Reference:

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Chapter 10   Curriculum

Tony Dowden

Learning intentions

In this chapter we will:

- Develop a strong rationale for middle years' curriculum design and implementation,
- Discuss elements of curriculum theory relevant to the middle years, including tensions between subject-centred and student-centred curriculum models, and
- Consider a range of approaches to middle years' curriculum design and evaluate them in terms of responsiveness to students' diverse learning needs.

A rationale for curriculum design in the middle years

We all learn best when we understand what we are learning and why it is relevant to us but research tells us that it is especially important for the classroom curriculum to be meaningful and relevant to middle years' students. Middle years' teachers should have specialist subject knowledge in two or more fields and a sophisticated level of pedagogical content knowledge that specifically caters to the learning needs of young adolescent students (Australian Council of Educational Research [ACER], 2012). It might seem valid for a teacher to adopt a 'default' position and just implement the official curriculum without additional thought to curriculum design but, as we will see, this approach is too simplistic because it fails to consider the diverse learning needs of middle years' students.

Middle years' curriculum design should be oriented towards personalised learning so that it meets the needs of students who have special needs, addresses student diversity and caters for students who are gifted and talented (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2015). Accordingly, good middle years' curriculum design aligned with appropriate approaches to teaching and assessment is prerequisite to successful learning outcomes in high school. The ideal middle years' curriculum design places both the student and key disciplinary knowledge at the heart of the curriculum but, as we will discover, barriers to implementation need to be overcome before this can be achieved. This chapter emphasises the need for teachers to consistently exercise 'curriculum mindfulness', that is, as teachers design their classroom curriculum, they must be sure about what they are doing and understand why they are doing it.

Meeting students' diverse learning needs

The Australian Curriculum states that "all students are entitled to rigorous, relevant and engaging learning programs drawn from a challenging curriculum that addresses their

individual learning needs" (ACARA, 2015, n.p.). Unfortunately, statements of universal educational entitlement such as this are often poorly implemented by school systems and, in the case of the middle years, have given rise to a thriving middle years' movement that has strongly criticised traditional approaches to schooling for frequently failing to cater for the developmental and educational needs of students. Indeed, a strong commitment to meeting the diverse learning needs of students is a key driver of the middle years' movement.

Middle years' experts have long argued that curriculum design in the middle years should be informed by students' developmental and educational needs. The Position Paper of the Middle Years of Schooling Association (MYSA) in Australia, now known as Adolescent Success, states that students need "integrated and disciplinary curricula" that are "challenging, integrated, negotiated and exploratory" (MYSA, 2008, n.p.). Similarly, the National Middle School Association (NMSA) in the USA, now the Association for Middle Level Education (AMLE), states that the middle years' curriculum should be "relevant, challenging, integrative and exploratory" (NMSA, 2010, n.p.).

Despite wide agreement among experts about desirable features in the design of middle years' curriculum, teachers often struggle to construct a coherent curriculum that authentically supports classroom learning. While several factors probably contribute to this problem, the most important factor is likely to be that teachers have not developed a sufficiently strong rationale for middle years' curriculum design. Assuming relevant professional development on the middle years is accessible, most teachers intuitively recognise the educational benefits of developing a rich range of pedagogies and authentic assessment items but they can struggle to understand what middle years' curriculum design should look like and how to align the classroom curriculum with pedagogy and assessment. The likely reason for this is that curriculum design is complex with several components that need to be addressed in order to achieve a successful outcome. The AMLE recently reaffirmed that schooling in the middle years should be "developmentally responsive, challenging, empowering and equitable" (Levin & Mee, 2016). Let us unpack the implications of these four points for middle years' curriculum design.

Developmentally responsive

Middle years' curriculum design that is developmentally responsive positions the student at the heart of the curriculum. It recognises and understands that the developmental stage of young adolescence is a time of significant change that leads to many personal challenges, some of which occur simultaneously (Caskey & Anfara, 2014). Middle years' curriculum design also recognises that students are in the early stages of learning how to become independent learners and they are still in the process of acquiring and developing a range of learning skills, including working with others and accepting increasing levels of responsibility for personal academic progress. Good curriculum design accordingly interweaves subject content from the disciplines with the development of important social skills for effective learning. Done well, middle years' curriculum design creates the right conditions for catalysing a love of learning that will ensure students become committed lifelong learners (Pendergast et al., 2005).

In the middle years, students undergo significant maturational changes as they move from childhood to young adolescence (Brighton, 2007). Brains are still under construction (Carrington, 2006; Nagel, 2014). Emotions increase in strength and play an important role in mediating motivation and engagement. Indeed, we now know that emotion has a major influence on cognition (Damasio, 2005; Duncan & Barrett, 2007). For example, when

students like a teacher and enjoy a class, they think more deeply and concentrate for longer periods. Due to brain immaturity, students are prone to making black-and-white judgements such as 'I hate science', 'I hate my teacher', or 'I love English'. Many of these snap judgments have a negative impact on the quality of teacher-student relationships and, if reinforced by evidence arising from negative perceptions of a teacher's management of classroom behaviour, such judgements are soon reified and become the accepted mythology within student peer groups. This can create significant barriers to academic progress for some students, especially those who are affected by low self-confidence or stress (Nagel, 2007).

Developmentally responsive curriculum design in the middle years should specifically aim to teach students how to operate effectively in the social context (Beane, 1990, 2013). Healthy and respectful peer relationships are a prerequisite to working together effectively. The social skills of middle years' students are still developing, thus the curriculum needs to make specific provision for teaching important life skills, such as respect for others and tolerance of differences; and key interpersonal skills, such as negotiation and conflict resolution (Beane, 1990, 1997, 2005; Brighton, 2007; Caskey & Anfara, 2014). Curriculum designs that include collaborative work should include specific strategies for teaching students the essential skills for working successfully as a team.

In summary, the middle years' curriculum should be developmentally responsive and be specifically designed to enhance the growth of interpersonal skills. For further information on this topic, see Chapter 3 for a general discussion of human development in the middle years.

Challenging

Middle years' students are motivated to investigate topics that are personally relevant and meaningful to them (Beane, 1991; Nagel, 2014). In contrast, academic subjects are often foreign to students and, unless the teacher can find a way to make a topic or subject relevant, students may show little interest. Middle years' students have the developmental need to move towards gaining the locus of control for their learning and the need to accept increasing levels of responsibility (Caskey & Anfara, 2014). Curriculum design should therefore work in harness with these needs, not against them. Middle years' students are motivated to 'make a difference' within their own social context, thus curriculum designs including challenges which involve solving real-life problems in the community context are likely to be popular with students (McLaine & Dowden, 2011). The idea of negotiating the curriculum in collaboration with students is powerful and, in some cases, can hold the key to engaging otherwise unmotivated students (Beane, 1997; Boomer, Lester, Onore, & Cook, 1992; Hunter & Forrest, 2010).

Most middle years' students are in the process of moving from concrete thinking to abstract thinking but are usually unable to operate at a purely abstract level of thinking (Caskey & Anfara, 2014). Curriculum design in the classroom should therefore imply the use of a range of pedagogies with plenty of rich sensory input, such as learning from 'hands-on' experience (Carrington, 2006; Darling-Hammond, 2008; Hayes, Mills, Christie, & Lingard, 2006). Middle years' curriculum design should also set high expectations and encourage students to perform at increasingly higher levels of intellectual development (Arnold, 1997; Beane, 1997, 2013; Caskey & Anfara, 2014). Authentic assessment might include multimedia presentations of what students have learned or curations of relevant learning artefacts and, where possible, it should involve parents and community members (Beane, 1990; ACER, 2012). In summary, challenging middle years' curriculum design should aim for appropriate cognitive loading within a familiar and supportive social context.

Empowering

Middle years' curriculum design should be empowering but all too often we see the opposite. The transition from primary to secondary schooling tends to result in relatively shallow and impersonal teacher-students relationships and an increased emphasis on teacher control and discipline (ACER, 2012). In high school, students have many subject teachers which decreases the number of opportunities for teachers and students to have meaningful conversations and get to know each other properly. Indeed, part of the dip in student achievement in the first years of secondary education is explained by the remnants of an unsympathetic kind of schooling from the past that used principles of behaviourism, where students were expected to master subject content from the disciplines or accept negative consequences. It did not matter if content was irrelevant to students. For instance, a generation or so ago it was the norm in Australian classrooms for students to have to recite English poetry, learn Latin and memorise key dates associated with the kings and queens of England. As it is, disengagement, alienation and boredom from schooling tends to peak in the middle years (Dinham & Rowe, 2007; MYSA, 2008), thus unsympathetic schooling following a transition can have a negative impact on academic progress (ACER, 2012; Main & Whatman, 2016). It is now generally understood that attempting to force middle years' students to learn curriculum content, when they do not have good relationships with teachers or other students and lack a sense of connectedness to subject content, increases the risk that they will disengage from schooling and develop a generalised dislike for formal learning (Gibbs & Poskitt, 2010; Main & Whatman, 2016).

A safe and supportive learning environment that empowers students and meets their emotional needs must be built on the quality of relationships (Main, Bryer, & Grimbeek, 2004; Main & Whatman, 2016). A key to achieving warm teacher-student relationships is when the student perceives that the teacher cares for them personally (Poskitt, 2011). The classroom curriculum and associated pedagogy needs to unequivocally communicate and engender this. In the case of Indigenous students, teacher-student relationships that are built on a foundation of cultural competence are a prerequisite for classroom engagement (Buckskin, 2015). The quality of teacher-student relationships can be enhanced by being mindful of the developmental characteristics of students. For example, students in the middle years respond well to teachers who use gentle humour and who are easy-going and relaxed but they respond poorly to teachers who use sarcasm, 'Miss B says nasty things about us', or those who they perceive as needing to be the centre of attention, 'Everyone knows Mr C loves himself'. When teacher-student relationships are well-established, students are willing to try harder, take risks and accept challenges. Over time, students learn to accept increasing levels of responsibility, they become increasingly motivated and self-directed, they make meaningful connections between the classroom and the outside world, and they become aspirational about future educational opportunities. In summary, empowering middle years' curriculum design: builds positive teacher-student relationships, acknowledges that students need extra support during transitions, and promotes emotional well-being.

Equitable

Middle years' curriculum should be equitable and value each student's emerging personhood. Students should be specifically taught to tolerate, value and celebrate difference in the classroom. The quality of peer relationships and nature of peer influence are important aspects in the social environment of the middle years' classroom that must be factored into curriculum design (Beane, 2013; Nolan, Brown, Stewart, & Beane, 2000). While it is not possible within the scope of this chapter to discuss diversity in the depth it deserves, this is an

important aspect of middle years' curriculum design that must not be ignored. Catering for diversity in the middle years' curriculum is particularly important because these are the years that shape students' self-concept, personal beliefs and values (Caskey & Anfara, 2014). Every teacher can tell us that the classroom is defined by individual differences but the wide range of maturational variation in the stage of early adolescence means that the middle years' classroom has an extra dimension of diversity that is not present in other levels of schooling. Some students are vulnerable and need extra levels of support. Experienced middle years' teachers know that some students are very sensitive to the social context and are easy targets for teasing, whereas other students are comparatively phlegmatic and remain unruffled even by robust banter. In addition, students are often diagnosed with learning and or behavioural disorders in the middle years. A middle years' teacher with a non-judgmental, gentle and caring disposition can make a big difference to students who face difficult personal struggles (Rumble & Aspland, 2010; Rumble & Smith, 2016). In summary, equitable middle years' curriculum design ensures that every student feels included and valued within the classroom learning community.

All the elements discussed thus far are vital components of our rationale for middle years' curriculum design but, by itself, this is not enough. Middle years' teachers also need to understand the political context and recognise that the middle years' curriculum does not always receive unqualified support from other curriculum stakeholders.

Political considerations

The content and design of school and classroom curricula is always a political process because knowledge is one of the keys to attaining and holding on to power. Politics has a major influence on curriculum content, thus the subject content that is accepted into the official curriculum consists of carefully chosen knowledge which reflects the politics of the dominant group (Apple, 1990).

The curriculum is a convenient scapegoat for perceptions of underperformance in education. For instance, a common response to lower than expected results from mandatory testing regimes, such as NAPLAN, is the call for 'back-to-basics' from commentators who, nostalgic for the past, want a curriculum with greater emphasis on reading, writing and arithmetic that implies stricter classroom discipline. Curriculum designs that are perceived to have an emphasis on catering to the developmental needs of students at the apparent expense of a rigorous treatment of disciplinary content knowledge are especially likely to be at risk. Indeed, past history shows us that designs for middle years' curriculum have been targeted by powerful decision-makers who do not always understand what happens in the middle years' classroom (Beane, 2013). For this reason, teachers need to be able to discern whether their curriculum design will be accepted by their community and then act accordingly. One of the keys to attaining insight into this issue is to understand the tension between subject-centred and student-centred approaches to curriculum design.

Provocation: A developmentally responsive curriculum for Year 7

Bernard has been a secondary teacher in Queensland for five years. His main teaching subjects are senior Mathematics, senior Physics and junior Science. His principal has invited him to take charge of the school's Year 7 curriculum and make it developmentally responsive. At first Bernard is confused. He thinks to himself, 'the curriculum is just the curriculum, especially for senior Mathematics and Physics' but, as he ponders some more, he realises he has already modified a junior Science unit to make it more engaging and challenging for his students. He realises he doesn't fully understand what 'developmentally responsive' means but decides to accept the invitation anyway. Bernard needs your help. What advice can you give Bernard about a designing a developmentally responsive curriculum that will ensure his school puts its Year 7 students at the heart of the curriculum?

Curriculum theory

In order to understand contemporary designs for middle years' curriculum it is helpful to take a brief detour via some relevant curriculum theory. This section discusses the subject-centred curriculum model, the student-centred curriculum model and Dewey's theory of integration.

The subject-centred curriculum model

The subject model, also sometimes referred to as the separate subject approach or single subject approach, is based on the idea that specific fields of knowledge should be arranged into discrete disciplines of specialised learning and inquiry. This model, which has dominated secondary schooling and tertiary education in Australia for more than a century, is descended from an elitist approach based on social class that served the needs of the Industrial Revolution where, beyond the years of compulsory schooling, students who are successful graduate to increasingly higher levels, while those who fail either repeat a level or exit the education system and join the labour force. In the purest form of the subject model, the needs of students are subservient to what is deemed to be the ideal organisation and pacing for teaching the subject. It is also tacitly assumed that all students will use the same learning resources.

The subject-centred model has its champions but they are likely to be politicians or business people with specific agendas rather than educators. Certainly, they are unlikely to be educators who are catering for the educational needs of the full spectrum of middle years' students. Sustained academic progress in the middle years is very important because it provides the foundation for successful understanding of disciplinary knowledge for the senior years of high school and the workplace (ACER, 2012). Thus, the notion that all students in the middle years must have a solid grounding in the disciplines is not up for debate but, on its own, it must be understood that 'a solid grounding' is not enough. In fact, when this notion of a solid grounding in the disciplines within the middle years is subjected to closer scrutiny, it breaks down because the relatively high proportion of irrelevant subject content in any subject-centred curriculum means that many students disengage from learning and fail to make progress. This phenomenon is especially salient when students make the move to high school (ACER, 2012).

Student-centred model

The student-centred curriculum model is based on the idea that the subject content of the curriculum should be subservient to the needs of the learner. In its purest form there is no formal curriculum and no prescribed subject content because the curriculum is constructed

according to the curiosity and whims of the child. A famous example of a radical student-centred curriculum was implemented at Summerhill, a small private school in England that was founded in 1924 (Neill, 1960). The school's philosophy allowed students to construct their own curriculum, relevant and meaningful to each individual, and free from what was then seen as adult coercion. Of course, a radical curriculum such as this is untenable when there is an official curriculum that is mandatory.

Integration

US American philosopher John Dewey (1916) developed a theory of education based on data gathered in his Laboratory School at the University of Chicago. Dewey believed that education is the primary means of ensuring social continuity between generations. He thought that a recurring problem of education in a democracy was harmonising students' "individual traits" with the values of their communities, thus he identified the student and their local context as the focus for curriculum design (Dewey, 1936, p. 465). Three notions of integration were embedded in Dewey's theory. These were personal integration, social integration, and the integration of knowledge.

Personal integration

Dewey's notion of personal integration lay at the heart of his theory of learning:

> The mentally active … [student's] mind roams far and wide. All [subject matter] is grist that comes to the mill … yet the mind does not merely roam abroad. It returns with what is found … [with] constant judgment to detect relations, relevancies [and] bearings on the central theme. The outcome is a continuously growing intellectual integration … [This] is the process of learning. (1931, p. 424)

Dewey's insight was that when people learn, they do their own integrating. The implication is that students should not be taught parcels of knowledge that are pre-integrated by teachers or textbooks. To facilitate personal integration, Dewey explained that teachers should ensure that their students actively engage in the stuff of different subjects, thus he emphasised the importance of "learning by doing" (1900, p. 120).

Social integration

Dewey's notion of social integration was the process of inducting students into society, thus he thought the outcome of schooling should be that students become fully functioning citizens. He promoted social integration by engaging students in learning activities that developed skills and attributes needed in wider society, such as working collaboratively, solving real-life problems and building self-discipline. Dewey (1916) explained that social integration is achieved via active participation in a democratic learning community, where all students complete a common core of general studies, gain social experience, and actively develop and hone the skills needed for responsible citizenship.

Integration of knowledge

Dewey (1936) believed that the curriculum should be personally meaningful to the learner and valuable to society. He argued that subject content should consist of the specific knowledge that is uniquely important to each individual within their community context. Although Dewey did not specifically make the link between subject content and curriculum integration, his point was clear: integration of the curriculum must provide for personal

integration, which requires subject content related to the local context, and social integration, which requires subject content that promotes the development of responsible citizenship.

Provocation: A curriculum that develops social skills in Years 5 & 6

Kate and Jessie are mid-career teachers who have become increasingly concerned about bullying in Years 5 and 6 within their primary school. They talk to their principal about it and she asks them to design a local curriculum for Years 5 and 6 that emphasises the development of social skills. Kate and Jessie need your advice. What key ideas do you think they should include in their middle years' curriculum design?

Integrative curriculum design in the middle years

Pragmatic issues

Middle years' curriculum design must include several elements. The design process is not straightforward but, with the benefit of the clarity provided by our rationale for middle years' curriculum, it is evident this process does not need to be excessively complex either. This section discusses some pragmatic issues relevant to middle years' curriculum design before going onto discuss and evaluate extant middle years' curriculum designs.

Developing a curriculum framework

Any middle years' curriculum design must be multifaceted if it going to be "challenging, integrated, negotiated and exploratory" (MYSA, 2008). Accordingly, when the official curriculum is limited to an exposition of subject content to be delivered at each level – as it is in the case of the Australian Curriculum – it is necessary to develop a curriculum framework with links to pedagogy and assessment that will ensure the learning needs of students are met. For instance, Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Byrne (2002) recommended a framework that they called 'parallel curriculum' for educating gifted and talented students. Their framework entailed four curriculum strands: (1) *core*, which is subject content derived from the official curriculum, (2) *connections*, which expands on key concepts within the core, (3) *practice*, which focuses on developing students' disciplinary expertise, and (4) *identity*, which focuses on helping students relate to the discipline. Although this framework does not attend to important aspects of the middle years' curriculum such as diversity, it illustrates the necessity for curriculum design to include several facets.

Curriculum models

As revealed in the previous section, the student-centred and subject-centred models of curriculum are at odds with each other. In their pure form neither is appropriate for the middle years' curriculum but a hybrid of these two models, that focuses on meeting students' needs and ensuring that the curriculum includes substantive subject content, is an ideal model for the middle years – thus we should expect to see these two elements in contemporary designs for middle years' curriculum.

Curriculum models only approximate real-life, thus any application of a given curriculum model will not be implemented perfectly. Indeed, in the middle years it is often preferable for

the teacher to pragmatically and mindfully choose to implement just one part of a model or an amalgam of models that suits the classroom context, rather that attempting to implement a model in its entirety. The key is to operate mindfully, that is, always being able to justify every aspect of classroom curriculum design.

Evaluating curriculum design

Many different curriculum designs have been utilised in the middle years. Some designs are purpose-designed for the middle years but others have been borrowed from other fields. Some designs make a significant difference to student learning outcomes and are well worth the effort spent in preparation but others have little or no impact on learning outcomes and may represent wasted effort. The middle years' teacher needs to be able to discern which curriculum designs are most suitable for use in their context, thus we will utilise our middle years' curriculum rationale as a lens for evaluation. The rest of this section discusses and evaluates some contemporary middle years' curriculum designs.

Middle years' curriculum designs

Curriculum integration

Middle years' experts are close to unanimous in their support for middle years' curriculum designs that move beyond the single subject approach. In particular, curriculum integration has been repeatedly recommended as especially suited to the middle years. Curriculum integration has appeal in the middle years because it holds the potential for students to gain a holistic or 'big picture' view of topics under investigation, thus it harmonises with real life and avoids artificial divisions between subjects (Beane, 1990, 1997). In his review of more than 100 studies of curriculum integration over a seventy-year period, Vars concluded:

> Almost without exception, students in any type of interdisciplinary program do as well as, and often better than, students in a conventional [departmentalised] program. (2000, p. 87)

Although curriculum integration has been implemented with notable success in Australia (e.g., Pendergast, Nichols, & Honan, 2012; Rennie, Venville, & Wallace, 2012), there have also been some instances where it has been implemented in the middle years without a sound rationale, with the result that the educational benefits to students have been regarded as dubious at best. For this reason, middle years' teachers should be well informed before they decide to go ahead and implement curriculum integration.

Curriculum integration has a long and illustrious history but in the last decade or so its reputation has suffered due to confusing terminology and a literature of indifferent quality (Dowden, 2007). Current understandings of curriculum integration derive from two separate traditions originating in the USA more than a century ago (Gehrke, 1998). One tradition is subject-centred and is mainly concerned with correlating different subjects according to a common theme. This approach does not involve Dewey's notions of personal or social integration, and is commonly referred to as *multidisciplinary curriculum*. Multidisciplinary curriculum is closely related to the traditional single-subject curriculum and, in the middle years at least, has little to recommend it because it does not include student-centred elements and thus fails to align with our middle years' curriculum rationale which places a premium on developmentally responsive curriculum design. A common approach to the design of multidisciplinary curriculum in middle schools in the USA is for teachers to get together as a

team and write a unit, typically involving the 'big four' subjects of mathematics, English, science and social studies but omitting the creative arts. This approach has led to the biggest single criticism of curriculum integration in the literature: planning for multidisciplinary curriculum is time-consuming and frustrating for teachers and, all too often, the outcome is that middle years' students are uninterested in the multidisciplinary unit and are reluctant to engage in classroom learning (Dowden, 2014).

The second tradition is student-centred and has its roots in *democratic schooling* (Apple & Beane, 2007; Dewey, 1916). In its pure form, student-centred curriculum integration, and the kind of school culture that is necessary to support it, is far removed from the single-subject curriculum. Accordingly, both primary and secondary teachers can struggle to understand elements of student-centred curriculum integration and they may not easily make the transition to implementing the kinds of curriculum, pedagogy and assessment that are implied by a student-centred approach.

A definition for curriculum integration that is relevant to middle years' curriculum design is:

> A collective term for curricula where meaningful learning activities are designed by crossing discipline boundaries and/or utilising multiple disciplinary perspectives with the purpose of helping students to create and enhance knowledge and understanding. (Dowden, 2014, p. 18)

This broad definition includes any curriculum design that straddles one or more subject areas but, as we apply our middle years' curriculum rationale, we can appreciate that creating *meaningful learning activities* implies the need for student-centred elements which moves curriculum design beyond the subject-centred focus of multidisciplinary curriculum. In particular, middle years' curriculum design for curriculum integration should include coherent alignment of subject content, meaningful cross-curricular connections, relevant pedagogies and authentic assessment (Nolan et al., 2000; Pendergast et al., 2005).

Beane's model of student-centred curriculum integration

Twenty five years ago James Beane's book *A middle school curriculum: From rhetoric to reality* (1990) gave the American middle years' movement a new curriculum design. This model of student-centred curriculum integration, sometimes referred to as *integrative curriculum*, was superbly sensitive to the developmental needs of middle years' students and a sharp change from traditional subject-centred curriculum designs. Drawing from Dewey's ideas about democratic education, the model invited students to collaborate with their teachers and engage in curriculum-making. Beane's model utilised Dewey's notions of integration we discussed earlier. Beane defined his model as:

> A curriculum design theory that is concerned with enhancing the possibilities for personal and social integration through the organisation of curriculum around significant problems and issues, collaboratively identified by educators and young people, without regard for subject-area lines. (1997, p. 19)

The notions of personal integration and social integration are central to Beane's model. These notions build students' knowledge and skills as well as preparing them for active citizenship. The process of negotiating the curriculum via collaborative teacher-student planning facilitates social integration and teaches middle years' students valuable social skills.

Beane's (1997) integrative model is based on dynamic interplay between: themes generated from students' personal and social concerns, disciplinary knowledge needed to explore the themes, and the concepts of *democracy*, *dignity* and *diversity*. The model utilises themes generated from students' personal concerns and their concerns about social issues. Students are asked two questions: 'What questions or concerns do you have about yourself? What questions do you have about your world?' As these questions are addressed, the subject content of the classroom curriculum emerges and a particular problem or project is negotiated. In this student-centred curriculum design, students actively seek particular knowledge within the disciplines because they are motivated to learn, as opposed to a subject-centred curriculum design where students would be expected to passively learn decontextualized disciplinary knowledge for its own sake. Beane (1997) grounded his curriculum design in the concepts of democracy, dignity and diversity. These concepts underpin his model by ensuring that subject content is relevant and meaningful for the diverse range of middle years' students and dignifies them as learners by ensuring their experience of schooling is a democratic and inclusive process.

Beane's model is especially suited to the middle years because, as we apply our middle years' curriculum rationale, we can see it is attuned to a range of students' developmental needs. High on the list are the important social skills developed while negotiating the curriculum, an approach to including students in curriculum-making that also has a history in the Australian context (Boomer, Lester, Onore, & Cook, 1992). Beane's model lends itself to a range of real-world contexts beyond the school gate such as service-learning (Theriot, 2009) or community-based projects that will 'make a difference', for example, determining the sustainable use of a water supply for local public amenities.

Although Beane's model is elegant, and no doubt beguiling to teachers who are predisposed to democratic education, it is a radical curriculum design that is distinctly different to most other curriculum models and it may struggle for acceptance in some school communities. Key political questions for the teacher to address, then, are whether Beane's model is an appropriate means of delivering mandated subject content and whether this form of curriculum integration will be accepted by local community stakeholders.

Lessons from the past

The following recommendations for the design and implementation of curriculum integration are indicated for the middle years and are drawn from hard-won lessons from the past where curriculum integration was less than successful (adapted from Dowden, 2012 & 2014).

Respect the status of the single subject

When designing curriculum integration for the middle years it is wise to respect the status of the single-subject curriculum within the Australian education system. The traditional single-subject curriculum model increasingly dominates as students progress from the middle to the senior years. Each subject has specific pedagogical content knowledge associated with it that defines subject-specific approaches to teaching. In the case of mathematics, for example, the sub-culture of specialist mathematics teachers validates particular ways of teaching mathematics and rejects others. The single-subject approach is conservative and resistant to change. It is reinforced by subject experts and scholars, by school cultures and by traditional assessment such as exams. Indeed, most secondary teachers define themselves by the subject they teach, rather than the students they teach.

In many contexts, then, the high status of the single-subject curriculum explains the origin of resistance to curriculum integration. Subject teachers may be genuinely worried that the result of implementing curriculum integration will be that students will have diminished content understanding and will not develop subject-specific skill sets to the expected benchmarks. Parents and caregivers may be concerned about curriculum integration because they want their children to be prepared for senior high school.

Accordingly, curriculum integration must comply with normal checks and balances. It is essential to be able to clearly demonstrate what middle years' students have learned and the new skills they have mastered. In a traditional unit of work, the scope, sequence and learning outcomes are determined by the teacher beforehand but this is not possible when the design of curriculum integration is negotiated by the teacher and students. An effective solution is to 'back-map' learning outcomes from the unit against required standards or skills (Nesin & Lounsbury, 1999). Back-mapping can also include authentic assessment items such as exhibitions of students' work and performances of students' skills (Beane, 1997).

Curriculum integration should have clarity of purpose

In order for middle years' students to make substantive academic progress, the teacher must utilise the full range of curriculum, pedagogy and assessment tools to develop strategies that motivate students to actively engage in classroom learning activities. When done well, middle years' students have an emotional and intellectual investment in curriculum design. Good design supports effective learning and students soon build a portfolio of learning skills and develop a disciplined approach to their studies. The following points are especially relevant when planning curriculum integration in the middle years:

- Establish a clear and unambiguous rationale for implementing curriculum integration,
- Design student-centred curriculum integration such that it helps students achieve personal developmental goals and builds social connections (especially in Years 5-7),
- When implementing student-centred curriculum integration ensure that all teachers understand developmental needs in the middle years, and
- Implement subject-centred multidisciplinary units in instances where two or more disciplinary perspectives are desirable and this leads to deep learning, but avoid subject-centred multidisciplinary units unless the inclusion of each subject can be justified on a case-by-case basis.

Enlist the support of community stakeholders and be willing to be pragmatic

When implementing student-centred curriculum integration, the teacher should make sure it is understood and supported by the community. In particular, the teacher must be certain that they have the unequivocal backing of the school principal (Snapp, 2006).

Teachers should be constantly aware of the need in the middle years to rigorously prepare students for academic success in high school, therefore when implementing curriculum integration, teachers should be prepared to act pragmatically where necessary. For example, it often makes sense to temporarily suspend a curriculum integration program in order to teach 'stand-alone' lessons for subjects such as mathematics (Dowden, 2014).

A doctrinaire approach to the implementation of curriculum integration for ideological rather than educational reasons is unacceptable. A likely outcome is that students will be

disadvantaged and the wider community will not welcome future proposals to implement curriculum integration. In particular, it is important to always remember that student-centred curriculum integration is not a mainstream curriculum design thus, in order to maintain a good reputation, it is vital to implement it well and to get the politics right.

Provocation: A negotiated curriculum that makes a difference

Penelope recently read an article in a teacher magazine about service learning. She thinks that her Year 6 class would greatly benefit from service learning if it is implemented in their local community. She is keen to get underway but is unsure where to start, especially since she knows her principal will want a sound argument before he will allow any of her students to go into the community. What advice can you give to Penelope that will enable her students to authentically engage in negotiating the content of the local curriculum and also achieve learning outcomes that will make a lasting difference to the local community they live in?

Chapter summary

Middle years' teachers must have a strong rationale for curriculum design, otherwise recommendations from middle years' experts, such as the need for middle years' curriculum that is "challenging, integrated, negotiated and exploratory" (MYSA, 2008, n.p.), become empty slogans that lose their meaning in primary and secondary schooling contexts. Middle years' teachers should understand that curriculum is always political and that the curriculum that is enacted in the classroom is often the result of compromise. The middle years' curriculum is the site of a political struggle between the interests of the subject-centred model, which emphasises a challenging curriculum that focuses on a robust understanding of the disciplines, and the student-centred model, which aims to harness the energy and enthusiasm of students by ensuring the curriculum is relevant and meaningful to them. Good middle years' curriculum design is integrative because it utilises elements of both of these models. The student-centred curriculum integration model offers exciting potential for the middle years because it has the potential to maximise student engagement but, because it is not a mainstream design, the political context tells us that teachers should implement it respectfully and pragmatically.

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