



# Curriculum integration in the twenty-first century: some reflections in the light of the Australian curriculum

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## Abstract

This paper takes up Grumet and Yates' challenge to understand curriculum as "a projection towards a future as well as a drawing from the past" (2011, p. 245), exploring some of the enabling and constraining factors for curriculum integration in twenty-first century Australia. It takes a historical perspective, using this context to explore contemporary enabling and constraining factors for curriculum integration in Australian schools. It argues that while curriculum integration might provide a possible pathway to realising contemporary goals for Australian education, to a large extent this will rely on opportunities for the teaching profession to develop a robust sense of identity around 'curriculum work', reclaiming this space over that of 'curriculum deliverer'. It argues that this in itself will require a resistance to some of the dominant ideas about curriculum, pedagogy and teachers' work embedded in contemporary education policy and suggests some of the forms that this resistance might take.

**Keywords** Curriculum design · Curriculum integration · Teachers' work

## Introduction

Curriculum integration is not a new idea. In some ways, an essay on curriculum integration in the twenty-first century might be more aptly subtitled 'Curriculum integration: Why are we still talking about this stuff?' One answer to this question is 'because it is so hard', particularly in most secondary schools where the curriculum is neatly organised into discrete disciplines. We could also argue that over the past decade or so curriculum integration has become even harder, with so much of the way that both curriculum and schooling are structured in the contemporary age working against the idea. On the other hand, a renewed focus on science, technology, engineering and mathematics (STEM) and STEM + arts (STEAM), both in Australia and elsewhere, might provide us with a new energy for curriculum innovation and curriculum integration. We might add to this the imperatives contributed by the

contemporary world, where developing students' capacity to navigate knowledge and information across disciplinary boundaries is increasingly important. It is from both of these perspectives, focusing on both the possible constrainers and enablers, that I offer this reflection on curriculum integration in the light of the Australian Curriculum (AC).

There are, of course, many ways of integrating the curriculum, and these have been well discussed elsewhere in the literature (see, e.g. Beane 1997; Drake and Burns 2004; Groundwater-Smith et al. 2007). *Multidisciplinary* approaches are said to use different subject areas or disciplines as 'mirrors' to a chosen theme, linking the content that most closely relates to the theme into the integrated unit of work. As Beane (1997) suggests, while multidisciplinary approaches do contribute a range of different perspectives on the theme, they generally fall short of authentic integration, due to the curriculum still being fundamentally structured around separate disciplines. *Interdisciplinary* approaches usually involve seeking out common ideas embedded within different disciplines and developing interdisciplinary skills. *Transdisciplinary* approaches are usually forged around big questions, problems or ideas that drive the natural connections between subject areas or disciplines.

In this paper I aim to take up Madeline Grumet and Lyn Yates' (2011) challenge to understand curriculum as 'a projection towards a future as well as a drawing from

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the past' (p. 245), exploring some of the framing factors for curriculum integration in second century Australia. The paper is presented in three parts. In the first, I explore some of the historical bases for curriculum integration, revisiting some key ideas of the twentieth century and using these to build a rationale for curriculum integration in contemporary Australia. In the second, I briefly explore some of the key enabling and constraining factors at work in shaping curriculum integration in the context of the AC. Here I explore the possibilities for integration inherent in the AC itself, and contemporary approaches to both pedagogy and curriculum design that lend well to integration. I also explore national and global factors that stand in tension with these possibilities, and consider their local implications for curriculum integration. In the final, concluding section, I explore how educators might 'work the tension' between these enabling and constraining factors, arguing that teachers need to reclaim their role as 'curriculum workers', beyond that of 'curriculum deliverers'.

## Curriculum integration: a historical perspective

Michael Apple (2013) has written in recent years of 'collective amnesia' in education, and its impact on our field. One does not need to look too hard to see this in action. In 2016, one of the recent reviewers of the AC, in an opinion piece published in *The Courier Mail*, referred to formative assessment as a 'progressive fad' (Donnelly 2016). While admittedly a single example, Donnelly's claim, made to an audience of approximately 400,000 parents and community members (Roy Morgan Research 2017), reminds us of why some 'historical excavation' (Apple 2013) is desirable. The history of educational ideas can be overwritten and revised in public consciousness and as a consequence it does us well to return to these ideas at the source from time to time.

So, in responding to Apple's call, this paper will briefly traverse the twentieth century, exploring some of the key ideas that have shaped notions of curriculum integration in twenty-first century Australia. I do not intend this to be a comprehensive account, which is necessarily beyond the scope of this paper, but rather to assemble a series of perspectives that might be seen to provide the historical roots of contemporary ideas about curriculum integration.

First, to the work of John Dewey, arguably the most prominent American educationist of the twentieth century. Relatively late in his career, Dewey wrote *Experience and education* (1938), his final book on education, in which he reflected on the past 30 years of progressive education and on the relationship between the child and the curriculum. Dewey was one of the first to argue stridently for the integration of the

curriculum in the name of integrating education and children's lived experience:

Almost everyone has had occasion to look back upon his school days and wonder what has become of the knowledge he was supposed to have amassed during his years of schooling ... One trouble is that the subject matter in question was learned in isolation; it was put, as it were, in a water-tight compartment. When the question is asked, then, what has become of it, where has it gone to, the right answer is that it is still there in the special compartment in which it was originally stowed away. If exactly the same conditions recurred as those under which it was acquired, it would also recur and be available. But it was segregated when it was acquired and hence is so disconnected from the rest of experience that it is not available under the actual conditions of life. It is contrary to the laws of experience that learning of this kind, no matter how thoroughly engrained at the time, should give genuine preparation. (Dewey 1938, pp. 48–49)

These ideas are reflected in contemporary pedagogical practices that recognise the importance of working with and building on students' knowledge and experience, such as in the 'relevance' and 'recognition of difference' dimensions of the Productive Pedagogies Model developed in Queensland in the early 2000s (Lingard et al. 2001) and in the 'significance' dimension of the NSW Quality Teaching Framework (Department of Education and Training 2003). The primary idea is that knowledge is not 'siloes' and that genuine preparation, to use the words of Dewey, uses the 'actual conditions of life' as drivers for the curriculum.

The 1960s and 1970s gave birth to a renewed focus on curriculum reform, particularly in the United States, where the MACOS curriculum ('Man: A course of study'<sup>1</sup>) was developed by Jerome Bruner and colleagues, and in the United Kingdom, in Lawrence Stenhouse's ground-breaking work on the Humanities Curriculum Project (HCP). Bruner's background was in psychology, and he brought to his curriculum work a sensibility grounded in the psychological sciences, which underpinned his argument that 'any subject can be taught effectively in some intellectually honest way to any child at any stage of development' (Bruner 1966, p. 33). This idea sits at the heart of the 'spiral curriculum', one of Bruner's key contributions. Bruner was committed to working with the innate curiosity of children and young people, and providing a counterpoint to orthodoxies of the day that often confused learning and memory. We see something of both

<sup>1</sup> Subsequently renamed '(Hu)mans: A course of study'. See <http://www.macosonline.org>

commitments in the opening paragraph of his original writing on MACOS:

There is a dilemma in describing a course of study. One must begin by setting forth the intellectual substance of what is to be taught, else there can be no sense of what challenges and shapes the curiosity of the student. Yet the moment one succumbs to the temptation to ‘get across’ the subject, at that moment the ingredient of pedagogy is in jeopardy. For it is only in a trivial sense that one gives a course to ‘get something across’, merely to impart information. There are better means to that end than teaching. Unless the learner also masters himself, disciplines his taste, and deepens his view of the world, the ‘something’ that is got across is hardly worth the effort of transmission. (Bruner 1966, p. 78)

MACOS itself incorporated studies of geography, history, science, religion and ethics and language arts, into a transdisciplinary curriculum shaped around the three recurring questions ‘What is human about human beings?’, ‘How did they get that way?’, and ‘How can they be more so?’ Bruner’s ‘emphasis on the power of ideas to shape and stimulate thought’ (Dow et al. 1971, p. 2) strongly informed the MACOS curriculum, drawing on his notion, resonant with Dewey’s ideas about experience, that ‘The best way to create interest in the subject is to render it worth knowing, which means to make the knowledge gained usable in one’s thinking beyond the situation in which the learning has occurred’ (Bruner, cited in Dow et al. 1971, p. 3).

The second large-scale example of an integrated curriculum from the mid-twentieth century came from the HCP, developed in the late 1960s by Lawrence Stenhouse and colleagues in the context of the extension of compulsory schooling in the United Kingdom to 16 years of age. The HCP curriculum crossed boundaries between English, history, geography, religious studies and social studies and was shaped around the notion of ‘controversial issues’. This notion, developed by Dorothy Fraser in her 1963 book *Deciding what to teach*, was defined as one that:

involves a problem about which different individuals and groups urge conflicting courses of action. It is an issue for which society has not found a solution that can be universally or almost universally accepted. It is an issue of sufficient significance that each of the proposed ways of dealing with it is objectionable to some section of the citizenry and arouses protest ... When a course of action is formulated that virtually all sectors of society accept, the issue is no longer controversial. (Fraser 1963, p. 153)

Stenhouse mounted a strong argument for the integration of the curriculum as an ‘example of education informing and giving grace to living’ (Stenhouse 1968, p. 27), and for him, the enactment of curriculum work by teachers, through the exercise of wise and well-honed professional judgement, was a crucial dimension of curriculum reform. Stenhouse is possibly more famous in the twenty-first century for his ideas about teachers as researchers, but his ideas about teacher research were initially focused around the role of teacher inquiry in curriculum development. His ideas about classrooms as laboratories for pedagogical innovation and experimentation were strongly linked to notions of inquiry as the ‘engine room’ of teacher development.

Furthermore, in the context of curriculum innovation and integration, Stenhouse was strong on the notion of teachers as scholars of both their academic disciplines and of education itself, and for the ideas driving curriculum to be robust, coherent and rigorous. He advanced the case of interdisciplinary integration as opposed to multidisciplinary integration when he wrote:

To cross subject curriculum boundaries successfully, one must grasp ... standards of quality in each of the subject fields involved ... Areas of study should have an internal logical coherence, and should not be based on casual associations. Thus, the juxtaposition of political power and power as energy in the physical sense is unsatisfactory, as is the association of irrigation, boiling kettles, swimming and water on the knee in a unit on ‘water’. Themes should probably seem inevitable, rather than clever. (Stenhouse 1968, pp. 27–28)

Both the MACOS curriculum and the HCP encapsulated a lot of what we might call ‘dangerous ideas’. First, the big ideas at the heart of both were in their very nature, as we have seen, controversial. Second, they encapsulated dangerous ideas because of the way they understood and configured content knowledge. John Elliott, reflecting in the 1990s on curriculum reform in the 1960s, wrote:

It was about changing the ways knowledge was represented in schools to children; not as information to be transmitted but as structures — of ideas, principles and procedures — which support creative and imaginative thinking about human experience ... But when knowledge is represented as structures which support inquiry the traditional syllabus is a quite inappropriate form of content organisation. This mode of representing knowledge is incompatible with a requirement for teachers to cover large amounts of content. It requires a more parsimonious organisation of content around the central

questions and problems which define the various disciplines by which human beings have attempted to make sense of their experience. (Elliott 1994, p. 49)

This idea resonates with Howard Gardner and Veronica Dyson's (1994) argument, made in the 1990s, that 'the greatest enemy of understanding is coverage' (p. 217). Somewhat disturbingly, many of the ideas embedded in the curriculum reforms championed by people such as Bruner and Stenhouse in the 1960s and 1970s, about content structures, student agency and decision making in learning, are still seen as deeply dangerous in the twenty-first century.

Subsequent to MACOS and the HCP, Australia's own Garth Boomer (1992) wrote of the teacher, the child and the curriculum as the 'eternal triangle' of education. In his classic work on negotiating the curriculum, he articulates a host of key questions that might drive curriculum design:

- How do children (and for that matter, we) learn?
- Under what conditions do children learn most effectively?
- What is learning?
- Do we all learn in the same way?
- How would you then fare as a learner in your own class?
- Are schools dedicated to the promotion of the child's power to learn, and ultimately to learn independently of instruction and guidance? (Boomer 1992)

Two things about these questions are noteworthy. The first is that the questions are all about learning, the implicit suggestion being that curriculum and learning are intrinsically linked, and that the first consideration for teachers in curriculum planning should be not curriculum content, but rather their learners. On the one hand this may not seem unusual, but on the other it does stand in contrast to the way that *curriculum* is often positioned today. The Donnelly and Wiltshire report, for example, suggests that, 'If the definition of a national curriculum includes that it must be implemented comprehensively, with certainty, and consistently, then Australia does not currently have a national school curriculum' (Donnelly and Wiltshire 2014, p. 105). That teachers discussed 'adopting', 'adapting' and 'integrating' the AC into their repertoires was a decided cause for concern for the reviewers, who seem to take the perspective that the curriculum can and should be 'implemented' consistently across all schools.

The second point of interest is the tension between the teacher, child and curriculum as the 'eternal triangle'. Boomer developed his model of negotiated learning in response to what he called 'motivated learning', which, he argued, rarely saw real alignment between student learning and teacher goals. In Boomer's model of negotiation (see Fig. 1 below), the intention of the teacher, defined as the sum of the teacher's previous experience/knowledge and the planned curriculum was married with the student's intention, defined as

the sum of their previous experience and their school aspiration, through dialogue, into a shared intent. There are three sets of constraints noted in the model: those that impact on the teacher's intention, those that impact upon the student's intention and those that impact upon the shared intent developed. He noted that in different contexts these might include such things as 'a fragmented timetable, disguised streaming of children and teachers, external examinations, large classes, or a limited choice of commercially produced resources all with an implicit, behaviourist learning theory' (Boomer 1992, p. 7).

In Boomer's work, we can see a reflection of Dewey's ideas about the centrality of experience, Bruner's ideas about curiosity and the challenge of the Humanities Curriculum Project to look beyond 'coverage'. Furthermore, Boomer's big challenge to us is to put learning at the centre of the curriculum development equation, not an easy task for those of us working within systems that position curriculum as more about content than learning. Having explored some of the key historical ideas, let us now turn to the contemporary enabling and constraining factors for integrating the curriculum.

## Curriculum integration in the twenty-first century: enabling and constraining factors

### Enabling factors

The Melbourne Declaration articulates a vision of young Australians as 'successful learners' that involves, among other things, creativity, innovation and resourcefulness, the ability to solve problems in ways that draw upon a range of learning areas and disciplines, and the ability to make sense of their world and think about how things have become the way they are (MCEETYA 2008). While the declaration also points strongly towards the development of disciplinary knowledge, the vision embedded in the declaration that young people are confident and creative individuals and active and informed citizens, and the commitment to action in enhancing middle years development, would seem to support working with those historically articulated ideas about curriculum integration.

Similarly, while the AC and its locally developed counterparts are unashamedly structured by disciplines, the most recent iteration of ACARA's *Shape of the Australian Curriculum* paper acknowledges that, 'Rather than being self-contained or fixed, disciplines are interconnected, dynamic and growing. A discipline-based curriculum should allow for cross-disciplinary learning that broadens and enriches each student's learning' (ACARA 2012, p. 22). It becomes more explicit about possibilities for curriculum integration related to students' experience and interests, and local considerations when it says: 'Schools are able to decide how best to deliver the curriculum, drawing on integrated approaches where



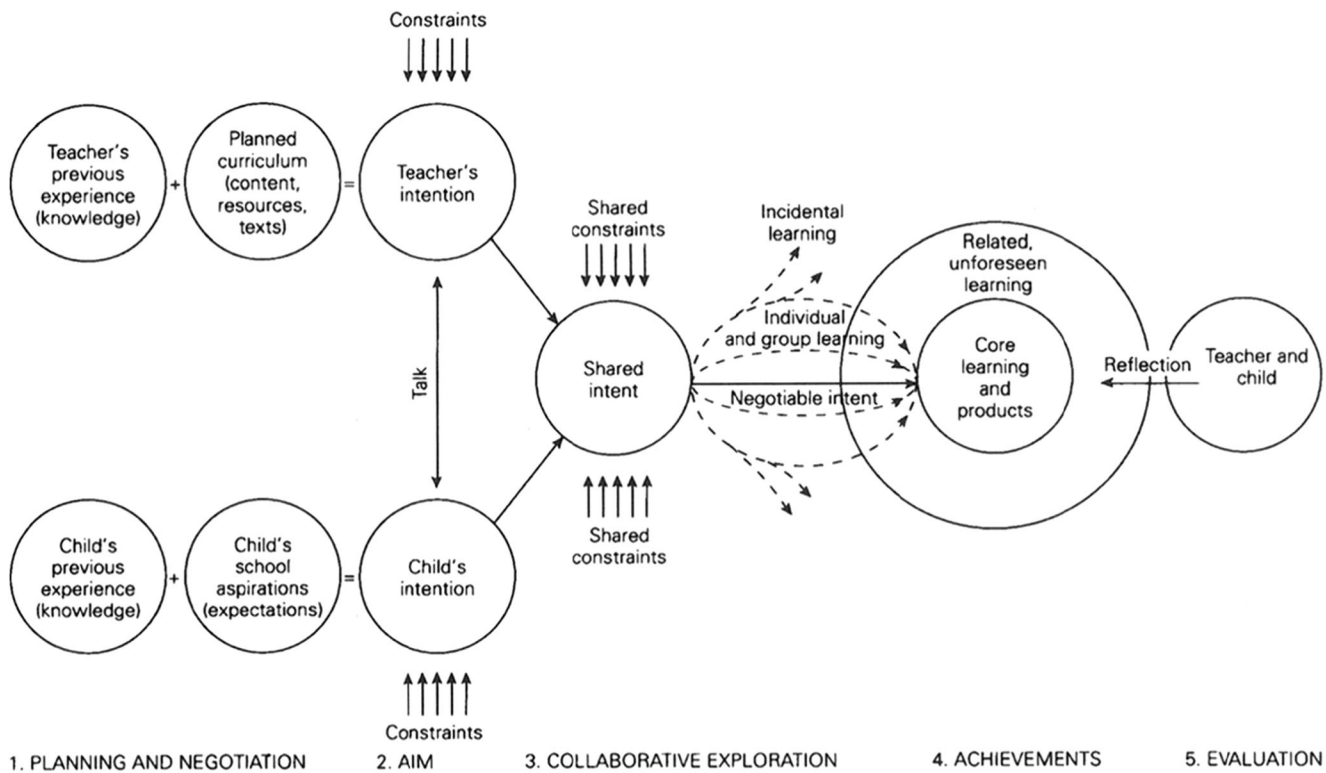


Fig. 1 Boomer’s model of negotiation (Source: Boomer 1992, p. 11)

appropriate and using pedagogical approaches that account for students’ needs, interests and the school and community context’ (p. 13).

Clearly the underpinning philosophy and guidelines for the AC, then, open doors to the possibility of curriculum integration as one way of realising the broader goals of education in Australia. While, historically, one of the main critiques of curriculum integration has been around the erosion or ‘dumbing down’ of traditional disciplines (see, e.g. Venville et al. 2002), the AC itself recognises the compatible rather than antagonistic nature of the learning areas.

A second enabler might be thought of as the late twentieth century/early twentieth century turn towards ‘understanding’. We see this in approaches to curriculum design that make use of Wiggins and McTighe’s *Understanding by Design* (1998) approach, for example, and also reflected in the Teaching for Understanding framework developed by the Project Zero team at the Harvard Graduate School of Education (Andrade et al. 1999). The initial iterations of these approaches were published within about six months of each other in 1998 and 1999, and have had a widespread influence on practitioners globally over the past two decades. The ‘enduring understandings’ at the heart of the understanding by design approach and the ‘generative topics’ at the heart of Teaching for Understanding resonate very closely with ideas about controversial issues. While it is certainly possible to generate both of these in a single-discipline context, they often ‘bleed’ into the silos of other disciplines, lending well to integrated curriculum

work. These approaches, along with others, such as problem- and project-based learning and ‘assessment for learning’, have given us, at a time when the curriculum has arguably become more fragmented, a way of thinking more holistically about the task of curriculum design. They might be thought of as enablers for curriculum integration because of this as well as because of the resonance between those central understandings and the ‘big ideas’ that have historically driven curriculum integration.

A third enabler is children and young people themselves: the ‘consequential stakeholders’ of curriculum and schooling. They come to school with more access to more information and more knowledge than any generation of the past. While Prensky’s (2001) ‘digital natives’ argument has long been critiqued, and a range of variables other than generation have been identified as predictors in interactions with the internet (Helsper and Eynon 2010), it is reasonable to argue that students access and experience information and knowledge in different ways. Furthermore, in these ‘real-world’ experiences, knowledge is not divided into disciplinary silos, which suggests an openness to knowledge integration, writ large, on the part of contemporary children and young people.

### Constraining factors

Now I will briefly sketch out the constraints. Pasi Sahlberg, former Director-General of the Centre for International Mobility and Co-operation at the Finnish Ministry of

Education and Culture coined the acronym ‘GERM’ (Global Education Reform Movement) some years ago. Sahlberg (2011) argues that the GERM takes its inspiration from three sources. The first of these is a recent backlash on a global scale against constructivist, learner-centred approaches to teaching and learning. The second he refers to as ‘the public demand for guaranteed, effective learning for all’ (p. 100), while the third is the competition and accountability movement in education. These, he argues, have given rise to five globally observable educational trends, employed in diverse international contexts in the name of improving the quality of education:

1. standardisation
2. increased focus on core subjects
3. prescribed curriculum
4. transfer of models from the corporate world to education
5. high-stakes accountability.

Local iterations of the GERM in Australia have seen, among other things, the introduction and ‘scaling up’ of teaching standards which seek to quantify and standardise teaching practice; the introduction of national standardised testing and use of testing results to create a de facto market in schooling through the [myschool.edu.au](http://myschool.edu.au) website; and, of course, the urgent creation of the national curriculum itself. The ‘perverse effects’ of these policy moves in Australian education have been well documented (see, e.g. Lingard and Sellar 2013). Together, they lead towards a narrowing of the curriculum, and a drive to privilege that which will be used for accountability purposes over that which will not. Bahr and Crosswell (2011) have argued in recent years that, in the Queensland context, the middle years focus that emerged from the Queensland School Reform Longitudinal Study (Lingard et al. 2001) in the early 2000s has ‘lost ground’ to concerns in recent years around underperformance (linked to comparative NAPLAN [National Assessment Program – Literacy and Numeracy] scores), ‘teacher quality’ and a concern for disciplinary rather than interdisciplinary curriculum. These elements work as the key constraints to an integrated curriculum both on their own terms and through their reinforcement of ‘traditional’ structural arrangements for schooling, many of which continue to get in the way of student learning (Hayes 2003).

### Working the tension: some reflections on reclaiming curriculum work

So, given these enabling and constraining factors, what might it take to successfully integrate the curriculum in twenty-first century Australia? Part of the solution, it seems to me, based on both research and ongoing interactions with teachers

located in schools across sectors and geographical locations, lies in reclaiming the notion of the teacher as a ‘curriculum worker’.

This in turn relies on understanding curriculum work as a complex process involving prioritisation, translation and transformation of knowledge into appropriate conditions for learning, with reference to context. It relies on understanding curriculum work as a deeply creative and productive process that demands confidence with and command of content; deep pedagogical expertise; and ideally a good understanding of the learners in question. This is an understanding of teaching as scholarly work, as intellectual work, as knowledge work.

In their book *Schooling by design*, Wiggins and McTighe (2007) expressed their frustration with what they saw as an uncomfortable relationship between teachers and curriculum:

Over the years, we have observed countless examples of teachers who, though industrious and well meaning, act in ways that suggest that they misunderstand their jobs ... We believe that teachers, in good faith, act on an inaccurate understanding of the role of ‘teacher’ because they imitate what they experienced, and their supervisors rarely make clear that the job is to cause understanding, not merely to march through the curriculum and hope that some content will stick. (p. 128)

This observation, despite being expressed as an individual issue, points to a more systemic one, that of the deprofessionalisation of teachers in relation to curriculum work. As the amount of curriculum content has risen, Australian teachers have increasingly been encouraged to see curriculum in terms of ‘coverage’.

For example, the original *The shape of the Australian Curriculum* paper, published in 2009, had the following to say about teachers as curriculum workers:

The curriculum should allow jurisdictions, systems and schools to implement it in a way that values teachers’ professional knowledge and that reflects the needs and interests evident in local contexts, as *it will be teachers who decide how best to organise learning for students*. Organisation of learning should take account of individual family, cultural and community backgrounds; acknowledge and build on prior learning experiences; and fill gaps in those experiences. (National Curriculum Board 2009, p. 8, emphasis added)

Implementing the national curriculum, as in the case of state and territory curriculums, *will rely on teachers’ professional judgments about how best to organise learning for students, how to reflect local and regional circumstances, and how best to take advantage of their*

*own specialised professional knowledge and their students' interests.* (National Curriculum Board 2009, p. 11, emphasis added)

By the 2012 version of the paper, these passages had morphed into:

*Jurisdictions, systems and schools* will be able to implement the Australian Curriculum in ways that value teachers' professional knowledge, reflect local contexts and take into account individual students' family, cultural and community backgrounds. Schools and teachers determine pedagogical and other delivery considerations. (ACARA 2012, p. 11, emphasis added)

*The Australian Curriculum makes clear to teachers what is to be taught.* It also makes clear to students what they should learn and the quality of learning expected of them. Schools are able to decide how best to deliver the curriculum, drawing on integrated approaches where appropriate and using pedagogical approaches that account for students' needs, interests and the school and community context. (ACARA 2012, p. 13, emphasis added)

The differences are subtle but the shift from teachers deciding how best to organise learning for students to schools being able to decide how best to deliver the curriculum is not just a semantic one. Rather, it goes to the heart of teacher professional judgement in relation to curricular decision making. The 'makes clear to teachers' in the second iteration signifies an almost disciplinary stance from ACARA in relation to teachers, while school decision making is viewed in a more favourable light. Further, the notion that curricular decisions should be made at a school rather than classroom level suggests at least some acceptance of a 'one-size-fits-all' curriculum, and a reluctance to acknowledge that teachers can and should use their professional knowledge and judgement to tailor learning to the needs of their learners.

An important aspect of reclaiming the 'curriculum worker' space is embracing and consciously growing teacher professional judgement as a matter of professional development priority. Teacher professional judgement has been regarded with increasing suspicion over the past 20 years, but so much of teachers' curriculum work, not to mention other work, relies on finely honed professional judgement. Professional judgement has come to be thought of as unreliable and 'subjective', with 'data' sought as an objective alternative, but this rests on a misconception about educational evidence and the role of judgment. When confronted with a range of evidence of student learning in the form of 'data' from different sources, teacher professional judgement becomes more, not less, critical.

Teacher professional judgement can be sharpened by teacher educators, school leaders and teachers working collaboratively to sustain real conversations about curricular and pedagogical practice, to push each other to draw evidence from a broad range of sources and use it in both employing our judgement and opening that judgement up to the scrutiny of others. A teacher who is truly in touch with their students and their learning knows vastly more about the performance of their students than a supposedly objective test score. Professional judgement is by no means a 'silver bullet', but so much of engaging in critical curriculum work relies on confident and well-developed professional judgement that it warrants prioritising in the mission to reclaim 'curriculum work'.

Without teachers being enabled to embrace their identity as curriculum workers more overtly, more stridently and more expansively, visions of integration, whether oriented towards STEM or STEAM, are unlikely to come about in any real way. Grumet and Yates (2011), writing about curriculum 'writ large', suggest that we 'entertain the possibility that part of what curriculum does is fix, even for a brief time, the sense of what matters' (p. 237). The opportunity offered by current discussions about curriculum integration provides us with scope to articulate once again, in and for our school communities, a sense of what matters. We would do well to grab it with both hands.

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