been achieved.

What we believe best positions the sustainability of this school’s interdisciplinary curriculum approach is the decision to keep the subjects intact, and overtly valuing that there is a body of knowledge specific to each discipline that needs to be taught. The interdisciplinary units are planned to augment not displace the subject-based curricula. The students too acknowledge that ‘it’s good to have one or two units a year like this ...[but] you can’t have that sort of learning for all the year ... you have got to learn the other stuff’ (Student, Group1).

Conclusion

The teaching team has taken up the challenge presented by Pinar *et al.* (1995) ‘to continue the conversation’ initiated by curriculum theorists, and in doing so has developed an interdisciplinary framework that they believe will contribute to the development of their Middle School curriculum for Years 7-9. The focus on developing a sequence of interdisciplinary units that span Years 7-9 and connect with a theory of knowledge unit in Year 10, indicate the likelihood of a sustainable future for interdisciplinary learning in this school. Although mindful that the staff and student interviews have simply provided snapshots of initiating this approach, the excitement generated by engaging with complex ideas across disciplines is very encouraging.

Concurrent with the teachers’ emphasis on the importance of discipline knowledge is their acknowledgement that in the work place issues ‘do not readily fit into neat disciplinary niches’ and that ‘teams of interdisciplinary workers are the norm’ (Gardner, 1999, p. 53). To succeed in today’s world students need to be able to draw on cross disciplinary expertise both in the work place and in their personal lives. Despite the logistics and the inherent challenges of marrying disparate methods and ways of thinking that an interdisciplinary approach presents, the connectedness to real world practices is a powerful argument that is likely to be endorsed by the stakeholders of this school. As Julie McLeod and Lyn Yates’ assert, schools are constantly redefining ‘which qualities count as the embodied characteristics of a “good student”’ (2006, p. 51) in response to what they perceive as social and discursive changes in the work place.

The interdisciplinary approach adopted by the school in this case study is consistent with Marilyn Strathern’s (2006, p. 196) notion of crossing the disciplines rather than transcending them. She argues that ‘there is a great pull to imagine that disciplinary boundaries can be altogether transcended’. We argue that the positive response to the implementation of the unit can be attributed to Dr Landvogt’s encouragement to embrace Howard Gardner’s premise that disciplinary understandings come before interdisciplinary connections. In this way, the teaching team crossed not transcended the disciplinary boundaries, honouring disciplinary understandings while recognizing the value in more fluid interactions across the disciplines. This allowed subject teachers to bring their disciplinary lens to the planning process, knowing that the design of the unit would not devalue, diluted or subsume the discipline’s knowledge, but would preserve the integrity of the disciplines. The next layer of analysis of classroom lessons, however, needs to identify whether the interdisciplinary unit assisted students to make and apply foundational disciplinary distinctions (Gardner, 1999) and respond to the essential question: Did the disciplinary perspectives around which the learning was planned, deepen the students’ understanding of the conceptualisation of reality?

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