

# Creativity and the Australian Curriculum

## Hidden Beliefs and Common Misconceptions

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### **Vignette 1: Should Teachers Establish a Separate “Creativity Time” in Their Curriculum?**

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Mr Marrow is a Year 1 teacher who values creativity and often incorporates it into his teaching. Although he readily admits that he doesn't know much about creativity theory or research, he has worked hard over the years to make room for creative expression in his classroom. In fact, he long ago established “creativity time” wherein students can do any kind of art project or other form of self-expression. He teaches his students when to be silly and when to get serious. As such, he often gives his students cues to remind them when they are being “creative” but “not appropriate” given the academic goals of a particular lesson. Mr Marrow has noticed that he has to give these types of cues more often since his school adopted the Australian Curriculum. He feels that his creativity/academic content ratio is a bit out of balance – particularly when teaching reading and mathematics. He is trying to find more time for his students to take small breaks from the content so that they can still find ways to express themselves creatively. Unfortunately, he feels it is a losing battle. He is starting to feel torn in two different directions.

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### **Vignette 2: Is Creativity Really Compatible with Standards-Based Teaching?**

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Ms Pascal, a secondary school maths teacher, often mentions to her colleagues that she inevitably gets one or two “creative” students in each section of the courses she teaches. For her, creative students are those who continually pose interesting questions and frequently surprise her with

the depth of their mathematical insights. She feels that creative students' strengths are also what make them so challenging to teach. They are at times exhausting, interesting, engaged, disruptive and simply difficult to predict. The thought of increasing her students' creative behaviour is one that sounds good in theory, but not when facing six sections of students and trying to keep on pace with all the new Australian Curriculum: Mathematics achievement standards. Ms Pascal is convinced that teaching for creativity means not teaching the Australian Curriculum. She feels both are reasonable, but incompatible, goals: whereas creativity is unconstrained originality, the Australian Curriculum is constrained conformity.

Mr Marrow's and Ms Pascal's experiences illustrate how many teachers feel: caught between competing curricular goals in light of the new Australian Curriculum standards. This chapter will take a closer look at common beliefs about creativity and curriculum standards, specifically the Australian Curriculum. We will discuss how some of these beliefs can result in mistakenly viewing creativity and standards-based learning as competing priorities. We will also discuss how a greater understanding of creativity can increase a teacher's ability to incorporate creativity development into standards-based teaching. The chapter will close with a *From Concepts to Classroom* section, which will summarise practical tips and suggestions for how teachers might incorporate these insights and ideas into their classrooms.

### COMMON BELIEFS ABOUT CREATIVITY

Creativity is a tricky concept to understand, particularly in the context of the classroom. One reason is that teachers, like most people, hold their own beliefs about creativity. Sometimes these beliefs are in alignment with how creativity researchers define and understand creativity; at other times they conflict. These personal, often unspoken thoughts that people have about a topic are called implicit beliefs. Implicit beliefs can be positive or negative. Psychological research has found that people's expressed opinions often correspond with their implicit beliefs about controversial issues (such as racism or politics) (Greenwald & Banaji, 1995).

People have implicit beliefs about creativity as well. One landmark study by Sternberg (1985) found that people generally view creativity as distinct from intelligence. They associated creativity with four dimensions: non-entrenchment (i.e. willingness to do something differently), aesthetic taste/imagination, perspicacity (astuteness) and inquisitiveness. Some studies have shown that some of the explicit theories of creativity, which will be discussed in detail in the next chapter, are intuitively believed by laypeople (e.g. Kaufman & Beghetto, 2013a).

There have been few formal studies of people's implicit beliefs about the content standards – but this does not mean that people do not have strong opinions!

### COMMON BELIEFS ABOUT CONTENT STANDARDS

The Australian Curriculum was developed by the Australian Curriculum, Assessment and Reporting Authority (ACARA), in accordance with the outline set forth in the *Melbourne Declaration on Educational Goals for Young Australians*. This document called for all Australian governments to support the creation of a national curriculum “designed to develop successful learners, confident and creative individuals and active and informed citizens” (MCEETYA, 2008). The resulting web-based publication is a living document, continually updated and improved, and formed by the opinions of national experts, government ministers and practising teachers. The Australian Curriculum aims to better prepare students for entrance into tertiary-level education and the workforce by outlining a common roadmap of concepts that students should be taught regardless of where they live or their background.

While policymakers and commentators may continue to debate the merits of the Australian Curriculum from their armchairs, many more teachers are being asked to bring them to life. We direct this book to teachers who are working with the Australian Curriculum and want to maintain both creativity and meaningful learning. To explore this, we must start with an understanding of creativity and content standards.

As discussed, many people view creativity as unconstrained originality. We say, for instance, “Think outside of the box.” Creativity is often associated with freedom, expansiveness and divergence. Content standards, on the other hand, are often seen as curricular constraints – or the very “box” that creative students (and teachers) try to escape. They are sometimes viewed as narrow, limiting and restrictive. As a result, teachers feel stuck in the middle between a desire to teach for creativity and a professional responsibility to teach for the attainment of content standards.

One of the authors of this book (Beghetto) recently held a workshop with teachers who were interested in teaching for creativity. During the lunch break a teacher (whom we will call Ms Ong) shared a story about her experiences teaching in a school with a nearly singular focus on meeting content standards. Ms Ong is passionately committed to teaching for and with creativity, but felt she had little freedom to do so. In fact, she explained that the only time teachers can work without surveillance and disruption from school administrators is when they display a “practice testing in progress” sign on their classroom door.

Practice testing in Ms Ong's school is viewed as a sacred time. Taking advantage of the way the administration takes a "hands-off" approach when they believe students are doing practice exams, Ms Ong used this time to engage her students in creative curricular activities. Ms Ong and other teachers who are passionate about creativity will do whatever it takes to incorporate it into the curriculum.

By contrast, Gary Groth, a veteran teacher with more than 30 years of experience, described his most recent year of teaching as the "absolute worst year in the classroom" he had ever experienced. Not because of his students, but because of how he experienced external curricular mandates: "This year I was told what to teach, when to teach, how to teach, how long to teach, who to teach, who not to teach, and how often to test. My students were assessed with easily more than 120 tests of one shape or another within the first six months of the school year" (Groth, cited in Berliner, 2011, p. 85).

Ms Ong and Mr Groth found that content standards can serve as a vehicle for developing policies that place unnecessary pressure on teachers (and their students). Moreover, the concomitant evaluation, monitoring and comparison that sometimes accompany accountability mandates often kill the motivation necessary for creative expression (Amabile, 1996; Hennessey, 2010a, 2010b). As a result, some teachers sneak creativity into their classrooms on the sly, whereas others may simply become discouraged.

These external pressures can also result in a narrowing of the curriculum (Berliner, 2011) which, in turn, undermines meaningful learning. Rather than teaching students how to learn and how to think, the curriculum becomes focused on a narrow range of outcomes. For example, McNeil (2000) found that teachers' most immediate responses to external curricular mandates was to narrow the scope and quality of course content – thereby distancing students from more meaningful and active learning. This narrow focus is most profoundly felt, according to McNeil, by students in low-income and predominately ethnic and racial minority neighbourhoods. In this way, the Australian Curriculum may exacerbate long-standing inequalities in education.

We recognise that implementing standards-based reforms can increase pressures on teachers and students and narrow the curriculum. As such, those leaders and policymakers who would advocate for creativity need to support teachers' efforts by examining how teachers experience such external mandates and exploring ways to decrease external pressures. We also feel it is important not to deny the agency that most teachers have in their own classrooms. Indeed, teachers can still do much to support student creativity and meaningful learning in the context of the Australian Curriculum. We will present ideas and examples for how this might be accomplished throughout the remainder of this book. But prior to doing so it is important that we first return to the question of whether creativity and the Australian Curriculum are compatible.

**CONTENT STANDARDS AND CREATIVITY:  
IRRECONCILABLE DIFFERENCES?**

Are creativity and the Australian Curriculum incompatible? We think not – in fact, we will argue that there are many synergies, places where the content descriptions and creativity support, reinforce and enhance one another. One needn't abandon creativity, one needn't forego many opportunities to teach students to be more imaginative, and one needn't feel like a philistine by teaching to the Australian Curriculum. But a teacher does need to be a bit more thoughtful about how they teach for creativity, a bit more selective about the kinds of exercises and activities used, and a bit more creative in the ways in which they plan lessons. All in a day's work for a teacher.

We are not Pollyannas; therefore, we are not arguing that we are living in the best of all possible (educational) worlds. And we acknowledge that there will be times when teaching for creativity and teaching to the Australian Curriculum will conflict. For example, to encourage students' creativity we often want to avoid extrinsic constraints (like rewards and evaluation) as much as possible, whereas the development of skills (including many of the Australian Curriculum general capabilities) often requires frequent and thoughtful evaluation of students' work. But that conflict existed long before the Australian Curriculum came along, and even the most passionate advocates of creativity enhancement acknowledge that students need to develop skills and acquire knowledge – domain-specific material that (among other things) is necessary for improving creative performance. Even Shakespeare had to learn history (and how to write and spell) somewhere along the way before he could write *Henry IV*. Denying our students opportunities to learn such things wouldn't just cause them to fail standardised tests. It would also limit their creative growth. We will discuss ways to deal with this intrinsic versus extrinsic motivation issue and other potential creativity/Australian Curriculum conflicts below. They are manageable, but dealing with such conflicts productively requires thoughtful planning.

So yes, there are some conflicts between teaching for creativity and teaching the Australian Curriculum, but they are fewer than most teachers imagine. Many of the seeming conflicts between the Australian Curriculum and creativity are based on misunderstandings. There are four kinds of misunderstandings that lead people to think that content standards such as the Australian Curriculum content descriptions and creativity are incompatible. These misunderstandings can make teachers feel that they can either promote the skills and content knowledge outlined in the Australian Curriculum *or* promote creativity, but not both. Here we present those four misconceptions, stated in somewhat extreme versions to help make them clear:

1. Creativity means that there are no wrong answers, and teaching for creativity means valuing only the wildest and most unusual ideas.
2. The Australian Curriculum is a list of things students need to know, and learning them will require lots of rote memorisation.
3. The best way to acquire knowledge and skills is via drill-and-kill.
4. The best way to promote creativity is to be silly.

Okay, those are caricatures – we said we would state them in extreme versions – but the beliefs of many teachers are often just tamer versions of these misconceptions. Let’s examine them one at a time.

**1. Creativity means that there are no wrong answers, and teaching for creativity means valuing only the wildest and most unusual ideas.** It is true that creative thinking often involves coming up with many possible responses to open-ended questions – that creativity often requires (among other things) divergent thinking. Divergent thinking is often conflated with brainstorming, but brainstorming is actually a technique – one of many techniques – designed to elicit divergent thinking. It is particularly common to use this technique when trying to get a group to engage in divergent thinking. And it is also true that during brainstorming, participants are encouraged to defer or suspend judgement and accept equally (for the time being) every idea that comes to mind. But divergent thinking (whether produced by brainstorming or some other method) is just one part of the creative process. Some creativity-training programs have stressed divergent thinking and de-emphasised convergent and evaluative thinking. But this is not a problem with creativity; it’s a problem with having a very limited understanding of the creative process. Successful creativity involves multiple iterations of both divergent and convergent thinking. For example, students may first engage in brainstorming or divergent thinking at the problem construction stage – simply figuring out what the problem is that needs to be solved (e.g. Reiter-Palmon & Robinson, 2009). Convergent thinking can help choose the best problem to tackle; divergent thinking can then be used again to figure out ways that the problem might be solved. Convergent thinking can select a best pathway – and so on, with multiple iterations leading to the best possible creative solution.

Ask almost any creativity researcher these days to define creativity and they’ll tell you that creativity involves coming up with new ideas *that work* (or words to that effect). We put “*that work*” in italics to emphasise an important point: creativity isn’t the same as finding *the* right answer, but it is very much about finding (or inventing) right (good, appropriate, successful, workable, desirable, suitable) answers – answers that work, that get the job done, that fit the constraints of the situations, that solve the problem. Producing many wild and unusual ideas may or may not be part of that process. But

creativity isn't about ignoring the real world and coming up with ideas that are unworkable, and it often requires a great deal of knowledge and skill – the kinds of things the Australian Curriculum content descriptions are all about.

It is also important to note that a new idea does not mean a perfectly unique idea. If a child figures out a different way to tie their shoes, that's an innovation as long as they figured it out themselves, even if other people figured it out long ago. It's innovation if it's new to them – and if it *works* in some way. If it doesn't work – if it leaves their shoelaces in a messy, tangled and ugly knot – then their efforts may qualify as imaginative, or even as a good try, and they may learn through the process things they will need to know to move on to a better solution, but what they have done is not creative in the sense we mean here. The work done by a creative idea may be very small – it may be simply thinking about a problem in a slightly different way that allows new perspectives or insights; it may mean constructing meaning out of something that was previously not understood or misunderstood; it may be realising something that was apparent to others but not to oneself – but it must do *something*. Creativity doesn't mean that every idea is equal to every other idea, even if one suspends judgement for a period of time while generating possible solutions and even if in the service of producing a few creative ideas one decides to treat every idea, temporarily, as a good idea. Suspending or deferring judgement just means the evaluation will come later. The misconception of considering divergent thinking to be the entirety of creativity minimises the importance of skills, knowledge and the need for ideas that actually work in the production of creative things.

**2. The Australian Curriculum is a list of things students need to know, and learning them will require lots of rote memorisation.** There may be some standards in the Australian Curriculum that look like lists, but for the most part that is not what the Australian Curriculum is about at all, and memorisation is not the primary skill one needs to meet the achievement standards in the Australian Curriculum. The Australian Curriculum is really about skills and understandings, which are not abilities that one can normally acquire via memorisation. The content descriptions require students to be able to do things with knowledge, to know when it's appropriate to do one thing versus another, to be able to think original thoughts in a domain in ways that work. Here are three skills (the first three) in the Australian Curriculum: English Year 3 content descriptions for literature:

- ▶ Discuss texts in which characters, events and settings are portrayed in different ways, and speculate on the authors' reasons.
- ▶ Draw connections between personal experiences and the worlds of texts, and share responses with others.

- Develop criteria for establishing personal preferences for literature). (ACARA, 2014)

None of these are things one could accomplish by memorising anything; all require figuring something out, coming up with ideas – ideas that work, that are based on the text in question – that have *not* been stated explicitly. This requires understanding, but it requires more than just understanding. Students must be able to do things *with* that understanding. They need to do things independently. They need to do things that allow them to come up with answers they have not been given. Doesn't that sound a lot like creative thinking? And this isn't just in the Australian Curriculum: English content descriptions. Here's one from the Australian Curriculum: Mathematics Year 8 content descriptions:

- Describe, interpret and sketch parabolas, hyperbolas, circles and exponential functions and their transformations. (ACARA, 2014)

Describing, interpreting and sketching a variety of mathematical representations requires very interesting, challenging and resourceful thinking – not memorisation – and it's not something students can learn by rote memorisation. It requires understanding a number of things, figuring out how to use them and coming up with answers students have not been given, answers that fit the specific situation described in the problem. Isn't that a lot like the seven words we said were a key to creativity: “coming up with new ideas that work”?

**3. The best way to acquire knowledge and skills is via drill-and-kill.** Okay, nobody really thinks that – at least no one will confess to thinking that – and yet people who care intensely about creativity often go overboard in their critiques of teaching methods that do require memorisation. For example, in the Australian Curriculum students need to do these things:

- Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point.
- Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond.
- Subitise small collections of objects. (ACARA, 2014)

Memorisation and drills are likely to be involved in learning this material. But most of the knowledge and skills in the Australian Curriculum are not things one could successfully teach via drills and repetition. Most



skills and knowledge are not acquired most easily or most successfully via drills and repetition. Most skills and knowledge are acquired by using and applying them in a variety of situations, thinking about them in ways that connect them to what one already knows, recalling them in appropriate situations and analysing them to understand them better. In sum, most skills and knowledge are acquired by thinking (including creative thinking), not by rote memorisation. The Australian Curriculum is not about rote memorisation, and drill-and-kill should play little part in teaching to it.

**4. The best way to promote creativity is to be silly.** It's true that some divergent thinking activities can lead to silliness, and a bit of silliness is sometimes okay, but the goal of divergent thinking (which, bear in mind, is just one part of creative thinking) is to come up with many varied responses to an open-ended prompt or question. If divergent thinking is being used in the service of solving a real problem, then one would hope and assume that the ideas generated would be usable. As a warm-up activity when teaching students a divergent thinking method such as brainstorming, a teacher might ask students to do things like think of unusual uses for a brick (this is probably the most common exemplar of a brainstorming activity, unfortunately; as a warm-up activity it's fine, but it does lend itself to silliness). But brainstorming (and other methods of encouraging divergent thinking) can be serious, silly and everything in between, depending on the situation. In classrooms, divergent thinking can be a powerful tool to help students figure things out. For example, consider this standard:

- ▶ Use comprehension strategies to build literal and inferred meaning and begin to analyse texts by drawing on growing knowledge of context, language and visual features and print and multimodal text structures. (ACARA, 2014)

One might start by answering this question: "What are the important ideas in this passage?" After listing as many as one can (divergent thinking) and deciding which are the most important ones on the list (evaluative thinking), one might then ask oneself this question: "What are some different categories one might use to sort these ideas?" After listing several possibilities (divergent thinking) one might then decide which set of categories will work best for this text (evaluative thinking) and then use those to sort the ideas from the first list into the categories. The kinds of divergent thinking one might use in making this type of analysis are not at all silly, but this is still very much divergent thinking – and to do this analysis well will require a great deal of creative thinking that involves both divergent and evaluative processes.

So, are we saying that we needn't worry, that creativity and the Australian Curriculum are natural partners? Not exactly. It is important to see that creativity and the Australian Curriculum can be allies. We must recognise that they are not natural enemies (as too many people are wont to assume). Next, we need to look for all the synergies we can find. The steps that a teacher would take to promote creativity are not always the same as what they do to develop the kinds of skills and knowledge outlined in the Australian Curriculum; sometimes they may even conflict. But the important thing is to find ways in which creativity and the goals of the Australian Curriculum *can* work together. There are ways that teaching for one will promote the other. One of our major goals for this book is to help teachers teach for both.

### CONCLUDING THOUGHTS

The goal of combining creativity and the Australian Curriculum is attainable. But in order to do so we need to be able to understand and overcome several conceptual barriers. The purpose of this chapter was to uncover several hidden beliefs that can impede teachers' best efforts at simultaneously addressing Australian Curriculum and supporting creativity in their classrooms. When teachers are aware of these beliefs and misconceptions they are in a better position to overcome them so that they can attain the goal of teaching the Australian Curriculum more creatively. Doing so also involves developing a deeper understanding of creativity and its role in the classroom, which is the focus of the next chapter.

**FROM CONCEPTS TO CLASSROOM**

We've covered much ground in this chapter. In this section, we summarise a few of the key concepts discussed and provide some reminders for how these concepts can be applied to the classroom.

- *Creativity can thrive within constraints.* Creativity is often viewed as synonymous with unconstrained originality. When this happens it is difficult for teachers, like those in the opening vignettes, to imagine how creativity might have a role in the teaching of academic subject matter. As will be discussed in Chapter 2, creativity can be thought of as originality expressed within the conventions and constraints of academic subject matter. During maths class, for example, teachers can ask students to come up with as many ways as they can to solve a particular problem. The multiple solutions represent the expression of originality; requiring that the solutions also be mathematically accurate would represent the academic constraints.
- *The Australian Curriculum is more than rote memorisation.* The skills needed to succeed at the Australian Curriculum require deep learning, critical thinking and understanding. When analysing the actual content descriptions from the Australian Curriculum, it is clear that creativity would usually be an asset, not a hindrance.
- *Everyone has creative potential.* Some people (such as the teacher in Vignette 2) may believe that only certain students are creative. Creativity is a human trait shared by all people. Nurturing creativity in the classroom starts with recognising that not only do all of our students have creative potential, but we, as teachers, also have creative potential. This can help us understand that creative students are not necessarily disruptive students, although they sometimes can be. As we will discuss in Chapter 2, sometimes students will benefit from being encouraged to be more creative (e.g. "Okay, now come up with your own story"), and at other times students will benefit from understanding when their efforts at creative expression do not fit the context (e.g. "Your poem about the beauty of prime numbers is compelling, but writing it instead of an equation on your algebra exam is not the appropriate venue for sharing it").
- *Teachers can attain Australian Curriculum standards in multiple ways.* Educators sometimes associate standards-based teaching with rote memorisation. One reason is because this is typically how students' proficiency with standards has been assessed on external tests. Although memorisation of facts has its place in learning, it need

not be the only thing we focus on when teaching. Just as there are multiple roads to Rome, there are many ways to teach the Australian Curriculum. Standards do not prescribe how teachers should teach, but rather provide guidance on the content that should be taught. We recognise that in some schools, teachers can also feel pressure in how they teach. But in most cases teachers still have the professional agency to decide how to teach. They should have the freedom to choose to teach in ways that have a basis in research or, at the very least, a sound instructional rationale. In Chapter 6, we discuss a few key instructional principles and techniques that we view as particularly promising for simultaneously teaching creativity and standards-based learning. But regardless of the technique it is typically a good idea when trying out new approaches to let students, parents, colleagues and administrators know the instructional approaches being used and the rationale for them.

- *Creative thinking involves serious academic work.* Being creative can be fun. But it isn't *just* fun. Being creative requires follow-through, hard work, effort and mastering domain-appropriate content. Advice to aspiring creative writers, for example, nearly always says that one must read, write, rewrite and then repeat. It is (comparatively) easy to get a good idea. It is much harder to figure out which idea merits your time and to devote yourself to developing and executing a plan.
- *Creativity is compatible with standards-based learning.* When we broaden our understanding of creativity and content standards we can recognise how they are compatible (rather than competing) educational goals. Throughout the remainder of this book we will continue to discuss and attempt to demonstrate this connection, but we also stress that recognising that the connection is possible is an important first step. By simply starting with the question "what if?" it is possible to generate new possibilities and surprise oneself with the various ways that creativity can be incorporated into Australian Curriculum lessons. Oftentimes even the smallest of changes to existing lessons can result in opportunities for creative expression. In English, for instance, in addition to having students demonstrate their comprehension by paraphrasing what happened in a particular story, you can also ask them to explain what would happen if they changed one event or removed a particular character. This not only challenges them to engage more deeply with the existing narrative, but also provides an opportunity for creative thinking.