GRATTAN Institute

Ending the lesson lottery

How to improve curriculum planning in schools

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Overview

Great teaching *inside* the classroom relies heavily on high-quality curriculum planning *outside* the classroom. But achieving this is challenging. The Australian Curriculum and its state variants provide high-level direction only, leaving vast gaps for teachers to fill in. For too long, governments have underestimated the subject-matter knowledge, curriculum expertise, and time required to bring the curriculum to life in the classroom. And without a coordinated, whole-school approach to planning – which carefully sequences learning of key knowledge and skills across subjects and year levels – even the hardest-working teachers will struggle to give their students the best education.

Many Australian teachers are being left to fend for themselves, creating lessons from scratch and scouring the internet and social media for teaching materials. This has contributed to unsustainable workloads and a high degree of variation in teaching and learning from one classroom to the next. It creates a lesson lottery for teachers and students.

A new Grattan Institute survey of 2,243 teachers and school leaders, conducted for this report, shows that a whole-school approach to curriculum planning is the exception in Australia, not the rule.

Half of teachers are planning on their own. The typical teacher spends six hours a week sourcing and creating materials, and a quarter of teachers spend 10 hours a week or more. Only 15 per cent have access to a common bank of high-quality curriculum materials for all their classes. Even more troubling, teachers in disadvantaged schools are only half as likely to have access to a common bank as teachers in advantaged schools.

Having access to a shared bank of high-quality curriculum materials for all subjects makes a big difference – teachers are much more likely to report consistent learning by students in different classrooms, a shared understanding with colleagues of what constitutes effective teaching, and greater satisfaction with their school's planning approach.

The workload benefits are big too – teachers spend three hours less each week sourcing and creating materials. Helping schools to establish a bank of shared materials for all learning areas could save 20 million teacher hours a year.

This report outlines a road map for a new partnership between governments, Catholic and independent sector leaders, principals, and teachers, in which governments and sector leaders acknowledge the heavy lifting involved in curriculum planning and provide schools and teachers with clearer guidance and more practical support.

First, to lighten the burden of curriculum implementation, governments and sector leaders should invest in high-quality, comprehensive curriculum materials, and make them available to all schools to adapt and use, if they choose. These materials should be quality assured by an independent body.

Second, governments and sector leaders should invest in strengthening curriculum expertise in schools. School leaders, curriculum leaders, and teachers need much more professional development to implement a high-quality, whole-school curriculum approach, and to design, select, or adapt materials effectively for their schools and their students.

Third, governments and sector leaders should monitor curriculum planning and implementation. Curriculum planning should be closely reviewed in *all* schools every four years, to track curriculum implementation on the ground and identify schools that need more support. And governments should fund rigorous, public evaluations of new curriculum materials and reforms, to ensure our schools get better and our teachers and students are not left to play the lesson lottery.

Recommendations

All schools should adopt a whole-school approach to curriculum planning and implementation. To help schools get there, governments and Catholic and independent school sector leaders should:

Ensure all teachers have access to high-quality curriculum materials

- Over the next five years, ensure every school and teacher has access to a suite of comprehensive, high-quality curriculum materials that they can choose to use and adapt as required. Governments and sector leaders should:

  – Audit the existing comprehensive curriculum materials that are currently available to schools, and identify critical gaps

  – Invest in comprehensive curriculum materials to fill gaps, and support teachers to use them effectively

  – Establish a rigorous, independent, quality-assurance mechanism to continually evaluate and report on the quality of externally-developed curriculum materials

  – Review and update government websites so teachers know where to find high-quality, comprehensive materials

Recognise and build curriculum expertise across the system

- Governments should direct the Australian Institute of Teaching and School Leadership to:

  – Update the Teacher Standards to clarify that teachers are not expected to develop curriculum materials individually, and to recognise the importance of subject-specific curriculum expertise

  – Update the Principal Standard to emphasise the role of school leaders in establishing a whole-school approach to curriculum

- Governments and sector leaders should overhaul professional development programs to ensure:

  – Principals and school leaders can embed whole-school curriculum approaches in their school

  – Curriculum leaders have deep subject-specific curriculum expertise and the skills needed to implement a whole-school approach in their discipline

  – Teachers can use, adapt, and refine high-quality curriculum materials with confidence (at least 50 per cent of teachers' professional learning hours each year should be curriculum-specific)

Set clear expectations for all schools and support school improvement

- Overhaul school review processes to ensure rigorous and regular review of all schools' implementation of the curriculum

- Provide targeted feedback and support to school leaders and teachers to improve whole-school curriculum planning and implementation

Fund rigorous evaluations of curriculum implementation over time

- Fund research into the design and implementation of curriculum planning and materials, and evaluate the impact of different approaches on student learning

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1   Curriculum planning matters

Effective teaching relies on high-quality curriculum materials that help students to build knowledge and skills deliberately and incrementally. But developing these materials is complex and time-consuming, and requires a structured, whole-school approach to curriculum planning.

For too long, governments have taken curriculum planning in schools for granted. This has saddled teachers with unrealistic expectations and exacerbated their workloads. Even more worrying, it has created a lesson lottery that impedes student achievement.

1.1   Great curriculum planning underpins great teaching

Effective teaching has the biggest impact on student learning outside of influences in the home.[1] A student with a highly effective teacher can achieve in half a year what a student with a less effective teacher achieves in a full year.[2] But effective teaching does not just happen. It requires careful preparation and planning, before a teacher even sets foot in the classroom.

Curriculum planning requires much more than simply following the Australian Curriculum, or the state-level variants (see Box 1 for key definitions).[3] These mandated, high-level curriculum documents provide broad direction only, leaving the heavy lifting of detailed lesson

planning and assessment to teachers.[4] This report is focused on how to best support teachers with the significant curriculum planning required to implement the Australian Curriculum and state-level variants, not with the content or structure of these mandated curricula.

For example, the new Australian Curriculum's Year 7 History course expects teachers to choose one of five ancient civilisations (Greece, Rome, Egypt, India, or China) and teach students about the 'organisation and roles of key groups in ancient society such as the nobility, bureaucracy, women, and slaves'.[5] Once a teacher has chosen an ancient civilisation, such as ancient Egypt, this still leaves them to make a huge number of decisions, including which social groups to cover, the depth of study, and how to assess learning. It is simply assumed teachers will have a sufficiently solid grasp of ancient Egyptian history – a period that spans more than 1,500 years – to make these choices, *and* the time needed to construct detailed, high-quality lessons on this topic. This is a tall order, especially for new or out-of-field teachers. Even experienced history teachers who have specialised in different periods, such as modern history, may struggle.

Converting the mandated curriculum into high-quality curriculum plans and lesson materials requires deep content knowledge, teaching expertise, and careful coordination across a whole school (see Box 2 for an illustration of this process).

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1.   Aaronson et al (2007); Hanushek (1999); Hanushek et al (2005); Leigh and Ryan (2011); and Rockoff (2004).
2.   Leigh (2010).
3.   Most states and territories follow the Australian Curriculum for Foundation to Year 10, though NSW and Victoria have their own variations. In Years 11 and 12, teachers follow a state-specific curriculum (e.g. the Higher School Certificate in NSW) or internationally accredited curriculum (e.g. the International Baccalaureate Diploma Programme). This report refers to the Australian Curriculum, inclusive of state variants, unless otherwise specified.

4.   Queensland is a notable exception here. While Queensland teachers must follow the Australian Curriculum, the Queensland government's 'Curriculum into the Classroom' (C2C) initiative provides teachers with detailed curriculum materials across all subjects and year levels (Foundation to Year 10). These materials are not the mandated curriculum, but provide an example of how the Australian Curriculum could be implemented in a school. For further detail see Box 16 on page 40.
5.   ACARA (2022).

Given the loose guidance in the Australian Curriculum, wide variation in teaching and learning between classrooms is inevitable unless schools adopt a careful and coordinated approach to whole-school planning. Over time, many students experience a curriculum that comprises a poorly connected series of activities, that can be highly repetitive or leave critical gaps.[6]

This creates a lesson lottery for students *and teachers*. If teachers don't know what preparation students have had in previous years, teachers may waste precious time planning for and reteaching concepts and skills students have already mastered, or they may overlook critical concepts and skills, assuming their students have already been taught them.

Many teachers and students get a losing ticket in the lesson lottery.

1.2 High-quality curriculum materials and whole-school approaches boost student learning

Research shows that when teachers use carefully sequenced, high-quality curriculum materials – even if developed by others – they can boost student learning by about one-to-two months each year, possibly more.[7]

Not all curriculum materials are equally effective, and teachers need training in how to use particular materials in their classrooms. But the research shows that when teachers are supported to use high-quality curriculum materials well, student learning improves. And the positive impact on student learning tends to increase over time.

For example, one rigorous randomised controlled trial found that Year 2 students taught using a sequenced set of Mathematics curriculum

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6. Partelow and Shapiro (2018); Steiner (2017); Steiner et al (2018a); and Whitehurst (2009).
7. See Appendix B for a summary of key studies.

materials gained one additional month of learning within a year on a standardised Mathematics test, compared to students in comparison groups.[8] In another study, researchers randomly assigned schools to either start an all-encompassing reading program with their prep cohort – which included sequenced lesson plans, supporting lesson materials, and tutoring for some students – or continue teaching as usual. At the end of the first year, students taught using the program had gained an additional two months of learning compared to those in business-as-usual classes. And by the end of the second year, these students were more than six months ahead.[9]

Box 3 describes the features of high-quality curriculum materials. Box 4 and Appendix A provide concrete examples of the level of detail these materials go to.

1.3 Governments expect a whole-school approach to curriculum planning, but the reality often falls well short

Australian governments expect schools to adopt a whole-school approach to curriculum planning. In fact, several states require schools to have documented curriculum plans across year levels and subjects, and policy guidance often emphasises the merits of a whole-school approach to planning.[10]

For example, the Victorian government recommends a whole-school curriculum approach where school leaders plan curriculum that is 'sequential across year levels and integrated across curriculum areas', to minimise 'the risk of repetition or serious gaps occurring'. To support

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8. Stokes et al (2018).
9. Borman et al (2007).
10. For example, see: Victorian Department of Education and Training (2020a); Queensland Curriculum and Assessment Authority (2019); and Tasmanian Department of Education (2020a).

Box 2: Great classroom lessons don't just happen – they are underpinned by careful, whole-school curriculum planning

Great classroom lessons don't stand alone – they represent the tip of the iceberg. Sitting under the surface is a carefully designed, coordinated, whole-school approach to curriculum planning. This planning eliminates the lesson lottery by making sure every class counts.

A whole-school curriculum plan takes the guess work out of individual lesson planning. Instead of individual teachers designing lessons based only on the broad content descriptors in the Australian Curriculum (or the state-level variants), a whole-school curriculum plan provides a road map for student learning in each subject and year level across the whole school.

With the plan in place, shared classroom curriculum materials can be developed that align closely to the plan, ensuring learning from classroom to classroom is not left to chance.

As a result of this effort 'beneath the surface', teachers step into the classroom each day with a clear understanding of how that day's teaching connects to the knowledge and skills students will learn over several years at school, and across multiple subjects.

With high-quality lesson plans and curriculum materials in place, teachers can also change how they prepare for the classroom – instead of focusing on *what* to teach, they can focus on *how* to teach the content in the most effective way for their students, including scaffolds to support differentiation.

> **Box 3: Key features of high-quality curriculum materials**
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> **Content and standards-aligned**: Curriculum materials should be aligned to year-level (or stage-level) appropriate national or state curriculum content and achievement standards. To achieve at year-level, students need access to year-level content.[a]
>
> **Coherent and knowledge-rich**: Curriculum materials should be carefully sequenced to ensure students gradually accumulate knowledge and develop more complex skills. Materials need to be specific about what knowledge students are expected to learn. For instance, in a Year 5 Science unit on animal adaptations, materials should define key concepts (e.g. the theory of evolution, fossil records), vocabulary (e.g. population), and specific animals and their adaptive features (e.g. a platypus's duckbill). Having learnt this disciplinary knowledge, students can then complete more complex tasks that require critical thinking (e.g. analysing fossil records to see how an animal has adapted to a changing habitat over time). Over years of learning, students can then accumulate deep disciplinary knowledge and tackle increasingly challenging topics and tasks.[b]
>
> **Evidence-based**: Curriculum materials should reflect the growing evidence base for effective teaching practices. For example, research has demonstrated the efficacy of a range of practices, including explicit instruction, mastery learning, spaced and retrieval practice, and formative assessment.[c] Curriculum materials help teachers implement these practices reliably in their classrooms.[d]
>
> **Comprehensive**: Curriculum materials should be comprehensive and detailed, encompassing the key materials teachers need to prepare for and teach each subject or learning area over the year. This includes a curriculum map that sequences subject content across years of learning, unit plans for each topic, and classroom materials that are ready-to-use and adapt (e.g. lesson plans, textbooks, and background materials and guidance for teachers). See Box 4 and Appendix A for examples.
>
> **Embedded assessment**: Curriculum materials should include targeted assessments that enable teachers to accurately assess students' grasp of the particular concepts, content, and skills taught. Formative assessments (e.g. pre-tests, quizzes, exit tickets) provide evidence of students' current achievement and misconceptions, allowing teachers to adapt instruction as needed. Summative assessments (e.g. unit tests, written responses, submitted portfolios) allow teachers to evaluate student learning at the end of a unit.
>
> **Easy to use**: Curriculum materials will have greater uptake and impact if teachers find them easy to use and adapt where necessary. Materials should be accompanied by professional development and provide teachers with explanations of key concepts and background information, guidance on lesson pacing, advice on common student misunderstandings, and scaffolds to meet different students' needs.
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> ———————
> a. TNTP (2018).
> b. See for example: Cervetti et al (2016); Neuman et al (2016); Willingham (2006); E. D. Hirsch (2006); and Young (2013).
> c. CESE (2020); and AERO (2022).
> d. See for example: Doan et al (2022); and Tarr et al (2008).

Box 4: An example of high-quality curriculum materials

Ark Curriculum Plus is a UK-based not-for-profit that has developed a suite of high-quality curriculum materials for Maths, English, Science, Geography, and History. Ark Curriculum Plus grew out of Ark, an education charity that runs a network of 39 schools serving more than 30,000 students. The Ark Curriculum Plus materials are designed by skilled teachers.

These materials are carefully sequenced across year levels and include everything needed for teaching, including an overarching curriculum map, unit plans, lessons plans and classroom materials (such as PowerPoints and booklets), assessments, and extra support for struggling students (see Figure 1.1 and Appendix A for more details). Schools are also provided with intensive support, including instructional coaching, lesson observations, and training sessions. This professional learning focuses on how teachers can best adapt and use Ark Curriculum Plus materials for their class and how curriculum leaders can lead implementation in their school.

This model has proved popular – about 1,000 UK schools currently use these Maths materials and assessments. This has allowed Ark Curriculum Plus to provide assessment benchmarks to schools to help them gauge the achievement and progress of their students.

The use of Ark Curriculum Plus's materials boosts student learning. Two rigorous randomised controlled trials found that students who were taught with the Maths materials gained an extra one-to-two months of learning in a year, compared to students in comparison groups.[a] Teachers benefit too – in an independent evaluation of the English materials, a significant majority of teachers reported reduced workload (80 per cent) and satisfaction with the program (75 per cent).[b]

a. Vignoles et al (2015); and Jerrim et al (2015).
b. Davies et al (2022).

Figure 1.1: Example of Ark Curriculum Plus materials from Year 5 Mathematics Mastery Unit on angles

Example editable slide

Accompanying page from student workbook

Accompanying teacher planning guidance
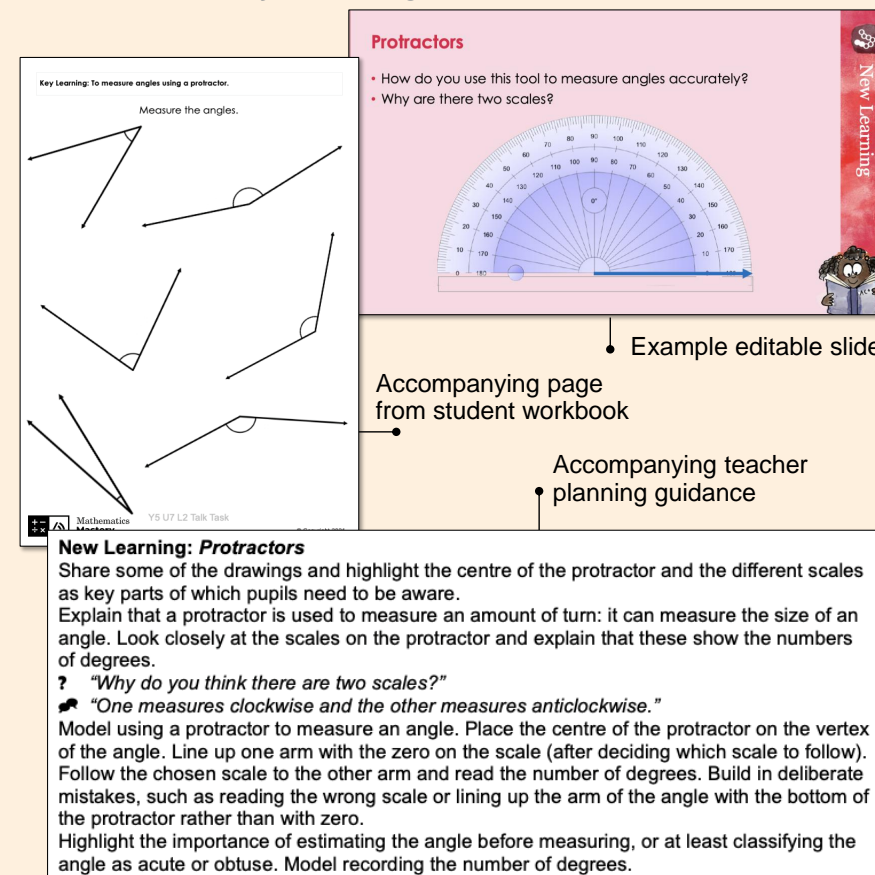
Source: Ark Curriculum Plus (2021).

this planning, school leaders are expected to ensure that 'pedagogy, assessment, and reporting are aligned' across the school.[11]

Similarly, the National School Improvement Tool (NSIT) – which has underpinned school reviews in Queensland, Tasmania, and the Northern Territory – has an explicit focus on 'systematic curriculum delivery'. To receive an 'outstanding' rating on this measure, schools demonstrate 'strong alignment' between their overarching curriculum delivery plan, term and unit plans, and classroom teaching, as well as 'vertical' alignment, with 'teaching in each year building on to and extending learning in previous years'.[12]

But despite these expectations, schools often get limited guidance and insufficient support to implement this approach. And our research shows there are huge gaps between policy documents and real-world practice in many schools.

1.4 Teachers are struggling with curriculum planning

Teachers are struggling with the curriculum planning load. A 2021 Grattan Institute survey of 5,442 teachers and school leaders across Australia sounded the alarm on the current situation in schools. A large majority (86 per cent) of teachers said they 'always' or 'frequently' feel like they do not have enough time for high-quality lesson planning.[13] Half (53 per cent) reported that teachers at their school spend a great deal of time 're-inventing the wheel' when preparing lessons.[14] And

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11. Victorian Department of Education and Training (2020a).
12. The NSIT was developed by the Australian Council for Education Research: Masters (2016, p. 16). 'Systematic Curriculum Delivery' is one of nine measures of school performance reviewed under the NSIT.
13. Hunter et al (2022b, Figure 2.3, p. 14).
14. Hunter et al (ibid, Figure 4.2, p. 26). These survey findings build on other Australian studies that suggest teachers do not have sufficient time for many aspects of effective teaching. See school staff workload surveys in Queensland, Victoria, and Tasmania, with a total of more than 28,000 respondents: Rothman et al (2018); Rothman et al (2017); and Weldon and Ingvarson (2016).

38 per cent indicated that the absence of a detailed whole-school curriculum plan hindered effective preparation for their classroom.[15]

Even if teachers had another hour or two each week to devote to preparing high-quality curriculum materials, that would be unlikely to solve the planning challenge. Interviews for this report with curriculum design experts and our case study schools (see Chapter 2) suggest it takes at least 500 hours to develop a year's worth of sequenced and detailed curriculum materials for one subject (e.g. Year 8 English). This means it would take a secondary teacher (teaching four subjects) an entire year – 2,000 hours – to develop curriculum materials for their classes if they had to start from scratch. This would leave no time for classroom teaching let alone the other tasks they are required to do.[16]

And unless teachers work together to implement a whole-school approach, there is no guarantee these materials will support a coherent sequence of learning that builds knowledge and skills incrementally over time, without leaving critical gaps.

1.5 Disadvantaged students are missing out most

Current approaches to curriculum planning pose huge equity issues. Disadvantaged students experience a relentlessly widening gap in learning outcomes compared to their more advantaged peers.

The learning gap between disadvantaged and advantaged students in Australia more than doubles between Year 3 and Year 9. By the time they reach Year 9, students whose parents did not finish school end up about four to five years behind in reading compared to students whose parents have a university degree.[17]

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15. Hunter et al (2022b, Figure 4.2, p. 26).
16. Based on the median of four different subjects per teacher reported by secondary teachers in Grattan's 2022 survey on curriculum planning and materials survey, and a 38-hour working week across 40 weeks of term time in a year.
17. Grattan Institute analysis of 2021 NAPLAN data: see Hunter (2022, p. 6).

What's more, disadvantaged schools tend to have the highest rates of beginning teachers, out-of-field teachers, and teacher turnover.[18] All of these factors increase the curriculum-planning challenge for individual teachers and schools. Our 2021 survey showed that teachers in disadvantaged schools were even less likely to have access to a whole-school curriculum plan (43 per cent versus 35 per cent in advantaged schools), even though it was more important for their students.[19]

1.6 Improving approaches to curriculum planning should be a priority for all governments and school sector leaders

The current challenges are not due to a lack of effort on the part of teachers. In Australia, most teachers carry a large curriculum planning load, and too often they are left to do their best in near-impossible circumstances.

There are many examples of great teaching underpinned by high-quality, whole-school curriculum planning in Australian schools and classrooms. But too often this relies on circumstances that are difficult to replicate in all schools, such as a school being fortunate to have several highly-expert curriculum leaders on staff. The reality is that many schools and teachers face immense challenges in developing the high-quality, carefully sequenced and shared curriculum materials that would provide the greatest learning opportunities for their students.

Given these challenges, Australia urgently needs a new approach to curriculum planning.

Whole-school approaches to planning that draw on and adapt existing, high-quality curriculum materials can save teachers' time and effort. They can also free teachers from the unhelpful assumption that they need to do everything themselves, and instead allow teachers to focus on what only they can do – guide and support their students to acquire a rich, foundational body of knowledge and skills that sets them up to thrive as they move into adulthood.

A more effective approach to curriculum planning in schools would also provide more opportunities for teachers with deep expertise and interest in curriculum planning to use their skills to support colleagues, within their own school as well as across the education system.

Change is possible, but governments and school sector leaders must step up and provide much greater support for curriculum planning and implementation in schools, so that teachers are empowered to deliver on the promise of excellence and equity in education for Australia's children and young people.

1.7 Structure of this report

The remainder of this report sheds new light on the complex curriculum planning challenges schools face, and proposes reforms to end Australia's lesson lottery.

Chapter 2 provides case studies of five schools around Australia that are committed to high-quality, whole-school curriculum planning. It shows how these schools developed shared, comprehensive classroom curriculum materials that scaffold student learning, empower teachers to deepen their curriculum and teaching expertise, and reduce the lesson lottery for teachers and students. This chapter also highlights the significant leadership commitment, curriculum knowledge, and investment of time required to make this happen in practice.

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18. For instance, while 16 per cent of Year 8 maths students in advantaged schools are being taught by out-of-field teachers, in disadvantaged schools this jumps to 28 per cent (Thomson et al (2021)). See also Weldon (2016); and Thomson (2021).
19. Hunter et al (2022a, Figure 2.16, p. 16).

Chapter 3 presents new research on the magnitude of the curriculum planning challenge faced by most Australian schools. It details the results of a new Grattan Institute survey of 2,243 teachers and school leaders on curriculum planning. That survey builds on our 2021 survey on teacher workload pressures.[20] Together, these Grattan surveys paint a stark and worrying picture: most teachers get insufficient guidance and support on curriculum planning, which adds to teacher workloads and undermines student learning.

Chapter 4 calls for a new partnership between school systems, school leaders, and teachers. It identifies concrete steps governments and school sector leaders should take now to help schools and teachers end the lesson lottery.

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20. Hunter et al (2022c).

2 Some schools are getting it right

Our research demonstrates that significant pay-offs for teachers and students are possible with a whole-school approach to curriculum planning and implementation. It takes the lottery out of learning, because all students receive common, high-quality learning experiences that build on each other through their school years. Teachers benefit too – high-quality curriculum materials improve their classroom instruction and give them more time to tailor learning to their students' needs.

But it is impossible for individual teachers to do this work on their own. Schools need a clear vision, strong leadership, deep curriculum expertise, and an upfront investment of time, to develop and embed a whole-school approach to curriculum planning. This is a big change and the challenges of replicating it across all schools in Australia should not be underestimated.

2.1 Our case study schools show it's possible

We investigated the curriculum planning and implementation processes in five primary and secondary schools across NSW, Victoria, and Western Australia (see Table 2.1).[21] The schools we studied varied across important dimensions, including school size, location, government or non-government sector, newly-established or well-established, highly advantaged and more disadvantaged.

To select our case studies, we searched for schools that had embraced a whole-school approach to implementing curriculum. Each school was at a different stage of implementation – some were in the second year of embedding this new approach, others had been using shared

materials for five years or more – but all were committed long-term to implementing a whole-school approach.

Table 2.1: Our case study schools implement a school-wide curriculum approach in diverse contexts

School	Description	Size	ICSEA
Marsden Road Public School	Established government primary school in south-west Sydney	734 students	969
Serpentine Primary School	Established government primary school in a regional town outside Perth	179 students	974
Docklands Primary School	Newly established government primary school in central Melbourne	467 students	1114
Aveley Secondary College	Newly established government secondary school in outer-metropolitan Perth	1,300 students	990
Ballarat Clarendon College	Established independent combined primary and secondary school in regional Victoria	1,618 students	1161

Notes: The Index of Community Socio-Educational Advantage (ICSEA) measures the level of educational advantage that students bring to learning. ICSEA values are calculated on a scale which has a median of 1000 and a standard deviation of 100. See ACARA (2020) for details.

Sources: ACARA (2021a) and case study schools.

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21. See Appendix C for a summary of our case study methodology.

The Grattan Institute team conducted multiple interviews with the leadership team and teachers, reviewed curriculum documents, and spent two days on-site at each school. Our objective was to understand each school's approach to developing and using high-quality school-wide curriculum materials, how their approach had evolved over time, and the impact on teachers and students.

2.2 High-quality curriculum materials underpin a strong school-wide approach to teaching and learning

A visitor to one of our case study schools would quickly be able to observe the core features of a whole-school curriculum approach in action. For example, they would notice that each Year 3 Reading class was tackling the same content as the other Year 3 Reading classes down the hall, with small adjustments to the pace of lessons and opportunities for additional practice to take account of the needs of different students. Likewise with the Year 6 Maths classes, Year 7 History classes, and so on.

While the unique personality of each teacher shines through, all teachers would be seen drawing from a common school-wide toolkit of effective practices to explain tricky concepts, embed common skills, work through complex problems, guide discussions, check for student understanding, and manage any classroom behaviour issues that arise.

This kind of alignment does not just happen – it takes a lot of hard work behind the scenes to get there. Curriculum materials only map out an approach. Teachers still need to 'buy in' to a collective agreement of what great teaching looks like in the classroom, and the practical skills to deliver it.

Our case study schools show that this is an all-encompassing change. It requires a revamp of how schools are often run, because the curriculum – the what and how of teaching – lies at the heart of every school's make-up.

Our case study schools didn't get to where they are on their own. Recognising the deep expertise and huge investment of time required to build high-quality curriculum materials from scratch, these schools often selected robust, comprehensive curriculum materials available externally (such as spelling, Maths and reading textbooks and/or programs), and adapted these where necessary. This made it possible for schools to invest more time in tailoring their approaches to their local context, where this added to the learning experience of students. For example, using externally developed materials for some subjects freed up teacher time in one of our case study schools to develop English units focused on the stories and landscapes important for local Aboriginal people.

Changes happened in stages. Schools often focused on developing and adapting high-quality curriculum materials for one subject or learning area first (e.g. English and literacy), or found that one particular department was the quickest to establish their shared approach, because of the strength of their curriculum leader and team.

Our case study schools worked hard to identify and appoint strong curriculum leaders with the expertise, authority, and time to lead this approach. The schools also created a coherent assessment framework to monitor student progress and identify individual needs, followed a clear school-wide instructional model, and provided teachers with high levels of training and coaching support.

Box 5 and Box 6 illustrate how Marsden Road Public School and Aveley Secondary College bring all these elements together to ensure a whole-school approach to curriculum.

Box 5: Marsden Road's school-wide curriculum approach

Marsden Road Public School is a government primary school in south-west Sydney. It serves a low socio-economic community, has a highly mobile student population, and more than 90 per cent of its students come from non-English speaking households.

Taking the helm in 2016, the principal's top priority was establishing and implementing a school-wide curriculum plan. Previously, curriculum planning had been based on year levels and was, as one school leader told us, *'quite disjointed, with no school-wide understanding of how students progressed from Kinder to Year 6'.*

Over several years, the principal gradually introduced a school-wide curriculum plan – called the 'Core Program'. This includes a detailed learning sequence for each subject, accompanying pedagogical model, common assessment schedules, lessons plans, and shared classroom materials such as textbooks.

Now there is no guess work about what students are learning and when. Common classroom materials mean that all students in a year level learn the same phonics sequence, approaches to structuring an essay, and grammar rules, for example, and these build on what's been taught before. The benefits for teachers are significant. As one teacher said, *'I finally know what someone should have done last year. You don't have the gaps.'*

Teachers in each year level plan together using the Core Program, creating shared classroom materials that they can then adapt for their classes. With all teachers using the same classroom materials, teacher workload is reduced – one teacher told us her workload had *'dropped by two thirds'* since she joined Marsden Road.

This shared approach also means teachers have a baseline from which they can improve their own teaching practice:

'I feel like I've learnt and grown so much. Having this reference [the Core Program], which is quick and easy, has had a massive impact on the kids. Because we're more knowledgeable, our teaching is better.'

This school-wide approach also provides clear expectations to students that support learning. As one teacher observed:

'We spend our time teaching and don't manage behaviour. We're all on the same page. The kids know we're all on the same page. You can tell Marsden kids from non-Marsden kids. Our kids are like "we're learners". We don't have the challenges others have.'

This can only happen because everything at the school is geared towards implementing the Core Program well. Each term teams spend a day together coordinating planning based on the Core Program, and half a day creating or refining shared classroom materials. Weekly whole-school professional learning is driven by the Core Program, focusing on specific content (such as grammar rules) and pedagogical strategies (such as effective questioning techniques).

School leaders provide instructional coaching and monitor implementation. They frequently observe classes in action, review teachers' Core Program documentation each term, moderate common student assessments and results, and ensure teacher performance reviews are aligned to the Core Program.

Box 6: Aveley Secondary College's school-wide curriculum approach

Aveley Secondary College is a new government secondary school in outer-metropolitan Perth, serving a low socio-economic community. The school has grown rapidly, from 260 students in 2018 to more than 1,300 today, and it employs a large number of graduate teachers.

The principal's top priorities have been to implement a whole-school teaching approach and shared, sequenced curriculum materials to drive consistent, high-quality teaching.

Heads of subjects have been key to implementing this vision – they have developed detailed learning sequences across year levels and overseen the development of classroom materials.

In Science, for instance, knowledge and skills are mapped from junior general Science subjects up to specialised senior subjects such as Biology and Chemistry. Student booklets, assessment tasks, and detailed lesson-by-lesson PowerPoints are all saved in a common drive, and responsibility for refining these materials is allocated to different team members.

All teachers follow the same detailed lesson PowerPoints, but at a pace that suits their class and their comfort as a teacher. As one teacher told us: *'In my first year, the PowerPoint was almost a script. Now it's a tool and I'll depart from it.'*

Even when teachers are busy, they know that they have materials to rely on. As one department head said, *'In a typical school, if teacher workload is high, lessons don't get planned. Here, if workload gets too high, worst case scenario is we deliver [the planned lesson] the same as last year.'*

Teachers see the benefit of this approach. One teacher said: *'Every teacher is doing the same thing. Whether you're in another class or*

my class, you're learning the same thing at the same time. There's no lottery.'

This approach relies on a strong school-wide culture of professional trust. The school's leaders articulate the vision and set the tone, but individual teachers also need to buy-in to the vision and be willing to share their work. As one teacher said: *'There needs to be a culture of openness, trust, and dialogue. People need to be able to deliver feedback and take it on board.'*

To build this culture, the school has invested heavily in teacher induction, professional learning, and implementation support. The head-of-department role is supported by a deputy head and team leaders in every year level. Teachers meet in subject teams each week to analyse student assessment data and further refine materials. Every staff member is allocated to an instructional coach who helps them to design shared lesson materials and gives feedback on their implementation in the classroom.

Developing this from scratch required a large investment of time in the early years, but teachers and students are now seeing the pay-offs. One beginning teacher told us: *'Being a new teacher, it makes it easier. I know that I've got two PowerPoints and a lab class already in the drive planned out.'* By the end of next year, the school will have detailed, lesson-by-lesson materials for all year levels. As one experienced teacher said: *'By 2024, it will be worth it.'*

The benefits for students are also clear: *'We have fewer kids that are not reaching success. We're catching more kids. They have so many more chances to succeed.'*

2.3 A whole-school curriculum approach prioritises student learning

To learn effectively, students need a highly sequenced curriculum that presents new material incrementally, connects new content to what's come before, and gives students ample opportunities to practice.[22]

Building student knowledge and vocabulary needs to be the priority – students' background knowledge and vocabulary supports their development of increasingly sophisticated language comprehension skills and schemas of knowledge.[23]
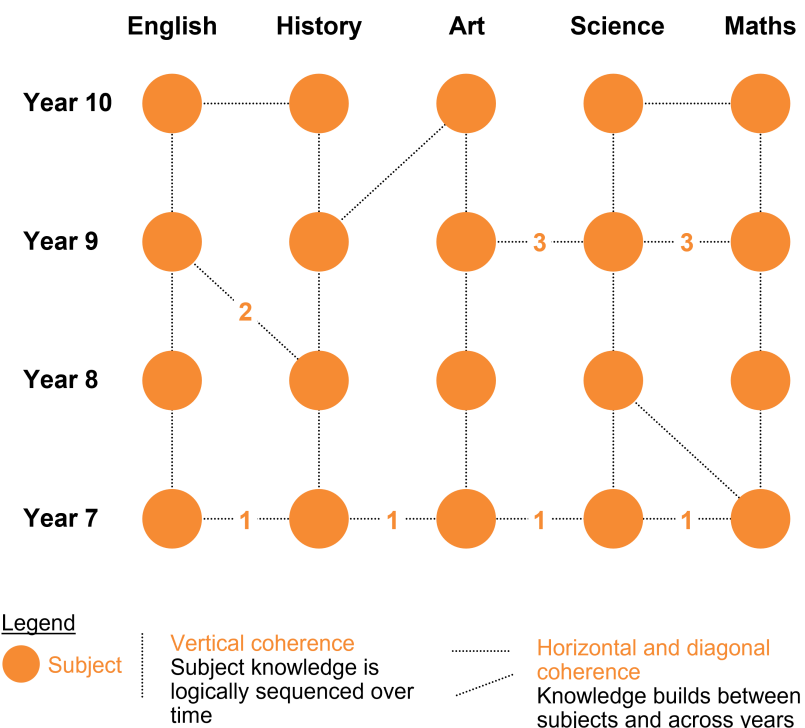
From the beginning of school right through to senior secondary school, students need to be exposed to curriculum materials that are well-sequenced and knowledge-rich. This is particularly important for disadvantaged students, who tend to rely more heavily on school to build their background knowledge.[24]

A whole-school approach deliberately sequences learning *vertically* between year levels in a subject. Ideally, it should also coordinate learning *horizontally* and *diagonally* across different subjects and year levels (e.g. a Year 8 History unit can be used to build students' background knowledge for a text study in Year 9 English: see Figure 2.1). This coordinated mapping avoids excessive overlap and builds students' subject-specific and interdisciplinary background knowledge over time. As one case study school teacher told us:

> Because the curriculum is so sequential you know you're not doubling up, that you're touching on things that have prior knowledge, and that you're teaching something that builds knowledge. This reflects the evidence on how the kids learn. It's an opportunity to deliver

a sequential curriculum that is aligned with the research on how children learn best.

Figure 2.1: A coherent school-wide curriculum carefully sequences learning year-on-year and across subjects

Legend

- **Subject**
- Vertical coherence — Subject knowledge is logically sequenced over time
- Horizontal and diagonal coherence — Knowledge builds between subjects and across years

Examples of coherence

1. Year 7 subjects use a common approach to writing
2. Year 8 History builds context for Year 9 novel study
3. Year 9 Art unit revisits concepts and vocabulary from Science and Maths

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22. Rosenshine (2012); and Willingham (2009).
23. See for example: Konza (2014); Smith et al (2021); Castles et al (2018); and Cabell and Hwang (2020).
24. See for example: Neuman and Dwyer (2011); Kosmoski et al (1990); and E. D. Hirsch (2006).

2.4 A whole-school curriculum approach ensures consistent assessment and standards

To achieve at their year level, students need content appropriate to their year level. But there is often a large disparity in the standard of work students receive.[25]

In the US, researchers who observed nearly 1,000 lessons and analysed more than 20,000 work samples across five states found that disadvantaged students were five times less likely to be given year-level appropriate learning tasks and assignments by their teachers.[26] This problem likely exists in Australian classrooms too.

The Australian Curriculum and its state variants provide only broad direction on what to teach. They do not give comprehensive advise on how to teach or assess what students have learnt. As one case study school leader described, the mandated curriculum:

> ...is just a framework. The dot points are so broad. What does it actually look like in the classroom? How far does it extend? It's so fuzzy that you can project your own experiences and teaching onto it.

This means, for example, that a Year 8 English teacher receives only limited guidance about what standard of literary analysis their students should be able to complete.[27] Teachers need to decide for themselves whether to teach students about a novel's narrative voice, its use of illusion, how different dialects affect the reader, or any number of other potential features. When individual teachers make these choices on their own, they often choose to teach different things and pitch lessons

to different standards. This leads to huge variation – an A+ in one class may not be the same as an A+ in the class next door.

A whole-school approach to curriculum helps overcome this problem by ensuring teachers have a shared understanding of what they will teach, and how students will be assessed. To achieve this, schools need both shared curriculum materials and opportunities to moderate student work across each year level. Box 7 shows how Marsden Road Public School uses termly teacher moderation sessions to ensure consistent standards in student writing.

2.5 A whole-school curriculum approach supports effective classroom instruction

High-quality curriculum materials reflect the evidence base for effective teaching, encouraging teachers to use evidence-based instructional practices in their classroom. These materials also support effective instruction by building teachers' subject-specific expertise (often called their pedagogical content knowledge) – an essential element of great teaching.[28] This expertise increases a teacher's ability to evaluate student responses, identify common misconceptions, and select strategies to enhance student learning.[29]

A teacher at one of our case study schools described how their school's materials helped them improve their content knowledge and teaching practice:

> Reading Reconsidered is so good. Some of the things that come up in the lessons I would never know. I would never think of those things. They're talking about how the character's motivations are ambiguous and the narrative is third person limited narration. In the last text we did different accents. They're very advanced skills.

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25. TNTP (2018).
26. Ibid.
27. In the new version 9.0 of the Australian Curriculum, for instance, a Year 8 English student is expected to 'analyse how language features such as sentence patterns create tone, and literary devices such as imagery create meaning and effect'. See ACARA (2022).

28. See for example: Tarr et al (2008); and Douglas et al (2011).
29. See for example: Baumert et al (2010); Hill et al (2005); Goulding et al (2002); and Harris and Sass (2011).

Another teacher explained how the use of structured and shared materials had improved their teaching:

> [At my previous school] we planned as a team, but we weren't really planning as a team. Here there is such a structure that I couldn't really go too wrong. There is a certain baseline. In the past I didn't know if it was good or not. You would look at the [mandated] curriculum and just make things up.

But curriculum materials alone are not a silver bullet – teachers need time and targeted support to use them. A whole-school approach to curriculum builds in the supports teachers need, focusing professional learning on how to implement materials in the classroom.

The curriculum materials themselves also enable high-impact professional learning, because teachers have a common foundation to discuss problems, learn from one another, further refine curriculum materials, and improve their classroom practice. Box 8 and Box 9 show how high-quality curriculum materials influence teacher practice at Ballarat Clarendon College, where fortnightly team meetings focus on refining curriculum materials based on student achievement, and at Docklands Primary School, where common curriculum materials enable targeted instructional coaching.

2.6 A whole-school curriculum approach helps teachers to differentiate instruction for their students' needs

Teachers with access to high-quality curriculum materials can spend more time tailoring instruction for and attending to their students' individual needs. Teachers can spend less time figuring out *what* to teach, and more time focusing on *how* to teach most effectively for their students (see Figure 2.2).

Across our case study schools, teachers agreed that shared whole-school curriculum materials enabled them to better meet the needs of their students.

Box 7: Marsden Road Public School's moderation process ensures consistency in writing assessment

Marsden Road Public School's literacy curriculum is underpinned by a detailed sequence for writing, which provides detail on, for example, which punctuation signs to teach in Prep (e.g. capital letters and full stops) right through to Year 6 (e.g. ellipses for omission).

Regular moderation helps teachers to implement these common standards. Students all complete termly standardised writing assessments, which are marked against a writing rubric based on NAPLAN. Each term, teachers mark a selection of student writing and then moderate in year-level teams. This process builds a common interpretation of the marking rubric and ensures students' work is marked at a school-wide standard.

School leaders ensure consistency across year levels by sitting in on benchmarking meetings and marking a sample of work by students in that year level. Consistency is now strong. One school leader told us: *'Most of the time it's pretty close. Only with the new teachers is there big variance.'* The school leaders also benchmark their results against NAPLAN. If their Year 3 or Year 5 results are lower or higher than anticipated, they know that their marking is off and adjust slightly if necessary.

The result of this increasing consistency is greater confidence, better support for students, and more learning growth. School leaders can use writing results to target individual and small-group tutoring to students who need to work on specific writing skills. Teachers agree that this has had a huge benefit: *'The NAPLAN data shows you how effective it is. We didn't really have something like this in the past. The demographic hasn't changed, but the data in the last five years has skyrocketed.'*

Box 8: Ballarat Clarendon College teachers use student achievement data to improve teaching and refine curriculum materials

Ballarat Clarendon College is a large, high-performing independent school in regional Victoria with students from Foundation to Year 12. It has a detailed and carefully sequenced shared curriculum that has been developed and refined by teachers over many years.

In the Maths Department, for instance, teachers use a common set of PowerPoint slides, student booklets, and assessment tasks. The slides provide a detailed lesson plan, with instructional guidance, a clear explanation of concepts, worked examples, and practice problems with answers. With all materials at the ready, teachers prepare for lessons by completing the practice problems, preparing to address any student misconceptions, and considering the micro-details of delivery (e.g. what questions they will ask students). Teachers also prepare by drawing on one another. One teacher explained how she worked with her mentor:

'Most of the time I'd work through the lesson, then catch her the next day before I'm teaching it, with everything highlighted that I wanted to ask. I would say 'how did you explain this?' It didn't take long – probably 5-to-10 minutes – but it just meant that I could use her language. As someone who had never taught it before, it helps me because she's seen it all and taught the exact same thing.'

Each lesson has a core set of 'essential slides' (roughly six-to-eight) that all teachers use. Beyond that, teachers adapt their approach to their class, adjusting the pace and drawing from the slide set to provide extra practice where needed. This means all students get the same key content, while teachers are well-supported to address specific needs in their classes.

Using the same curriculum materials also underpins a rigorous approach to curriculum improvement, via the school's 'Phase 2' meetings for each subject and year level. Held most fortnights, these

meetings are designed to 'ratchet up' the quality of curriculum materials over time, and provide collaborative professional learning. At each meeting, teachers examine student results from the most recent assessment, looking for variation on each question. If one teacher's class has excelled, the teacher is asked to demonstrate to the group how they taught that particular point. The principal explained to us:

'Variation is our friend. It's not revolution, it's evolution. We're trying to hold one lever steady so they can apply the scientific method. We want to hold the curriculum lever steady so they can see what works.'

Having teachers demonstrate their teaching of a concept or skill is key. Often it allows the group to pick up on tiny details about which some teachers might not be aware. One teacher described to us her experience in a recent Phase 2 meeting:
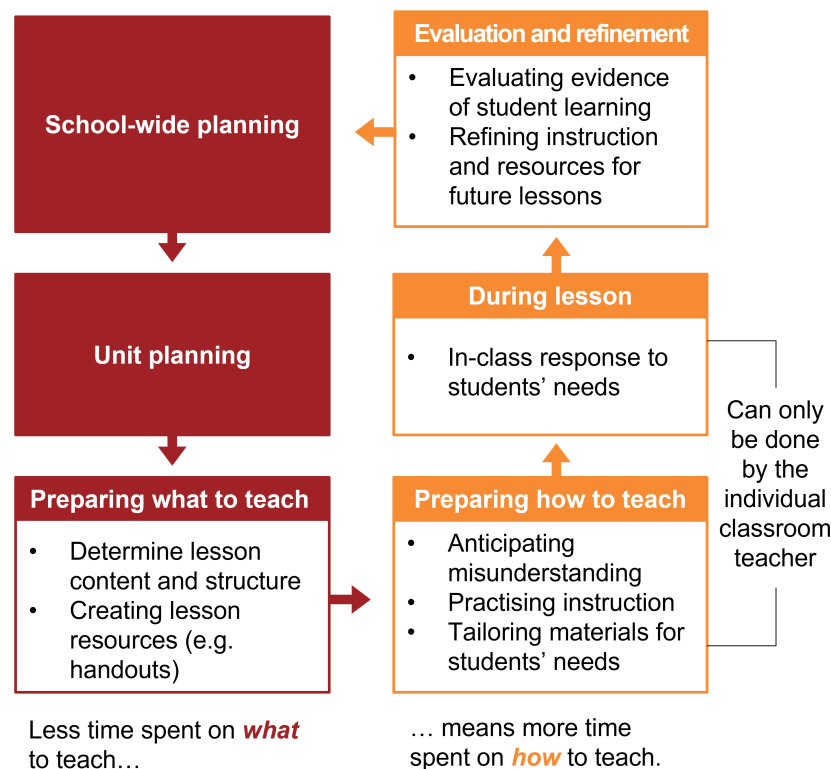
'It was literally just the lay-out of how the teacher had set out their working. It sounds minor but it's not. I guess because we care so much about micro-excellence, doing those tiny things means a lot to us. I love it, I love feedback. My class didn't perform well on that question, and I'm like "yes, I have a strategy now".'

As effective teaching strategies are identified, they are recorded on the shared PowerPoint slides for the benefit of future classes. These are often small instructional details – the type that help teachers hone their craft in the classroom – such as the best questions for teachers to ask students, the specific words used to describe a process, or common student misconceptions to address. As one teacher explained to us:

'The point is to get the best teaching practice possible. When someone explains [in a Phase 2 meeting] what they did, we put it in the slides for next year.'

While most teachers are scrambling to work out what activities to do in their class, teachers in our case study schools were instead intellectually preparing to enact the curriculum in their classroom.

Figure 2.2: A whole-school curriculum approach means teachers can better prepare for teaching

School-wide planning

Unit planning

Preparing what to teach
- Determine lesson content and structure
- Creating lesson resources (e.g. handouts)

Preparing how to teach
- Anticipating misunderstanding
- Practising instruction
- Tailoring materials for students' needs

During lesson
- In-class response to students' needs

Evaluation and refinement
- Evaluating evidence of student learning
- Refining instruction and resources for future lessons

Can only be done by the individual classroom teacher

Less time spent on *what* to teach…

… means more time spent on *how* to teach.

Box 9: Docklands Primary School's instructional coaching supports implementation of common curriculum materials

Docklands Primary is a new school in central Melbourne. Its top priority in its first two years has been establishing effective and consistent instruction, based on common high-quality curriculum materials. The school has invested up-front in developing rigorous, shared lesson plans that are highly sequenced from Prep to Year 6. School leaders carefully selected high-quality external resources – such as Sounds Write and Core Knowledge – which provide teachers with explicit and detailed lesson-by-lesson guidance. These external materials have then been adapted for the school's school-wide curriculum map and instructional norms.

The school's instructional 'playbook' – a detailed document that outlines core instructional principles and classroom strategies – makes effective practice concrete. Teachers are supported to bring the playbook to life through targeted instructional coaching. The leadership team targets coaching to teacher needs, based on twice-termly 'learning walks', classroom observations, and teachers' goals. The school is on track for every teacher to have received a term's worth of coaching, which includes weekly observations and feedback sessions, by the end of the year.

The existing curriculum materials and instructional playbook enable this coaching to be tailored for individual teachers. One teacher told us: *'The feedback here is linked to the scope and sequence, and the goal that I've been working on is really relevant.'* Another said: *'Coming here, I feel like I've actually learnt so much about so many different things. Having input from [instructional coaches] is really helpful. You can do your own research, but when you have someone you can talk to who can show you exactly what it looks like, then you can actually improve.'*

This intellectual preparation enabled them to be more responsive to student needs in the classroom. They had time to plan the micro-elements of their lesson instruction, such as the clearest way to set out a problem on the board, what questions to ask in class discussion, ways to check for understanding, strategies to overcome student misconceptions, and which students were likely to struggle and need extra support.

One teacher told us:

> In the past I spent so much time figuring out what to plan. I had complete freedom to decide what to teach. That's a lot of responsibility. Here, you look at the scope and sequence and it tells you what to teach, so you can put your energy into how to teach it. In the past it would be 'What is my learning intention?' But now I know what the learning intention is. I think instead about: 'Is this a question to ask the whole class, or is it a turn-and-talk?' Now we can think about the nitty gritty.

Beyond an individual teacher's differentiation within their classroom, a whole-school curriculum approach also helps schools to provide better 'tiered support', where students with the most complex needs receive the most intensive teaching support.[30] With shared curriculum materials, teachers can provide higher-quality universal classroom instruction (Tier 1), and schools can better target intensive teaching in small groups or one-on-one to students who need it (Tiers 2 and 3) (see Box 10).

2.7 A whole-school curriculum approach reduces teachers' workloads

In all our case study schools, teachers shared the workload by collaboratively developing and refining curriculum materials.

But collaboration is hard to do well. Grattan Institute's 2021 survey of 5,442 teachers and school leaders across Australia found that almost half of teachers think collaborative preparation time – where teachers work together to develop and share lesson plans – is actually *unhelpful*.[31] Teachers pointed to several reasons for this, including: poor leadership of the meetings; discussions focusing on issues other than curriculum planning, such as administration or difficult student behaviour; teachers preferring to work individually; insufficient time for quality collaboration; and timetabling clashes that prevented teachers from meeting together.

To make whole-school curriculum planning work, schools need curriculum leaders with the expertise, authority, and time to lead collaboration effectively. Our case study schools show that effective collaboration requires strong curriculum leadership. Curriculum leaders need to create the conditions necessary for collaboration, by setting clear and consistent expectations, establishing common processes and practices, providing individualised support to teachers, and creating the time for teachers to share problems of practice. Only then can the workload be shared.

When collaboration works well, teachers benefit hugely. Once the initial bank of shared high-quality curriculum materials had been developed, teachers in our case study schools rarely had to prepare curriculum materials from scratch. And because shared materials were aligned to a coherent school-wide curriculum map and a shared understanding of effective teaching, and had been reviewed by the team, teachers were confident in the quality of shared materials that they hadn't created themselves.

Teachers also had more time to prepare for their classes. As one second-year teacher told us:

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30. National Center on Response to Intervention (2010); D. Fuchs and L. Fuchs (2017); and Haan (2021).

31. Hunter et al (2022b, Figure 4.2, p. 26).

Box 10: Shared materials underpin differentiated teaching and tiered models of student support in our case study schools

Across our case study schools, a whole-school approach to curriculum has enabled teachers to implement a tiered support model, with high-quality, universal whole-class instruction (Tier 1) and more intensive support for students who need it (Tiers 2 and 3).

For example, at Marsden Road Public School, teachers devise subject-specific student seating plans to support differentiated instruction. In a Year 1 phonics lesson, for instance, all students learn the same letter-sound combination, but the teacher might direct the front row of students to practice the combination by writing monosyllabic words, the middle row to use multi-syllabic words, and the back row to write a whole sentence. Teachers' grasp of the sequence of learning is key to making this approach work.

Several of our case study schools also used flexible student groupings to narrow the range of student ability in a class, and allow teachers to better 'pitch' whole-class instruction to student needs. For instance, at Ballarat Clarendon College, all Maths teachers in a given year-level use the same detailed PowerPoints, but tailor their delivery for their particular classes – some classes run at a quicker pace with students completing more problems independently, while other classes move more slowly with more time for group practice.

Meanwhile, at Serpentine Primary School – a small school with only one class in each year level – daily spelling classes occur at the same time across the whole school, with students primarily grouped based on their current achievement. While some students are consolidating early phonics, others are working through different stages of the school's

highly-sequenced spelling curriculum, and the most advanced students are taking extension etymology lessons.

A whole-school curriculum approach also enables more intensive supports – such as small group and one-on-one teaching (Tiers 2 and 3) – to be targeted to student needs. For example, Serpentine Primary uses a series of high-quality literacy assessments to pinpoint individual needs. They test all new students and measure progress every term. Using sequenced and detailed curriculum materials, trained support staff provide additional tutoring to students who have fallen behind. As one literacy leader told us:

'We don't miss students. You know you're not going to get students in Year 3 that can't read. We have high expectations, we want all kids to be at [grade level].'

At Aveley College, all Year 7 students sit a literacy test upon arrival, allowing struggling students to be identified straight away. These students have intensive literacy support classes built into their timetable. Of the 300 Year 7 students, about 50 receive intensive literacy support, alongside about 20 Year 8 students. These students work through a highly sequenced and detailed spelling and reading curriculum, with the aim of being able to move back into mainstream English classes as soon as possible. This model has delivered great success. One teacher told us:

'Pretty much all of the intensive literacy support students progressed. We've got some doing ATAR classes now. There's a Year 10 student [now at grade-level], I have videos of them being unable to read in Year 7. Another Year 11 is getting a B who was in the same program.'

As a new teacher, I think the workload here is very achievable – the shared resources have made my transition into teaching much smoother. The way the school has structured the scope and workload allows me to focus on pedagogy and be personable with the kids.

And one experienced teacher told us:

To have someone give me a lesson plan is quite freeing. I feel relaxed knowing that what I'm teaching is quality. I don't miss spending three hours looking for a picture book that would suit my class. I feel like I'm a better teacher here.

2.8 Moving to a whole-school curriculum approach requires strong leadership and sustained effort

Moving to a whole-school curriculum approach is a long-term change-management process – the experience of our case study schools suggests it is likely to take at least five years. Box 11 outlines the change process underway at Serpentine Primary School.

To be successful, school leaders need a clear vision, strong leadership skills, and sustained effort. And even with these conditions, change can be challenging when it requires a cultural shift in schools. As one case study school leader said:

All good ideas start with some kind of resistance. Change is messy, but it's OK. People say they don't like change, but that's not true. We change every day. People are more averse to having ideas put forward that conflict with the ideas they have in their head.

Our case study schools are exceptions. As Chapter 3 shows, most schools either don't take a whole-school curriculum approach, or do it partially or poorly. The challenges are particularly steep for very small schools, where teachers have no choice but to take multiple subjects and composite classes that span many year levels, for schools that

serve very disadvantaged communities, and for schools with large numbers of inexperienced teachers or high staff turnover.

If we wait for all schools to develop and embed a whole-school curriculum approach themselves, without additional government support, we are likely to be left waiting a long time.

Box 11: Serpentine Primary School's move to a whole-school curriculum approach

Serpentine Primary School is a small government school that serves a lower socio-economic community about an hour's drive from Perth. There is only a single class in each year level.

When the current principal arrived in 2017, he noticed classrooms were 'siloed', teaching practice across year levels was disconnected, and there was little shared data collection or analysis. With flagging literacy and numeracy results, the principal knew something had to change.

On his first day in the job, the principal presented his vision to staff – he wanted to lift student results by implementing a whole-school curriculum approach and instructional model, where teaching was carefully sequenced year-to-year and consistent instruction was offered from class-to-class. To make this vision concrete, he took his entire staff to visit a school that had successfully adopted this approach to see it in action. The principal told us that he wanted his staff to *'hear from other teachers that they can do it, and see that it's empowering'.*

Starting small, the leadership team introduced a highly sequenced spelling curriculum in 2017. Teachers were supported with all the curriculum materials they needed, including detailed lesson plans, PowerPoints, and student workbooks. The timetable was reorganised to give every student 100 minutes of spelling instruction a week, including a weekly test. There was some initial resistance, but results came quickly. Teachers could see student progress in the weekly assessments, and the 2018 NAPLAN results provided a big tick of approval — no student was below the national average in spelling, and students performed above expectations based on their background. This early win was key for staff morale. As the principal described:

'It's quite a powerful experience to have your teaching validated by data. Teaching is hard work, but really rewarding when we see results...

Otherwise we get change fatigue. You start something but it's either the wrong thing and we don't get results, or we don't stick with it long enough to see the results, or we don't measure the results at all.'

The school built on this early success, implementing a sequenced phonics curriculum and introducing a school-wide 'instructional playbook' and coaching model. The assistant principal worked closely with teachers, observing and providing feedback to each teacher once a week. The principal told us that investment in staff was crucial to making long-term change:

'There needs to be a lot of up-skilling in terms of knowledge, research, and theories. Once teachers understand the research, they're much less willing to give it away.'

The school's shared curriculum materials have been expanded and refined over time and now include sequenced and detailed materials for daily literacy reviews, spelling, phonics, reading and vocabulary, and writing instruction. Teachers are now focused on developing similar materials for Maths, English, and Humanities.

Change on this scale does not happen without challenges. But the principal told us:

'You have to be able to see past the challenges. You have to find wins on the way through.'

A critical support for the leadership team was a three-year leadership program,[a] which provided training and coaching through the change-management process. This 'shoulder-to-shoulder' support helped the leadership team to foster buy-in from staff and set up a strong collaborative culture.

a. The Fogarty EDvance School Improvement Program.

3   Most schools will need help to get it right

Whole-school curriculum planning offers enormous benefits to students and teachers, yet schools rarely work this way. Few teachers have access to high-quality curriculum materials for all their classes. As a result, they often plan alone, searching the internet to create materials for their own classes. This takes a lot of time and means students are taught a highly varied curriculum. The problem is even more acute in disadvantaged schools.

A new Grattan Institute survey, conducted for this report, shows many teachers are dissatisfied with current approaches to curriculum planning and see the potential benefits of shifting to a whole-school approach. The few schools that have managed to go down this path are getting big pay-offs. Their teachers are more satisfied, and save about three hours a week on planning. Even more importantly, student learning in their school is less likely to be determined by the lesson lottery. But the challenges many schools face in following their lead are formidable. And government responses to date have fallen well short of the circuit breaker that is needed.

3.1   Grattan Institute's survey of teachers and school leaders

To understand the state of curriculum planning in Australian schools in 2022, Grattan Institute surveyed teachers and school leaders across the country. We asked them about the curriculum materials they use, curriculum planning processes at their school, and their attitudes towards planning.

We received 2,243 detailed responses from 1,915 teachers and 328 school leaders (see Table 3.1 for a breakdown).[32] The survey results

provide a unique, detailed – and worrying – insight into the pressures on teachers and school leaders when to it comes to curriculum planning across Australia.

Table 3.1: Grattan Institute's 2022 survey of teachers and school leaders

	Number of survey respondents	Percentage of survey sample	Percentage in Australian teaching population
Primary	1,190	53%	52%
Secondary	1,053	47%	48%
NSW	672	30%	30%
Vic	554	25%	27%
Qld	425	19%	21%
WA	289	13%	10%
Tas	120	5%	2%
SA	83	4%	7%
ACT	81	3%	2%
NT	19	1%	1%
Government	1,564	70%	64%
Catholic	338	15%	19%
Independent	341	15%	17%
Mostly advantaged	660	30%	43%
A fairly even mix	925	41%	31%
Mostly disadvantaged	658	29%	25%

Notes: Survey respondents self-identified the level of disadvantage/advantaged of their school. Percentages may not add to 100% because of rounding. See Hunter et al (2022a) for details.

Source: ACARA (2021b).

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32. Details of the survey questions and responses are provided in the supplement to this report: see Hunter et al (2022a).

3.2 Most teachers don't have access to shared curriculum materials

Only 15 per cent of the teachers we surveyed have access to a comprehensive bank of ready-to-use, high-quality curriculum materials for all the subjects or learning areas they teach (see Figure 3.1).[33] The problem is worse in primary schools, where only 9 per cent of teachers reported having access to these materials for all subjects.[34] Even more worrying, teachers at disadvantaged schools were only half as likely to report having access to these materials for all their subjects, compared to teachers at advantaged schools (11 per cent compared to 21 per cent).[35]

About one in three (36 per cent) of teachers reported that they had *no* access to a comprehensive bank of curriculum materials for *any* of their subjects (this rose to more than 40 per cent among teachers in disadvantaged schools).

About half of teachers reported having a bank for some but not all of their subjects. Many of these teachers told us that building a bank was a work-in-progress at their schools, that it varied by year level and subject, or that they had a personal bank which they shared informally with other teachers.

3.3 This means teachers spend a lot of time planning alone

Almost half (49 per cent) of teachers said they are the main person responsible for selecting and developing materials for their classes (see

33. Our survey used the term 'instructional materials'. For clarity, this report uses the term 'curriculum materials' throughout. Some teachers who reported having access to a comprehensive bank of materials for all subjects said this was because they had created materials for themselves or shared them informally. The proportion of teachers that have access to a comprehensive school-wide bank is therefore likely to be lower than 15 per cent.
34. See Figure 3.3: Hunter et al (2022a, p. 10).
35. See Figure 3.4: Hunter et al (ibid, p. 11).

Figure 3.1: Few teachers have access to a bank of curriculum materials for all their subjects, especially in disadvantaged schools
Percentage of teachers who have access to a bank of materials, aggregate and by school advantage/disadvantage
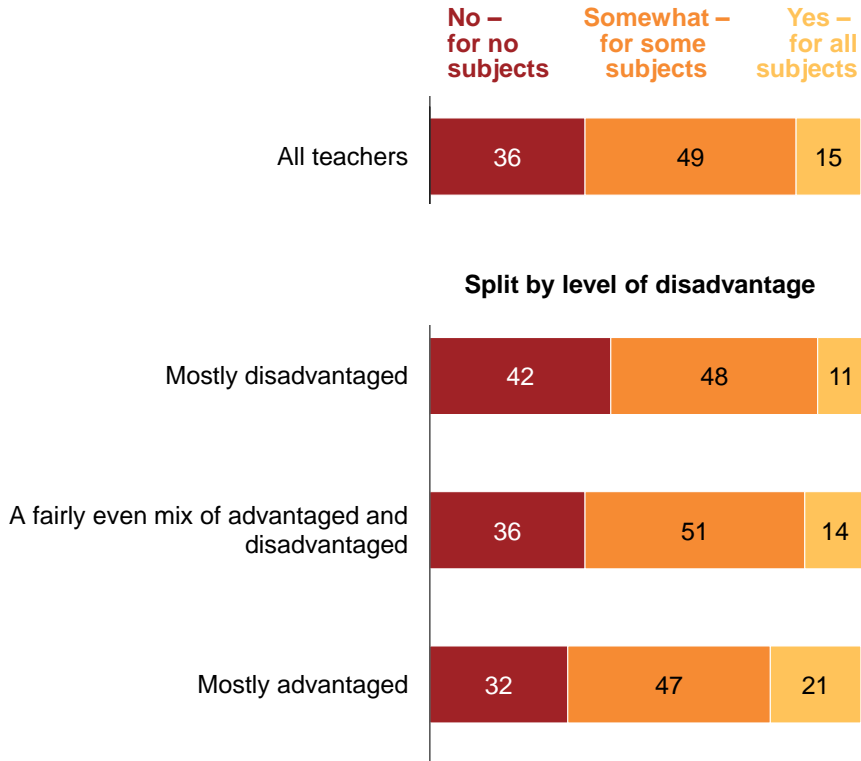
Notes: Total sample size of 1,854 teachers. Teachers self-identified their school's level of advantage/disadvantage. Percentages don't always sum to 100 due to rounding. A chi-squared test of independence found differences between groups are statistically significant (p value < 0.05). The question asked teachers: 'Within your school, do you have access to a comprehensive bank of ready-to-use, high-quality instructional materials?' See survey supplement for detail: Hunter et al (2022a).

Source: 2022 Grattan survey on curriculum planning and materials.

Figure 3.2).[36] And this is especially true in small schools (those with fewer than 200 students), where 71 per cent of teachers reported being individually responsible for preparing classroom materials.[37]

Some teachers have no choice but to plan alone – a quarter of teachers are the only one teaching their subject at their school. And this is much worse in small schools, where more than half of teachers are teaching a subject on their own. Specialist teachers (i.e. of Arts, Languages, etc) are also more likely to shoulder the planning burden alone.[38] Creating high-quality materials is an acute challenge for these teachers: three-quarters of teachers and school leaders said that having 'too few teachers' was a barrier to developing shared curriculum materials (see Figure 3.7).

This highly individualised approach to lesson planning is time-consuming. The typical full-time teacher spends six hours a week *just* on sourcing and creating curriculum materials. But some teachers spend a lot longer: one in four teachers spend more than 10 hours a week on this task. What's more, the time teachers spend planning doesn't get smaller as teachers become more experienced (see Box 12).[39]

This approach to curriculum planning stretches teachers' planning time very thin, particularly for teachers who are required to take multiple subjects. This is a particularly pressing challenge for primary school classroom teachers, 82 per cent of whom teach across five or more

Figure 3.2: About half of teachers prepare materials for their classes themselves
Percentage of teachers
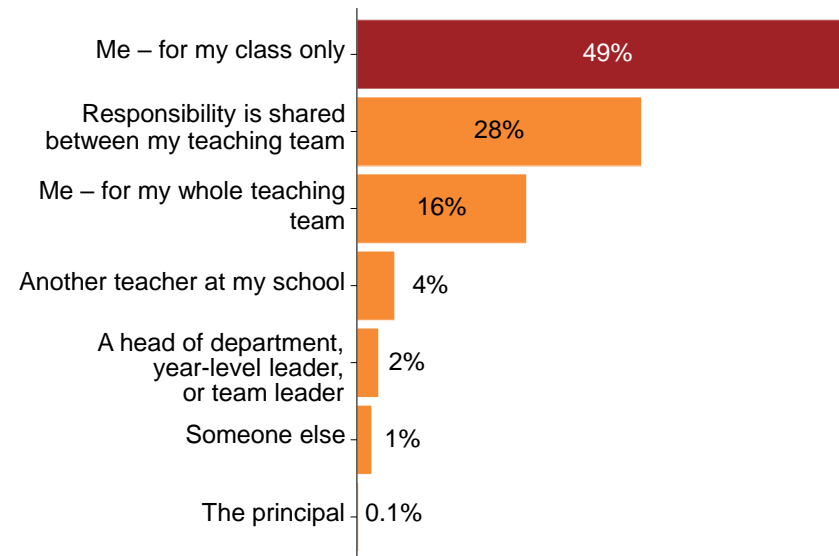
Notes: Total sample size of 1,795. The question asked: 'For this lesson, who is responsible for the majority of work in selecting or developing the instructional materials you use?' See Hunter et al (2022a, p. 26) for details. To ensure a spread of subjects, teachers were randomly assigned to respond in relation to either the first lesson in their timetable, the first lesson after recess, or the first lesson after lunch. That lesson had to involve teaching content (i.e. not pastoral care or an extra-curricular). Percentages don't sum to exactly 100 due to rounding.

Source: 2022 Grattan survey on curriculum planning and materials.

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36. To ensure a spread of subjects, the survey was designed to randomise the lesson teachers were asked to report on. Teachers were asked to report on either the first timetabled lesson in their week, the first lesson after recess, or the first lesson after lunch. This lesson had to involve teaching content (i.e. not pastoral care or an extra-curricular). See Hunter et al (2022a, p. 26) for details.
37. See Figure 3.37: Hunter et al (ibid, p. 30).
38. See Figures 3.33 and 3.34 in Hunter et al (ibid, p. 28).
39. See Figure 3.27 in Hunter et al (ibid, p. 24).

learning areas.[40] Teachers in rural schools do it tough too, because they teach more subjects on average than teachers in metropolitan schools.[41]

Teachers also routinely prepare lessons for subjects they have not taught before or have not been trained in. Half of secondary school teachers in our survey were teaching a subject for the first time this year, and 15 per cent of primary school classroom teachers (or 'generalists') were taking a new year level.[42] While one new subject requires a lot of preparation, one in four secondary teachers (23 per cent) are taking at least two or more new subjects. Another recent survey found that 28 per cent of Australian teachers – and up to 40 per cent of Maths teachers – are teaching subjects in which they have not been trained.[43]

It is unreasonable to expect individual teachers to plan high-quality curriculum materials for such a breadth of subjects, let alone subjects they are not trained in or are taking for the first time. Yet this is exactly the position many Australian teachers find themselves in.

3.4   This undermines quality and creates a lesson lottery

Our survey finds mixed perceptions among teachers regarding the quality of the classroom materials they are currently using. On one hand, about three quarters of the teachers we surveyed feel they are able to ensure the classroom materials they use are consistently

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40. See Figure 2.1: Hunter et al (2022a, p. 8).
41. Seventy-six per cent of secondary teachers in rural and remote schools take at least four subjects, compared to 61 per cent of secondary teachers in metropolitan and regional schools.
42. This holds true even if we include only those secondary school teachers who have been in the profession for at least three years. See Figure 2.2: Hunter et al (2022a, p. 8).
43. AITSL (2021, p. 8).

> **Box 12: What teachers say about their lesson-planning challenges**
>
> Teachers we surveyed described the difficulties they face when planning:
>
> > There's not enough hours in the day to make materials as high-quality as I would like them to be. I forever feel guilty for not being good enough.
> >
> > *– Secondary school teacher*
>
> > I am an experienced teacher but in a brand new role, and I'm floundering with having minimal good instructional materials to guide me.
> >
> > *– Secondary school teacher*
>
> > Some classes will always suffer. I can have a week where my Year 12s have great resources developed, adapted, and prepared by me. However, other classes will just have things that I have put together in a limited time-frame and may not be as thought out.
> >
> > *– Secondary school teacher*
>
> > Beginning teachers have so much to learn: classroom management, school operations, student names, how to plan lessons, what a school's assessments are. Asking them to create their own instructional materials for five-to-eight subjects immediately is a ridiculous yet common ask. Beginning teachers should observe colleagues in Week 1, and then use the lesson plans of their colleagues for their own classes. Australian schools need to stop asking novice teachers to drink from a fire hose.
> >
> > *– Secondary school teacher*

high-quality.[44] On the other hand, almost three quarters (74 per cent) of teachers and school leaders said that a lack of consensus about what constitutes quality would be a barrier to adopting shared curriculum planning at their schools (see Figure 3.7 on page 35). This suggests there is a wide range of conflicting opinions about what constitutes high-quality materials.

The conditions teachers are planning under make developing a carefully sequenced, high-quality curriculum almost impossible. With about half of teachers planning individually, it is very hard for teachers to ensure that what they teach carefully builds on what has come before or sets students up sufficiently for what will come next.

And the methods teachers use for planning only exacerbate the problem. Many teachers who did our survey told us they wind up scouring the internet to try to find materials – on average, teachers visit five different internet websites each fortnight to find resources. By far the most popular sites are social media platforms, such as YouTube, Teachers Pay Teachers, and Twinkl, which do not have robust vetting processes to ensure the materials are high-quality (see Figure 3.3).[45]

The result is that teachers use materials of varying quality in their classes. Individualised planning means that students are less likely to experience a coherent, vertically aligned curriculum over time and are more likely to be a victim of the lesson lottery. Unfortunately, the lottery weighs heaviest on disadvantaged students. In advantaged schools, 63 per cent of teachers agree that students at their school learn the same thing, no matter who their teacher is; in disadvantaged schools, that figure is only 48 per cent.[46]

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44. See Figure 3.29 in Hunter et al (2022a, p. 25).
45. Our survey results mirror a recent, large US survey which found that search engines and teacher marketplaces were more popular go-to sites for classroom materials than government-funded sites. See Doan et al (2021).
46. See Figure 3.12 in Hunter et al (2022a, p. 15).

Figure 3.3: The most popular internet sites for resources are the hardest to quality-assure
Percentage of teachers that report visiting each site once a fortnight or more
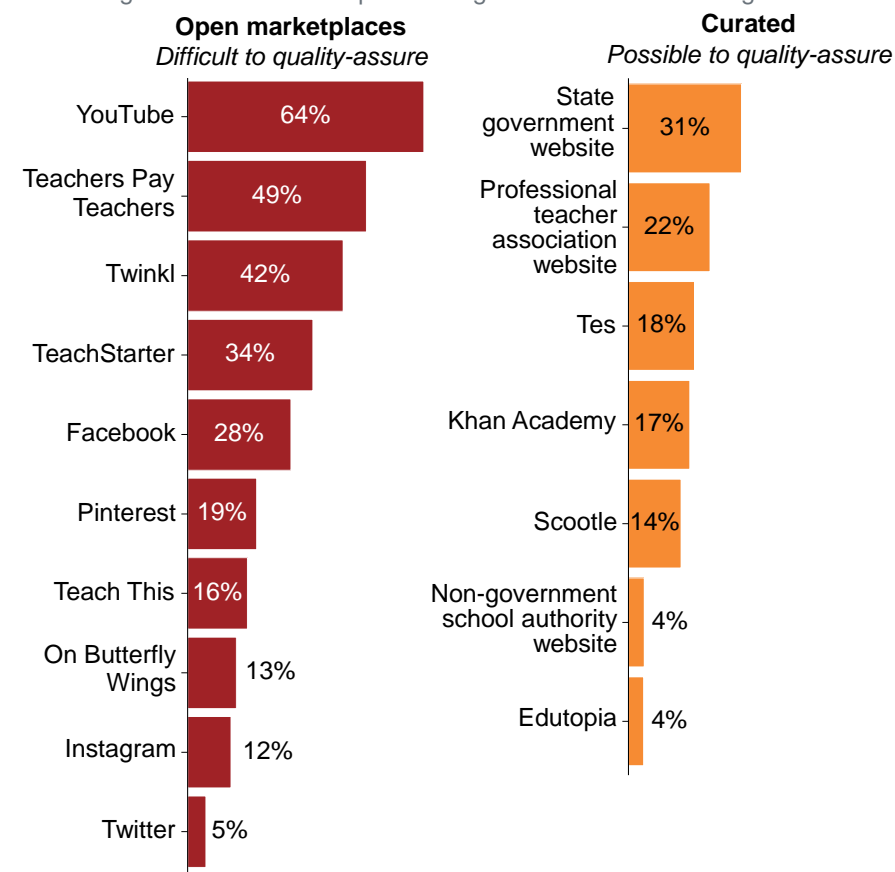
Notes: Total sample size is 1,991 teachers (including government and non-government teachers). The question asked: 'Select any online resource repositories you use regularly (once a fortnight or more, on average) for ideas and/or materials to integrate into your lessons'. Tes was formerly known as The Times Educational Supplement. Percentages sum to more than 100 because teachers could select multiple responses.
Source: 2022 Grattan survey on curriculum planning and materials.

3.5 Teachers want change and students need it

More than half (55 per cent) of teachers are dissatisfied with their school's current approach to curriculum planning.[47] At disadvantaged schools, 61 per cent of teachers are dissatisfied.[48]

Teachers believe their students would benefit if they were able to use shared, high-quality curriculum materials in their classrooms. Nearly four in five teachers (79 per cent) said a comprehensive bank of high-quality curriculum materials would be very or extremely useful. And 88 per cent of teachers agreed that having access to such a bank would give them more time to focus on improving their classroom practice and meeting the learning needs of individual students (Figure 3.4).

Our survey shows stark differences on key indicators of quality for teachers and students based on whether schools have a comprehensive bank of materials (see Figure 3.5 and Box 13).

Teachers and school leaders in schools with a comprehensive bank of materials for all subjects report that students almost always complete the same assessment tasks (96 per cent agree or strongly agree, compared to 75 per cent of teachers and school leaders in schools without a bank for any subjects), that students are more likely to be taught with the same instructional materials (76 per cent versus 44 per cent), and that students learn the same things no matter who they are taught by (80 per cent versus 45 per cent). They were also almost four times more likely to be satisfied with their approach to planning: 60 per cent were satisfied, compared to 16 per cent of teachers and school leaders without a bank (Figure 3.5).

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47. Forty-five per cent of school leaders are also dissatisfied. See Figure 3.11 in Hunter et al (2022a, p. 15) for the percentage of teachers and school leaders who said they are satisfied.
48. Figure 3.12: Hunter et al (ibid, p. 15).

Figure 3.4: Teachers believe students would benefit from high-quality curriculum materials
Percentage of teachers who agree or strongly agree with each item

Using shared high-quality instructional materials would…

give teachers more time to focus on improving their classroom practice — 90%

give teachers more time to evaluate and respond to individual student learning needs — 88%

Beginning teachers should be…

supported to implement shared high-quality instructional materials in their classes — 97%

provided with shared high-quality instructional materials that they can use in their classes — 93%
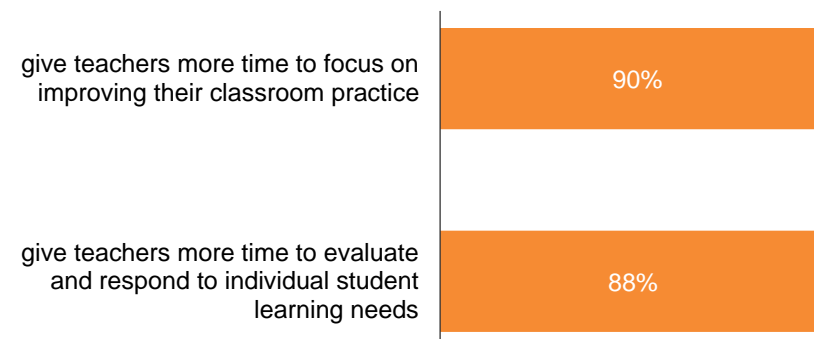
Notes: Total sample size ranged from 1,597 to 1,606, because not every teacher answered each question. School leaders reported similar views about the benefits of high-quality curriculum materials – see survey results supplement: Hunter et al (2022a, p. 17). The question asked: 'Please indicate the extent to which you agree or disagree with each statement'.

Source: 2022 Grattan survey on curriculum planning and materials.

Box 13: Teachers' views on the idea of a comprehensive bank of high-quality curriculum materials

Teachers we surveyed expressed frustration with the status-quo, and support for a whole-school planning approach:

It frustrated me to no end that schools and governments do not provide resources/lesson plans/unit plans that are ready to go. I was a lawyer before I was a teacher, and I would never have drafted a legal document without using a precedent! Having materials that are ready to go creates efficiency and improves quality of teaching. – *Primary school teacher*

One of the most time-consuming activities in teaching is preparing lessons and suitable materials. If there was a bank of high-quality lesson plans with accompanying resources organised in correct scope and sequence, it would allow teachers to concentrate on teaching and assessing, and provide a better-quality education for our students. It would also allow a more effective work/life balance. – *Primary school teacher*

Two things are pertinent here: firstly, a comprehensive bank of ready-to-use, high-quality instructional materials releases the cognitive load from me as a teacher. This allows me to focus on the pedagogical approaches I am using to ensure knowledge and skill development. Secondly, such instructional materials ensure consistency between classes in the same school and/or system, ensuring that all students have access to learning of the same high standard. – *Teacher in a combined school*

In my context, the use of a bank of resources has made a huge difference to the quality of instruction. It allows us to see the instruction of other teachers (through the materials), gives us a common set of practices that underpin our discussions about classroom practice, and frees up time for us to focus more on the requirements of the students in our classes rather than fruitlessly searching or creating. – *Teacher in a combined school*

Figure 3.5: Schools with shared curriculum materials report big benefits for students and teachers
Percentage of teachers and school leaders who agree or strongly agree, categorised by access to a comprehensive bank of curriculum materials
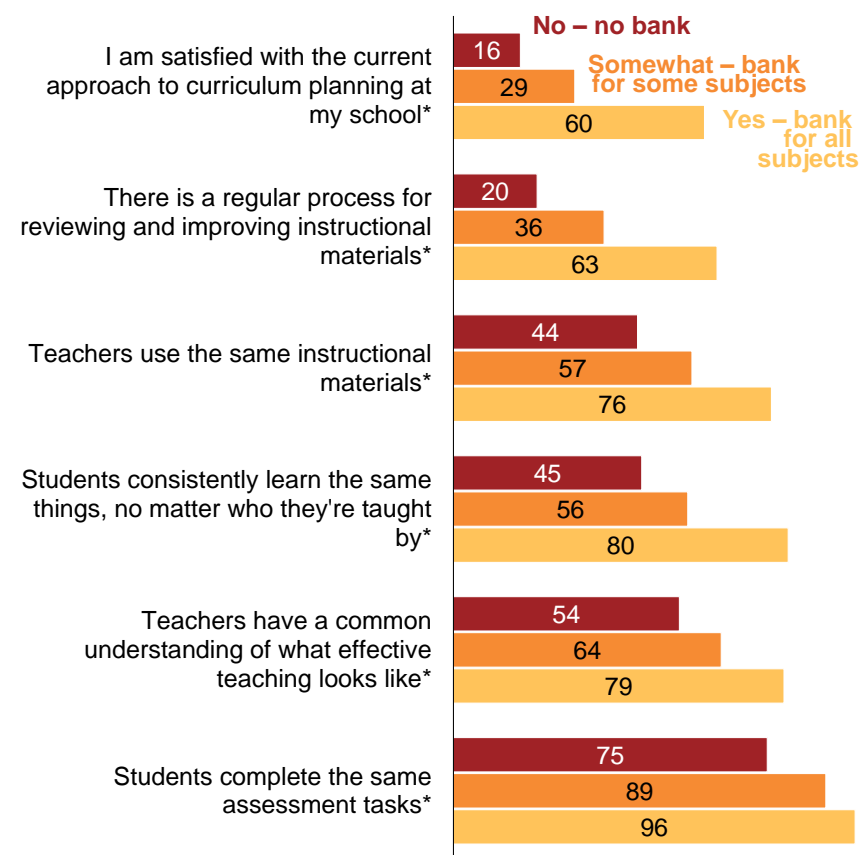
Notes: Total sample size ranges from 1,794 to 1,856. Sample size varies because not every teacher or school leader responded to each item. Results are similar when the 221 school leaders who don't regularly teach are excluded – see Figure 3.10 in Hunter et al (2022a, p. 14). An asterisk (*) indicates differences between groups are statistically significant (p < 0.05) using a chi-squared test of independence.

Source: 2022 Grattan survey on curriculum planning and materials.

3.6 More effective whole-school curriculum approaches could ease teacher workloads

Once established, a whole-school curriculum approach can help ease teacher workloads. In schools where teachers already have shared materials, teachers spend three hours less each week on sourcing and creating materials (Figure 3.6). This is a significant amount of time – double that of the time release negotiated in one recent industrial agreement.[49]

Failing to support schools to make this change has significant workload implications. Addressing the lack of access to a comprehensive bank of shared curriculum materials in schools could free up 20 million hours of Australian teachers' time each year.

3.7 Despite the benefits, change will be challenging in most schools

The day-to-day reality in many schools means that, without government help, a shift to a whole-school approach to high-quality curriculum planning is unlikely to happen. Our case study schools are the exception, not the rule.

3.7.1 More time would help, but it won't end the lesson lottery

Our case study schools invested time up-front in building a comprehensive bank of high-quality curriculum materials (see Chapter 2). And teachers in those schools still need time to adapt and refine curriculum materials, do the intellectual preparation needed to deliver the materials in the classroom, and consider how they will support the needs of different students.

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49. Australian Education Union Victorian Branch (2022).

Figure 3.6: The typical teacher with a bank for all subjects saves 3 hours planning each week compared to those with no bank
Median hours teachers spend sourcing and creating materials each week, by access to a comprehensive bank of curriculum materials
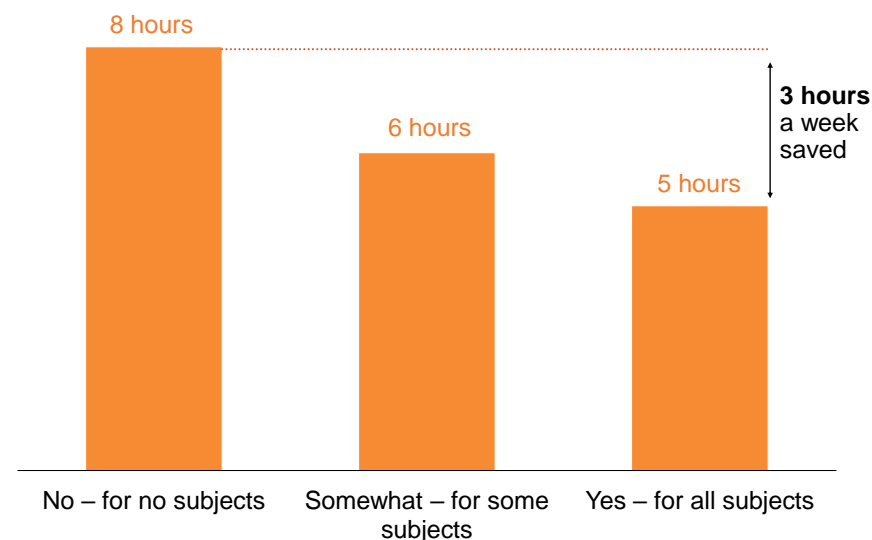
Notes: Respondents were asked: 'In a typical week during term time, about how many hours do you spend searching for and developing instructional materials?' Respondents were asked to include time spent searching online and developing lesson materials from scratch (such as PowerPoint slides, worksheets, or assessment tasks) and hours spent both at home and at school. Sample size included 665 teachers who indicated they did not have a bank of materials ('no'), 890 teachers who indicated they had a bank for some subjects ('somewhat'), and 276 teachers who indicated they had a bank for all subjects ('yes'). Differences between groups are statistically significant (p value < 0.05), using a linear regression with key school and teacher-level characteristics as covariates (school size, level of advantage, level of schooling, face-to-face teaching hours, years of experience, and if new subjects are taught). See Figure 3.28 in Hunter et al (2022a) for distribution of results.

Source: 2022 Grattan survey on curriculum planning and materials.

Creating more time for teachers to prepare for effective teaching is vital, but often challenging.[50] Almost all teachers and school leaders we surveyed (98 per cent) believed lack of time was a barrier to making whole-school, high-quality curriculum planning happen (Figure 3.7).

But simply providing teachers with an extra one or two hours a week for more individual lesson planning won't cut it. As discussed in Chapter 1, it takes at least 500 hours to make sequenced and detailed curriculum materials for a year's worth of classes in one subject. It is unrealistic to expect teachers to do 500 hours of planning per subject – but in effect this is what we are expecting of many teachers.

And even large increases in teachers' individual preparation time would not end the lesson lottery, unless curriculum processes are also overhauled to ensure careful, whole-school curriculum sequencing and coordination.

As our case study schools show, teachers don't need to do all this work on their own. School-wide approaches allow the heavy lifting to be shared. When schools commit to shared curriculum planning, they can provide teachers with the time they need to prepare for great teaching and respond to students' individual needs.

3.7.2 Using shared curriculum materials will require a culture shift in schools

As our case study schools illustrate in Chapter 2, shifting to whole-school curriculum planning is a big undertaking that requires everyone to be on the same page. Our survey results show that some teachers have concerns that would need to be addressed for them to be comfortable with new ways of planning.

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50. Grattan Institute's January 2022 report *Making time for great teaching: How better government policy can help* was dedicated to the topic of finding more time and found cost-effective ways to create more time for classroom preparation.

Figure 3.7: Schools face many barriers to establishing a comprehensive bank of curriculum materials
Percentage of teachers and school leaders who identified each barrier
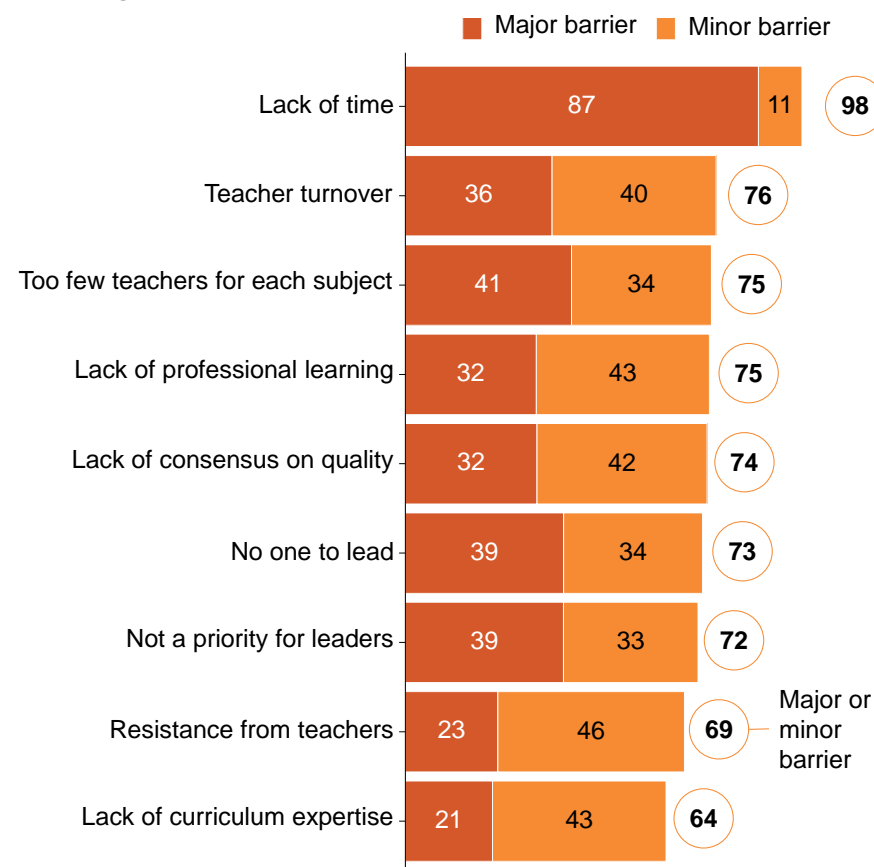
Notes: Total sample size ranged from 1,964 to 2,043. The question asked teachers and school leaders to: 'Please rate the barriers in your school to improving access and use of a comprehensive bank of ready-to-use, high-quality instructional materials'. Possible responses included 'Not a barrier', 'Minor barrier', 'Major barrier', and 'Not applicable'. See Figure 3.8 in Hunter et al (2022a, p. 13) for differences in school leaders' and teachers' responses.

Source: 2022 Grattan survey on curriculum planning and materials.

Despite most teachers seeing benefits of a shared approach to curriculum planning and materials, teacher resistance to change was considered a barrier to establishing a comprehensive bank of curriculum materials by 69 per cent of teachers and school leaders (Figure 3.7).[51] Some teachers are hesitant about how shared materials would be developed and whether such materials would enable them to better meet their students' individual needs. Some teachers are also reluctant to give up some of their individual autonomy that allows them to decide for themselves what curriculum materials they use in the classroom.

In many ways, these hesitations are not surprising. Governments increasingly expect teachers to tailor and target their teaching to students' individual needs, and policy frameworks often advocate for a highly differentiated model of teaching wherein teachers attempt to meet each student where they're at.[52] And the Australian Professional Standards for Teachers reflect the idea that effective teachers must be adept at planning, selecting, and creating curriculum programs on their own.[53]

Some schools and policy makers have interpreted the expectation to differentiate as incompatible with using shared curriculum materials. They argue that to respond to the needs of each student, curriculum materials must be designed for a specific class or even personalised to individual students. Teachers whose leaders share these reservations are left with little choice but to make unique curriculum materials for

their class. Several of the teachers we surveyed, who saw the benefits of whole-school curriculum planning, said this put them in a bind (see Box 14).

But our case study schools show that it is possible to deliver high-quality instruction and meet a range of student needs while using shared curriculum materials across classes, and that there are considerable benefits to adopting this approach.

3.7.3 Coordination and leadership are vital but hard to get right

To make whole-school curriculum planning work, schools need curriculum leaders with the responsibility and time to coordinate it.

Our case study schools have senior leaders – often the principal – with a vision and plan to put whole-school curriculum planning in place. They also have highly effective curriculum specialists or middle leaders with responsibility for sequencing content taught across year levels and, increasingly, between subjects. Together, these school leaders lead and sustain a whole-school approach to curriculum planning.

But this kind of leadership is rare in schools. Having no one to lead the development of shared materials was considered a barrier to shared curriculum planning by 73 per cent of the teachers and school leaders we surveyed (see Figure 3.7). And 72 per cent of teachers and school leaders felt that adopting shared curriculum planning was not a priority for their school's leaders.[54]

One reason leadership was considered such a barrier is that curriculum leadership roles are often ill-defined, and those leaders lack the expertise, authority, and time to drive real change. Few teachers say they have a leader in their subject area who provides them with instructional materials, helps them choose effective materials, or helps

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51. For a comparison of teachers' and school leaders' responses to this question, see Figure 3.8 in Hunter et al (2022a, p. 13).

52. For example, see the Northern Territory's Framework for Inclusion, the Tasmanian Learners First Pedagogical Framework, and the Victorian Pedagogical Model: Northern Territory Department of Education (2019), Tasmanian Department of Education (2020b), and Victorian Department of Education and Training (2020b).

53. For example, the Standards expect proficient teachers to 'design and implement learning and teaching programs using knowledge of curriculum, assessment and reporting requirements' (Standard 2.3).

54. For a comparison of teachers' and school leaders' responses to this question, see Figure 3.8: Hunter et al (2022a, p. 13)

them to adapt existing materials for their class (see Figure 3.8). More than half of teachers say they don't have a leader who gives them advice on how to improve their classroom delivery, and ensures that all teachers of a subject use shared instructional materials.

At some schools, time is rarely dedicated to curriculum planning as a team. Only one quarter of the secondary teachers we surveyed meet with their subject team at least fortnightly, and fewer than half of primary school teachers meet with their team at least fortnightly.[55]

Productive time to collaborate is essential for building and sustaining a whole-school approach to curriculum planning. Our case study schools showed that while curriculum plans and classroom materials can establish a clear instructional approach, time spent collaborating is essential for developing a shared understanding that builds expertise and creates opportunities for consistent learning between classrooms. In our case study schools, teams met at least fortnightly, but often more frequently. And these meetings were laser-focused on teaching and learning based on the shared curriculum, or refinements of shared curriculum materials based on how well the materials performed in the classrooms.

In contrast, many of the respondents to our survey felt that existing collaboration time set aside in their schools is often derailed by issues other than curriculum. More than half of teachers (55 per cent) report that they always or usually end up discussing matters other than instructional issues in curriculum meetings (see Figure 3.9). Nearly a third (31 per cent) say that they never or rarely reflect on how to use curriculum materials effectively.[56]

Meetings are also seldom used for the deep intellectual preparation required for effective delivery. Only 19 per cent of teachers said

---

> **Box 14: Teachers' views on cultures of individualised planning**
>
> Some of the teachers we surveyed said they – or their school system or leaders – preferred individualised planning over using shared materials:
>
> > My HOLA [Head of Learning Area] does not believe in common teaching and learning programs as he feels this limits teachers' agency and creativity.
> >
> > *– Secondary school teacher*
>
> > We are explicitly told that we cannot use programs created by others even if we adapt them, because the principal claims that we would not be meeting professional Standard 3.2. We are graded on our programs and marked down if the program is not an original.
> >
> > *– Combined primary and secondary teacher*
>
> > My class is different from my colleague's class [in the same subject and year level]. It's different from the class for the same subject I had last year. I cannot use the same approach or materials, because I need to ensure I am tailoring these to their learning needs.
> >
> > *– Secondary school teacher*
>
> > In our Diocese the expectation is that we create our own learning sequences that are contextualised and differentiated for our current students. There is not a lot of sharing that happens, and reusing programs is not something that is encouraged, unfortunately.
> >
> > *– Primary school teacher*

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55. See Figure 3.39 in Hunter et al (2022a, p. 31).
56. See Figure 3.40 in Hunter et al (ibid, p. 31).

Figure 3.8: Few teachers experience strong curriculum leadership
Percentage of teachers who agree or strongly agree that there is a curriculum leader who...

Item	Value
ensures all teachers of this subject use the same assessment tasks	53
expects teachers to use similar teaching strategies	37
provides teachers with advice which helps them to improve their delivery	30
ensures all teachers are using shared instructional materials	22
provides teachers with instructional materials that they can use	20
helps teachers adapt instructional materials	14
helps teachers choose the most effective instructional materials	14

Notes: Total sample size ranged from 1,168 to 1,178. Teachers were asked the question in relation to either the first lesson in their timetable, the first lesson after recess, or the first lesson after lunch. Item wording has been shortened, see Hunter et al (2022a, p. 32) for full wording.

Source: 2022 Grattan survey on curriculum planning and materials.

Figure 3.9: Planning time is spent ineffectively
Percentage of teachers by responses to whether in curriculum meetings: 'We end up discussing matters other than instructional issues'

Response	Percentage
Never true	2%
Rarely true	9%
Sometimes true	33%
Usually true	32%
Always true	23%
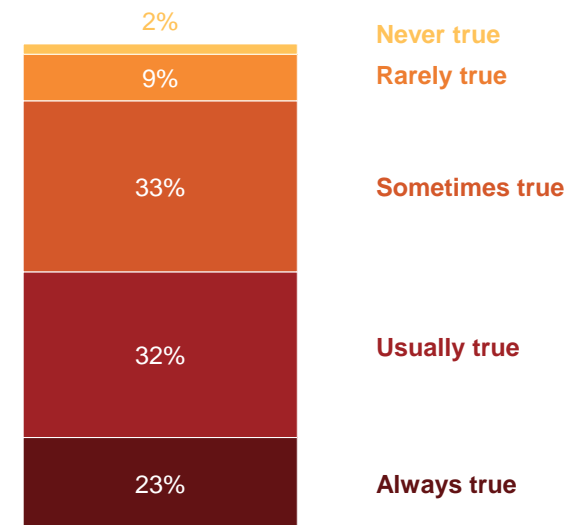
Notes: Total sample size of 1,133. Percentages do not sum to 100 due to rounding. Teachers were asked to consider a typical curriculum or lesson planning meeting with their teaching team, and indicate the extent to which the statement was true of how they spent their time in those meetings. To maximise the spread of responses for different subjects, teachers were randomly allocated to respond either in relation to the first subject they teach each week, the first subject they teach after recess, or the first subject they teach after lunch.

Source: 2022 Grattan survey on curriculum planning and materials.

that they always or usually use collaboration time to demonstrate to colleagues or watch how others teach a concept.[57] This is a lost opportunity to focus on curriculum and how to enact it in the classroom.

As a result, existing collaborative curriculum planning in schools is frequently rudderless, because teachers who are supposed to lead the work rarely get the time – and may not have the subject-specific expertise – to provide meaningful support to others (see Box 15).

Teachers often struggle to find outside help if they lack curriculum leadership at their school. Roles for recognised curriculum experts do not exist across most systems. Professional associations could fill this gap, but they depend on volunteers with scant resources.

This leaves teachers and school leaders in an unenviable position. Even if they want to adopt a comprehensive, whole-school approach to curriculum planning, they may lack the time, expertise, or authority to make it happen.

3.8 To date, government efforts to provide curriculum materials to schools have fallen well short

Governments have yet to reckon with the scale of the curriculum planning challenge in schools and their role in – and responsibility for – ending the lesson lottery.

Teachers' planning pains are not new. Over time, there have been sporadic efforts across the country to develop sample curriculum materials. Many consist of idiosyncratic, standalone activities, lesson ideas (without supporting classroom materials), or an assortment of links to various websites. These activities and materials fall well short of high-quality, comprehensive, coherent, knowledge-rich, standards-aligned and content-aligned materials (see Box 3 on page 9).

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57. See Figure 3.40 in Hunter et al (2022a, p. 31).

> **Box 15: Teachers' views on curriculum leadership**
>
> Several teachers we surveyed explained how curriculum leaders may not have the time, empowerment, or content-knowledge to lead curriculum change:
>
> > I am a faculty head, and curriculum leadership is what I feel is my core responsibility. But much of my time is actually taken up with student disruption and behaviour-management issues.
> >
> > *– Secondary school curriculum leader*
>
> > It is very difficult to ensure consistency of practice throughout the school when classroom teachers are not accountable to me in my role. I provide classroom support, coaching, mentoring, resources, advice on individual students, attend parent meetings. But at the end of the day, I'm not their immediate superior so I'm stuck in the middle trying to do everything I can for the students from a distance.
> >
> > *– Primary school curriculum leader*
>
> > Head teachers are not subject-specific and therefore have little-to-no knowledge about subject-specific content. Instead of receiving assistance from the head teacher, I spend my time explaining the units and assessments to them and teaching them the syllabus.
> >
> > *– Secondary school teacher*

A small number of comprehensive curriculum offerings – which include whole-school curriculum maps and full units of work with detailed classroom materials (such as lesson plans, learning activities, and assessment tasks) – have also been provided. Queensland's 'Curriculum into the Classroom' initiative is notable as the largest and most established contemporary example of an Australian government investing in a full suite of detailed curriculum materials for all subjects and year levels (see Box 16).

To date, government-provided curriculum materials have attracted mixed reviews from teachers. While nearly two thirds of teachers visit YouTube once a fortnight or more for lesson ideas or materials, web-based resources provided by government are much less popular – only 31 per cent of teachers in our survey reported visiting their state or territory's government website at least once a fortnight (Figure 3.3).

Perceptions of poor quality are one reason teachers and school leaders do not use government web-based resources more often (see Box 17). Only 33 per cent of teachers and school leaders agree or strongly agree that currently available government materials are high-quality (see Figure 3.10 on page 42). Most teachers and school leaders (52 per cent) also said that these materials are not easy to find. And only 22 per cent said these materials provide the right level of challenge for their students.

So far, materials provided by government have rarely been subjected to robust, independent quality reviews or regular 'real world' testing and refinement. And teachers generally get too little professional development, support, and encouragement to use externally developed materials confidently and effectively in their classrooms.

Getting these aspects right will be critical to the success of current government efforts to close the large curriculum materials gap in schools.

Box 16: Queensland's 'Curriculum into the Classroom' initiative provides comprehensive curriculum materials

Released in 2011, 'Curriculum into the Classroom', or C2C, is a suite of curriculum materials developed by the Queensland Department of Education. Comprehensive and detailed, C2C covers all subjects and learning areas, including smaller subjects such as Dance and German and support for composite classes.

C2C aims to provide schools with everything they need for a documented whole-school curriculum, from a school-wide curriculum map – with unit and assessment timing for every year level and subject – right down to aligned lesson-by-lesson classroom materials and assessment tasks. It also includes materials for teaching students with a disability. The materials are not mandatory and they can be edited by teachers.

Queensland government teachers in our survey were more likely to report that they used government-provided materials at least once a fortnight (65 per cent versus 42 per cent for government teachers in other states). They were also more positive about how easy these materials were to find (42 per cent versus 22 per cent) and adapt (35 per cent versus 27 per cent). But they had similar reflections to teachers in other states on the quality of government-provided materials. They were also only slightly more likely to report that they had access to a comprehensive bank of materials for all of their subjects (18 per cent versus 12 per cent). This suggests more work is required to support the use of C2C materials in schools.

To date, there has been no independent evaluation of the quality of C2C materials or a publicly reported evaluation of their impact on student learning.

Box 17: Teacher views on instructional materials provided by governments

Some teachers felt government materials were a useful starting point for teachers' planning, particularly if the materials provided options for differentiation and could be edited. But other teachers said they found it easier to create their own materials than sift through various government websites:

> They are often a rabbit warren that requires a decent amount of time to sift through to find what teachers need – *Primary school teacher*

> They can be very difficult to navigate, and there are so many different ones that you can spend hours searching for relevant and quality material. It is often quicker to make something yourself, but this also takes a significant amount of time – *Teacher in a combined school*

Availability of materials was a particular concern for teachers in non-government schools, and teachers of some subjects:

> In the Catholic sector these resources are not available to us, which is a shame – *Primary school teacher*

> The arts are never very well resourced. It's often not worth my time to try and find the resources. It's easier to just do it myself – *Secondary school teacher*

Some teachers said some government materials don't go into enough detail and are not well sequenced:

> They are very often only the skeletal frameworks of instruction and do not provide enough lesson-to-lesson content – *Secondary school teacher*

> The government resources have two annoying aspects for me. First, they are just activities and do not represent a sequence of learning over time. Second, they are variable in quality – *Teacher in a combined school*

> Nothing is sequenced so you can build on knowledge. They are all stand-alone single lessons – *Primary school teacher*

Some teachers were concerned about the quality of the resources:

> They are often very basic and don't always align to evidence-based teaching approaches – *Primary school teacher*

And some teachers felt they needed more implementation support:

> There has been little communication about them and no professional learning. The website also feels like a dumping ground for resources, and it is left to the individual teacher to filter through them – *Primary school instructional leader*

Figure 3.10: Teachers and school leaders report several problems with government-provided instructional materials
Percentage of teachers and school leaders by agreement to the statement, 'Instructional materials made available by governments...'

	Disagree or strongly disagree	Agree or strongly agree
are high-quality	30%	33%
are easy to adapt	40%	31%
are easy to find	52%	27%
provide the right level of challenge for students	43%	22%
address the particular learning challenges of students	55%	17%
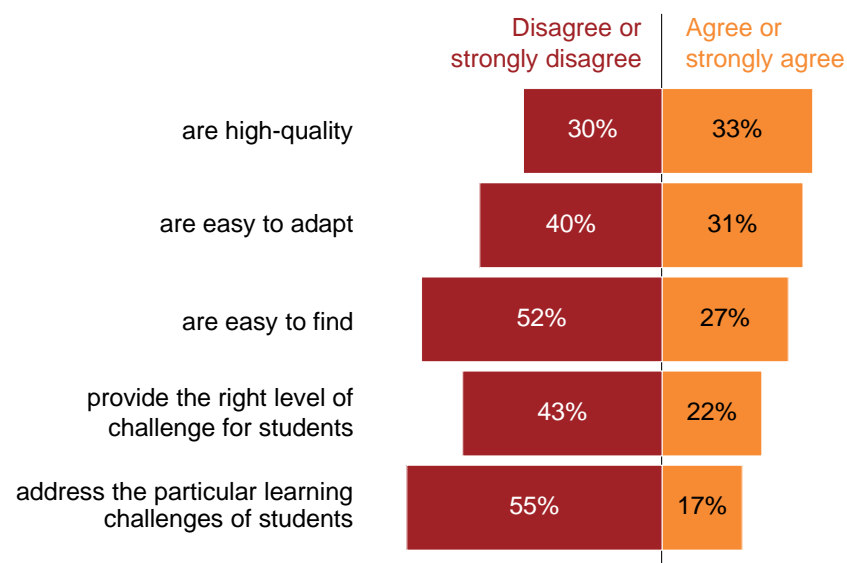
Notes: Total sample size ranges from 1,672 to 1,684. The question asked: 'Please indicate the extent to which you agree or disagree with each statement'. Respondents who chose 'Neither agree nor disagree' are not shown on this chart. This question was asked only of teachers and school leaders who indicated that they use government-provided materials at least fortnightly in their planning or coaching, and teachers and school leaders who indicated that they were aware of the materials but do not use them regularly (i.e. at least fortnightly). See Figure 3.21 in Hunter et al (2022a, p. 20) for a breakdown of responses by sector.

Source: 2022 Grattan survey on curriculum planning and materials.

4   What governments should do

We propose a new partnership between governments, Catholic, and independent school sector leaders, principals, and teachers. In this partnership, governments and sector leaders provide intensive support to schools and teachers to end the lesson lottery, improve student performance, and ease teacher workloads.

This will require everyone to pitch in, harnessing their different strengths and roles. Governments and sector leaders should ensure all teachers have access to high-quality curriculum materials and intensive support. School leaders should establish a clear vision and coordinate action in their schools, to adopt a whole-school approach to curriculum planning. Curriculum leaders should use their subject expertise to ensure high-quality, carefully sequenced curriculum materials are used across all classrooms and year levels. And with increased collaboration and coordination, teachers should be able to better focus on the progress and needs of the students in their classes.

This chapter provides a road map for governments and sector leaders, setting out the steps they should take to better support schools and teachers.

A forthcoming Grattan report will draw on our school case studies in greater depth to provide an action plan for school leaders, showing how they can implement a whole-school curriculum approach in their school.

4.1   A new partnership between governments and sector leaders, school leaders, and teachers

In Grattan's new partnership model, governments and sector leaders take a more hands-on approach to supporting schools. Schools will still have to do much of the heavy lifting on curriculum planning, but

governments and sector leaders will provide a strong helping hand (see Figure 4.1 on the following page).

National coordination between the federal government and the state and territory governments, along with sector leaders, could have significant benefits and reduce costs. But large and cost-effective improvements can also be achieved by individual states and territories and sector leaders, if national agreement cannot be achieved.

4.1.1   It makes economic sense for governments to ease the burden on teachers

Individualised curriculum planning is hugely inefficient. And in reality, teachers are struggling to fit the hours required into their working week. The current system wastes time and results in lost learning. Figure 4.2 on page 45 illustrates the huge burden we are asking teachers to shoulder. Governments have the resources to invest in high-quality curriculum materials, but instead expect teachers to build these on their own – an approach that we calculate is at least 240 times more expensive.

We estimate governments could guarantee schools have access to high-quality, comprehensive curriculum materials for Foundation to Year 10 for about $15-to-$20 million per major subject area, possibly much less if building on existing, well-established, high-quality curriculum materials.[58] Additional investment could provide schools with a wider choice of robust curriculum materials. This would set teachers up

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58. This is an indicative estimate, based on consultation with curriculum experts and developers. These costs do not include accompanying intensive professional development or developing sophisticated digital platforms

Figure 4.1: The Grattan road map for governments and sector leaders to improve curriculum planning in schools

CURRICULUM MATERIALS	BUILDING EXPERTISE	REVIEW AND EVALUATION
Governments and Catholic and independent sector leaders		
Ensure all teachers have access to a suite of high-quality, comprehensive curriculum materials • Audit the existing comprehensive curriculum materials that are currently available to schools, and identify critical gaps • Invest in comprehensive curriculum materials to fill gaps, and support teachers to use them effectively • Establish a rigorous, independent, quality-assurance mechanism to continually evaluate and report on the quality of externally developed curriculum materials • Review and update online sites so teachers know where to find high-quality, comprehensive materials	**Recognise and build curriculum expertise across the system** • Direct AITSL to update the Professional Standards to clarify that teachers are not expected to develop curriculum materials individually, recognise subject-specific curriculum expertise, and emphasise school leaders' role in establishing a whole-school curriculum approach • Overhaul professional development programs to ensure: – Principals and school leaders can embed whole-school curriculum approaches in their school – Curriculum leaders have deep subject-specific curriculum expertise and the skills needed to implement a whole-school approach in their discipline – Teachers can understand, implement, and adapt existing high-quality curriculum materials (at least 50 per cent of required professional learning)	**Overhaul school reviews and fund rigorous evaluation** • Fund regular and rigorous reviews of all schools' implementation of the curriculum, and provide targeted support to schools • Fund research into the design and implementation of high-quality curriculum materials, and evaluate the impact of different approaches on student learning
School and curriculum leaders		
Set clear expectations and processes to establish a whole-school approach for curriculum appropriate to their school context	Invest in initial and ongoing curriculum-specific professional learning and coaching for all staff	Build systems to monitor student learning and continually refine curriculum materials
Teachers		
Shift focus from planning individually and/or 'from scratch' to working with curriculum leaders and colleagues on developing and/or adapting shared, high-quality comprehensive curriculum materials for their school	Engage in subject-specific curriculum professional development. Using high-quality curriculum materials, shift focus to intellectual preparation for the classroom, including differentiation to meet students' needs.	Regularly monitor student learning to continually refine and improve curriculum materials and teaching practices

to focus on adapting and refining existing materials, rather than developing materials from scratch.

The potential savings are huge – providing comprehensive curriculum materials to teachers of all subjects could save teachers up to three hours a week. This is equivalent to about $1.3 billion of teacher time per year. Done well, it could significantly improve the quality of classroom curriculum materials in use and boost student learning.

4.1.2 The way teaching and learning is organised in many schools needs to change

A whole-school curriculum approach requires a fundamental rethink of how many schools run. Comprehensive, sequenced curriculum materials that set out what and how to teach are at the heart of this change. But these materials are only part of the solution.

Schools also need an accompanying evidence-based instructional model which gives teachers a shared understanding of what great teaching looks like.[59] School leaders need the expertise, time, and authority to lead a whole-school approach to curriculum planning. All staff need intensive, ongoing training and coaching, focused on understanding curriculum materials and effective classroom instruction. And schools need better monitoring and review systems to evaluate and refine different curriculum approaches and materials over time.

A change like this will not be easy. It will require strong school leadership, guided by an explicit vision of what a whole-school approach looks like in each school. The remainder of this chapter outlines how governments can help schools to make these necessary changes.

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59. The Australian Education Research Organisation (AERO) has published guidance on evidence-based instruction: see AERO (2022).

Figure 4.2: Individualised curriculum planning is a costly model
Indicative costs to develop quality curriculum materials for a single subject (e.g. Maths or English)
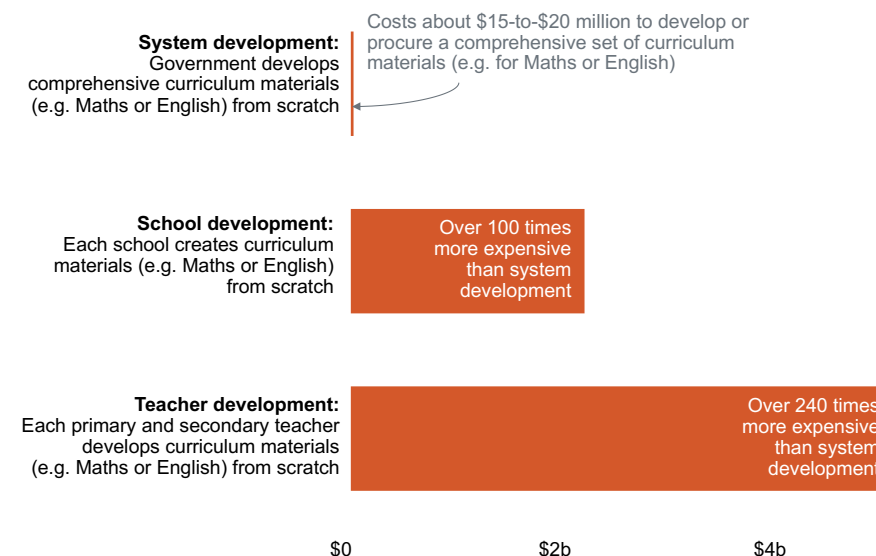
Notes: Calculated for Foundation to Year 10 Maths or English, assuming it takes 500 hours for teachers and schools to develop sequenced and detailed curriculum materials for one year of Maths or English classes (as estimated by curriculum experts, developers, and our case study schools). Cost for teacher and school development is calculated based on average teacher salaries across Australia. Teacher development costs are estimated based on the number of students (Foundation to Year 10) and average class sizes in Australia. Estimate for school development is based on the number of schools in Australia and years of schooling (Foundation to Year 10). System costs are estimated separately and are for creating stand-alone, high-quality, comprehensive materials accessible for teachers to adapt and use. This estimate is indicative only and based on consultation with curriculum experts and developers. These costs do not include accompanying intensive professional development or developing sophisticated digital platforms.

Sources: ACARA (2021c, student numbers); ACARA (2021d, school numbers); ACARA (2021b, staff numbers); ABS (2022, Survey of Employee Earnings and Hours (Cat. no. 6306.0), 2021 data); and OECD (2021, average primary and lower secondary class size, Table D2.1, 2019 data).

4.2 Ensure all teachers have access to high-quality, comprehensive curriculum materials

Some schools have defied the odds, and have managed to build up high-quality, comprehensive, shared curriculum materials that all teachers use as part of a coherent, whole-school approach to teaching and learning. These schools should continue to consolidate and refine their current approaches.

But these schools, some of which we studied in Chapter 2, are the exception, not the rule. To ensure all schools are able to establish a whole-school approach to curriculum planning, governments should take some of the burden off individual teachers and school leaders. Governments should ensure teachers have access to a suite of high-quality, comprehensive curriculum materials, and help schools choose the best materials for their context.

4.2.1 Audit existing comprehensive curriculum materials available to schools and identify critical gaps

Every school and teacher should have access to comprehensive curriculum materials that they can choose to use and adapt as required. These materials can up-skill beginning teachers and support out-of-field teachers as well as the large proportion of experienced teachers who take on a new subject for the first time every year. They can also reduce inefficient planning and provide an exemplar to all teachers, raising quality. These materials need to be comprehensive, easily tailored by teachers, and paired with teacher training and implementation support.

Governments should review the extent to which comprehensive curriculum materials are readily available to schools, identifying any critical gaps. This review should include existing comprehensive curriculum materials developed and provided by government education

departments, as well as high-quality, comprehensive materials offered in Australia by commercial and not-for-profit providers.

4.2.2 Invest in comprehensive curriculum materials

Governments should invest in high-quality, comprehensive curriculum materials to fill critical gaps that are identified, and make them available for all schools to use if they choose. Literacy/English, Humanities and Social Sciences, Maths, and Science should be the immediate priorities.

This could be achieved in three ways: governments could encourage existing not-for-profit or commercial providers to develop comprehensive curriculum materials that meet robust quality benchmarks; governments could directly procure new materials from external providers; or governments could develop new materials in-house, provided these are also subjected to rigorous quality assurance processes.

As an immediate priority, governments should consider buying high-quality curriculum materials from overseas, and adapting them for the Australian context.[60] Investment could also build off materials already made or under development in several states, such as Queensland, South Australia, NSW, and Victoria, and through Ochre Education, provided these meet robust criteria for quality, as outlined in Box 3 on page 9.

Any new curriculum materials should be developed in conjunction with experts in domain-specific curriculum design and pedagogy, and should be road-tested in classrooms. Appendix A provides an illustrative example of the level of detail and teacher guidance that should be built into high-quality, comprehensive curriculum materials, drawing on

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60. For example, Core Knowledge, Great Minds' Eureka Maths (originally developed for by New York District), and Ark Curriculum Plus's Mastery curriculums.

successful examples already available in the UK and US. Australian governments should follow the lead of the UK, where the government has tested several approaches to getting high-quality materials into the hands of teachers, including procuring from external providers, funding schools to collaborate and share materials, and developing resources in-house (see Box 18).

Over time, Australian governments should ensure a range of high-quality curriculum materials is readily available for all subjects and to all schools, including Catholic and independent schools. Providing a suite of materials that schools can adopt if they choose would ensure schools have flexibility and genuine choice, and avoid the perception that governments are mandating a specific approach. Over time, investment should extend beyond priority subjects to include smaller subjects such as Languages, Economics, and Technology, given that so many teachers are planning on their own in these areas.

This is not a 'set and forget' strategy. Because the Australian Curriculum will continue to be reviewed and updated, curriculum materials will also need to be reviewed frequently.[61] Materials should also be refined over time to bring them into line with emerging research on evidence-based practice.

4.2.3 Arm school and curriculum leaders with better information about the quality of externally developed materials

High-quality curriculum materials are hard to find – the internet is awash with options, but not a lot of detail about quality. Governments should make the right choice the easy choice, by reviewing and updating their online sites so teachers know where to find the best materials.

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61. This is a significant commitment, and should be factored into any government decision to develop curriculum materials in-house.

> **Box 18: The UK government's approach to providing teachers with high-quality curriculum materials**
>
> The UK Government has tested several approaches to providing teachers with high-quality curriculum materials. In 2019, it invested £2.4 million in a pilot program where several 'lead' schools developed and shared high-quality, comprehensive curriculum materials with other schools in their networks. Results so far have been positive. More than half of teachers said access to the new materials reduced their workload. In focus groups, some teachers noted they now had more time to prepare for class delivery and to support struggling students.[a]
>
> Oak National Academy was established in early 2020, with funding from the UK government, to provide remote learning support during the pandemic. Oak now provides comprehensive, sequenced materials across all subject areas (11,000+ lessons). These materials are freely available to teachers, students, and parents. Results from an independent evaluation have been positive. Most teachers (56 per cent) reported that Oak materials had increased the quality of their curriculum design, and 61 per cent said it had saved them time.[b]
>
> In September 2022, Oak became an independent, arms-length body of the Department of Education. Oak has since announced it will invest £8 million to purchase additional comprehensive, high-quality curriculum materials for six subjects.[c]
>
> This investment occurs against the backdrop of an established market of UK curriculum providers (including Ark Curriculum Plus described in Box 4 on page 10 and Appendix A).
>
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>
> a.   CooperGibson Research (2021).
> b.   ImpactEd (2021).
> c.   Martin (2022).

Governments should establish a rigorous, independent, quality-assurance mechanism that can be used to evaluate the quality of curriculum materials. Quality assurance findings should be made public.

In devising a national model, Australian governments should look to the US, where an independent not-for-profit organisation, EdReports, has developed a nationally recognised framework for examining the quality of comprehensive curriculum materials. EdReports uses paid teacher experts to conduct thorough quality reviews of comprehensive curriculum materials developed by non-profit and commercial providers. It publishes the results on its website (see Box 19).

4.3   Recognise and build curriculum expertise across the system

Providing schools with high-quality curriculum materials is only part of the solution. If we expect teachers and school leaders to work in different ways, we need to train them to do so.

There are two roles for governments here. First, governments need to make clear that individual teachers should not have to do it all when it comes to lesson planning – a whole-school curriculum approach enables teachers to share the load and requires school leaders to have sufficient curriculum expertise.

Second, governments should invest in building much deeper subject-specific curriculum expertise across the education system and within schools. This includes reaching a clear and shared understanding across education departments – from policy-makers, to regional office leaders, to principal-supervisors and other departmental staff who support schools – on the importance and features of high-quality, whole-school curriculum approaches and the materials available to schools.

Box 19: EdReports provides quality assurance for curriculum materials in the US

EdReports is a US not-for-profit, established in 2015, that helps teachers and school leaders identify high-quality curriculum materials. It reviews the quality of comprehensive curriculum materials – such as textbooks and web-based curriculum materials – and publishes the results. Reviews are conducted by accomplished teachers – with 17 years of experience on average – who receive more than 25 hours of training before they join a review team.[a]

Quality reviews are thorough. Review teams spend four-to-six months reviewing each set of materials. They evaluate materials against detailed and evidence-based criteria on quality and usability in the classroom. This process takes hundreds of hours.[b] The criteria for reviewing early years literacy curriculum materials, for example, are set out in a 100-page guide that helps reviewers assess whether materials meet clear, evidence-based requirements, such as providing for systematic and repeated instruction for students to hear, say, and read every new sound-letter combination they learn.[c]

EdReports has recruited and trained more than 700 teacher reviewers, published more than 970 reviews of English, Maths, and Science curriculum materials, and identified about 400 comprehensive curriculum materials that meet its quality standards.[d] EdReports also works directly with several US states, adapting its review process to help states identify high-quality materials that meet state-specific curriculum requirements.

a.   EdReports (2022).
b.   EdReports (n.d.[a]).
c.   EdReports (n.d.[b]); and EdReports (n.d.[c]).
d.   EdReports (2022).

To increase curriculum expertise in schools, we recommend a new cascading model of training, which ensures principals, curriculum leaders, and teachers have the skills they need to implement a high-quality, whole-school curriculum approach. The following sections explain this model.

4.3.1   Update professional standards for teachers and principals

Governments need to re-frame how we understand curriculum roles in schools, and encourage greater specialisation. We need to free teachers from the unhelpful assumption that individualised lesson planning is the best way to support student learning in their classrooms. Instead, curriculum leaders or teams of teachers should develop and refine materials together, drawing on high-quality external materials where appropriate, and then use them across their classes.

Governments should also better recognise the different areas of expertise within the profession. Teachers, like medical professionals, should be experts in specific areas – their subject or subjects, and the age-range of the students they are teaching.

An expert primary teacher, for instance, should have a sophisticated understanding of how students learn to read, which is very different to the knowledge of an accomplished senior secondary English teacher, who focuses primarily on analysis of sophisticated literary texts. And both are different to the knowledge an accomplished Science teacher needs to teach students about chemical reactions.

Current expectations for principals and teachers – as set out in the Australian Professional Standards for Teachers and Principals – don't fit with this understanding. These standards currently encourage individualised planning by teachers and do not recognise the importance of domain-specific expertise. Highly Accomplished and Lead Teachers (HALTs) are expected to demonstrate excellence across a very broad range of skills. And insufficient emphasis is given to the critical role of school leaders in driving a whole-school approach to curriculum planning.

Governments should direct the Australian Institute for Teaching and School Leadership (AITSL) to revise these standards and the way they are implemented, in four key ways.

First, the standards should clarify that teachers are not expected to develop curriculum materials individually, and that using and adapting existing high-quality curriculum materials is consistent with effective teaching. To do this, AITSL should revise the wording of the current standards, in particular standards 2.3, 3.2, and 3.4.[62]

Second, AITSL should develop new, detailed, subject-specific teacher elaborations that articulate the content and skills teachers need for effective teaching in each subject area and for certain year levels (e.g. the early primary years).

Third, AITSL should update HALT accreditation processes to encourage curriculum specialisation for middle leaders. Using the updated standards and new elaborations described above, the HALT process should recognise and reward teachers for developing specific, deep expertise. Applying these new standards and elaborations will ensure we're not asking our best teachers to be a jack of all trades and master of none.

Fourth, AITSL should update the Principal Standard to emphasise that principals have a vital role in establishing a whole-school approach to curriculum.

These changes would signal a move away from individualised planning and towards a shared, whole-school approach. In practice, these

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62. These particular standards relate to curriculum, assessment and reporting (2.3); planning, structuring and sequencing learning programs (3.2); and selecting and using resources (3.4).

shared approaches will re-focus principals on the core business of curriculum, build better in-school curriculum expertise, and enable teachers to focus on tailoring instruction for their students' needs rather than each teacher developing their own materials from scratch.

4.3.2 Support principals and school leaders to lead organisational change towards a whole-school approach

Implementing a school-wide curriculum approach is a significant and long-term (5+ years) change-management project. Principals and school leaders are central to this change. They need to have the vision, curriculum knowledge, management skills, and emotional intelligence to lead their staff through inevitable challenges. Working with their leadership team, they need to be able to redesign workforce structures and set up new processes and practices in their school.

Governments should invest in targeted support for principals. This support should:

- help principals understand the 'why' and 'how' of a high-quality, whole-school curriculum approach

- provide explicit training in areas such as school workforce design, selection and implementation of high-quality curriculum materials, and school-wide monitoring and assessment practices

- make the abstract concrete, by enabling principals to observe high-performing schools that can demonstrate exemplary whole-school approaches to curriculum planning and delivery

- involve sustained coaching to support principals through the inevitable challenges involved in organisational change

- include the entire school leadership team, which needs to work together to implement a whole-school approach.

4.3.3 Build curriculum leaders' subject expertise and leadership capacity

Curriculum leaders, such as heads of faculties or assistant/deputy principals, are vital for a whole-school approach because they lead the curriculum planning in their subject area.

Curriculum leaders need the expertise to be able to carefully sequence learning across year levels in their subject, coordinate the selection or development and refinement of high-quality classroom materials, and support teachers to implement these in their classes.

This is a challenging role and a significant departure from the way curriculum leadership is currently defined in most schools. To perform the role well, curriculum leaders will need not only deep curriculum expertise and pedagogical content knowledge, but also the 'soft' skills needed to lead others.

Governments should invest in more intensive training so that curriculum leaders can take on this role, and principals should ensure that curriculum leaders have the time and authority to perform the role effectively.[63]

Training and support for curriculum leaders should:

- help curriculum leaders understand the 'why' and 'how' of a high-quality, whole-school curriculum approach (aligned with the training that principals receive)

- provide explicit training focused on established learning progressions in their subject area, the process of designing a school-wide curriculum map, selecting existing high-quality

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63. The quality of professional development varies widely. Governments should prioritise high-quality professional development that provides practical advice on evidence-based approaches to designing and using curriculum materials. For example, see TeachWell's Masterclass Series.

curriculum materials, the evidence-base for effective pedagogy, and adapting materials for different student needs

- involve ongoing mentoring, coaching, and in-school support for curriculum leaders to help them build the soft skills required to lead their team

- establish and fund subject-specific cross-school networks, which would serve as a source of peer learning for curriculum leaders

- involve collaboration with internal or external Instructional Specialists or coaches, who support teachers' implementation in the classroom

- include Master Teachers, who are regionally-based, subject-specific, pedagogical experts who can provide additional support to curriculum leaders.[64]

4.3.4 Support teachers to understand, implement, and adapt existing high-quality curriculum materials

If we want teachers to use specific high-quality curriculum materials, then we need to support them to do so.

Governments can't simply hand teachers new curriculum materials and think that the work is done – many teachers will need time and coaching to understand the 'why' behind curriculum materials, as well as how to best implement them in their classroom with their students.

Governments should:

- provide curriculum-specific upfront teacher training, which explains the evidence-base underpinning curriculum material design, the pedagogical content knowledge necessary to teach specific parts

of the curriculum, and effective approaches for tailoring classroom instruction to student needs

- require at least 50 per cent of teachers' professional learning hours each year to be curriculum-specific

- ensure regular in-school team-based professional learning, focused on how to implement specific shared curriculum materials

- include instructional coaching by internal or external Instructional Specialists or coaches, to provide implementation support

4.4 Overhaul monitoring and accountability systems

4.4.1 Fund regular and rigorous reviews of all schools

School reviews provide one of the few windows into school and teacher practices on the ground. They are a key opportunity for governments and other sector leaders to provide additional tailored support to improve classroom practice and student learning.

Knowing how curriculum policies are playing out on the ground is vital for targeting system support and influencing practice in schools. School reviews that rigorously examine curriculum can empower principals, providing them with the authority and support they need to lead their school towards a whole-school curriculum approach.

Australia needs much more robust mechanisms to ensure that all schools are on their way to implementing a high-quality, whole-school approach to curriculum. While school-level curriculum notionally features in existing school review processes, in practice it is often a 'tick and flick' exercise and receives far too little attention given the curriculum is at the heart of teaching and learning – the core job of schools.

We need to end the 'hodge-podge' system currently in place. While some schools currently receive a thorough review of their curriculum

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64. See Goss et al (2015) for a detailed description of Master Teacher and Instructional Specialist roles.

approach and are provided with concrete, improvement-focused feedback and support, other schools receive only a cursory review of their curriculum and others still are simply required to self-assess their own performance and submit limited documentation.

All schools – government, Catholic, and independent – should participate in regular school reviews that include a rigorous examination of whole-school curriculum. The curriculum component of these reviews should go beyond minimum standards, focusing instead on improving each school's curriculum implementation and providing recommendations and additional support where needed. Many non-government schools currently only have to meet minimum accreditation requirements. This should change. A rigorous approach focused on continuous improvement should be in place for all schools, including independent schools.

A key first step will be developing agreed rigorous benchmarks for a high-quality, whole-school curriculum approach. Many governments and non-government school system leaders still don't have a clear, agreed understanding of what high-quality curriculum planning and implementation looks like in schools. And if they don't know what they want schools to be working towards, it's unlikely schools will get there.

School reviews should be conducted by independent reviewers who are well trained in understanding and applying quality benchmarks and providing constructive feedback to schools. As part of a school review, a thorough examination of a school's curriculum approach is likely to take reviewers about three-to-five days (including two days on-site in the school), depending on the size of the school. The review should consider the alignment between the planned, taught, and learnt curriculum, using classroom walk-throughs, observations, and student assessment data.

And reviews should be regular – ideally once every four years (unless a school has good reason to be exempt, or there is a need for more

frequent reviews). School leaders should receive specific feedback on their progress, and targeted support based on the results of their review. Review findings for individual schools should not be made public, to ensure they remain focused on feedback and improvement over time. However, governments should synthesise and report publicly on aggregated review findings, to support and prioritise ongoing curriculum research and professional development.

This would constitute a significant – and warranted – increase in focus on curriculum implementation in schools. Resourcing this commitment would require governments and other sector leaders to invest more in review processes. Conducting these curriculum reviews will require a specialised skill set, so systems will need to invest in developing this workforce over time. In large part, this could be achieved by better deploying the existing workforce across education departments and agencies.

4.4.2 Invest in monitoring and research to evaluate implementation and impact

Previous curriculum implementation support in Australia has not been coupled with rigorous, publicly reported monitoring and evaluation. This means we can't learn from and better our previous efforts.

Australia should systematically examine different approaches to school-wide curriculum, unit, and lesson planning, to identify the best ways to help teachers access and use high-quality curriculum materials without having to 'reinvent the wheel'.[65]

Australia should also formally evaluate the implementation and impact of curriculum materials and accompanying professional development

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65. For example the lessons learned from the Queensland Government's 'Curriculum into the Classroom' program should be examined, as should the impact of more recent initiatives in South Australia, Western Australia, NSW, Victoria, and federally via Ochre Education.

over time. In particular, we should measure the impact on student learning.

Most of the existing research has been conducted internationally, so we have limited insights into the Australian context. The recently established Australian Education Research Organisation (AERO) has a leading role to play in building the evidence base in Australia.

This kind of research is challenging to conduct, so needs to be thought through carefully.[66] Australian governments can follow the lead of the UK here, where the government and not-for-profits have funded research into the implementation of curriculum in schools and the impact of specific curriculum materials on student learning.

For example, the UK government has funded major research into how to examine the quality of curriculum planning and enactment in schools and has evaluated its own curriculum implementation support programs.[67] At the same time, the UK's Education Endowment Foundation – an independent not-for-profit research organisation – has conducted randomised control trials evaluating the impact of comprehensive curriculum materials like Ark Curriculum Plus's English and Maths Mastery.[68]

Translating curriculum from the page into the classroom is complex, but it is central to the functioning of a high-performing school education system. What we teach and how we teach it matters. Investing in curriculum research and development should be considered as essential to achieving excellence in our schools as medical research is to achieving excellence in our public health systems and hospitals.

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66. Steiner (2017).
67. CooperGibson Research (2021); and Government of the United Kingdom (2018).
68. Vignoles et al (2015); Jerrim et al (2015); and Davies et al (2022).

Appendix A: Concrete examples of comprehensive curriculum materials

This appendix includes snapshots from two sets of comprehensive curriculum materials: Ark Curriculum Plus's Mathematics Mastery (Appendix A.1) and EL Education's English curriculum materials (Appendix A.2). The snapshots are each taken from one unit – Ark Curriculum Plus's Year 5 Maths unit on angles, and EL Education's Year 8 literature unit on voices from the Holocaust.

These snapshots do not contain all the materials a teacher would need to teach these units, but they show the level of detail required to provide teachers with comprehensive and carefully sequenced curriculum materials.

A.1   Ark Curriculum Plus curriculum materials: Year 5 Maths

Ark Curriculum Plus is a not-for-profit organisation based in the UK that provides comprehensive curriculum materials and professional development to schools (see Box 4 on page 10 for further details).

Figure A.1 to Figure A.5 are excerpts from Ark Curriculum Plus's Year 5 Mathematics Mastery unit on angles. This unit is designed to last two weeks and includes eight planned lessons and two lessons for consolidation.

Figure A.1 includes an excerpt from the primary curriculum map. This excerpt focuses on Year 5 and outlines all the units of study a student will complete in this year, the time a unit will take, and the knowledge and skills students are expected to master by the end of each unit. This map is a small part of a broader plan – the full curriculum map extends from Foundation to Year 6, cumulatively building student knowledge and skill in each year level.

Figure A.2 shows the angles unit narrative, which provides teachers with an over-arching view of the teaching and learning expected in this

unit. This narrative steps out how each lesson fits together, unpacks key concepts and strategies for classroom instruction, and provides links to professional learning videos that can further build teacher's pedagogical content knowledge on specific content relevant to the unit (e.g. using a protractor).

Figure A.3 includes snapshots from the angles unit's diagnostic assessment. Completed at the start of the unit, this 12 question quiz helps teachers to identify whether students have the critical knowledge and skills required for this unit. Each question tests specific prerequisite knowledge and reveals student misconceptions (e.g. the question shown is designed to allow students to demonstrate whether they know how to compare angles within 2D shapes). Teachers are provided with guidance on the likely misconceptions students will have and strategies teachers can use to meet student needs.

Figure A.4 shows snapshots of some of the unit's classroom materials, all of which are editable. The materials include detailed PowerPoint lesson slides, accompanying instructional guidance for teachers, and student workbooks.

Figure A.5 provides an example student learning task, with options for adjustments to student needs. This includes the original independent learning task, a version with additional scaffolds for students who need more support, and an extension task. All of these learning tasks require students to practise the same skill (for this task, all students are identifying, comparing, and ordering acute, obtuse, and reflex angles), but provide different access points for students. Individual teachers will use their professional judgment to determine which adjustments are most appropriate for their students.

Figure A.1: Mathematics Mastery curriculum map: Year 5 Maths (excerpt from primary Maths)

Mathematics **Mastery**

Curriculum Map: Year 5

Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Reasoning with large whole integers		**Integer addition and subtraction**		**Line graphs and timetables**		**Multiplication and division**			**Perimeter and area**
• Read, write, order and compare numbers up to one million • Round numbers within one million to the nearest multiple of powers of ten • Read Roman numerals up to M		• Use rounding to estimate • Use a range of mental calculation strategies to add and subtract integers • Illustrate and explain the written method of column addition and subtraction • Select efficient calculation strategies		• Complete, read and interpret data presented in line graphs • Read and interpret timetables including calculating intervals		• Identify multiples and factors • Investigate prime numbers • Multiply and divide by 10, 100 and 1000 (integers) • Derived facts • Illustrate and explain formal multiplication and division strategies such as short and long • Use a range of mental calculation strategies			• Investigate area and perimeter of rectilinear shapes • Estimate area of non-rectilinear shapes

Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Fractions and decimals			**Angles**		**Fractions and percentages**			**Transformations**	
• Read, write, order and compare decimals • Round decimals to the nearest whole number • Represent, identify, name, write, order and compare fractions (including improper and mixed numbers) • Calculate fractions of amounts			• Classify, compare and order angles • Measure a draw angles with a protractor • Understand and use angle facts to calculate missing angles		• Add, subtract fractions with denominators that are multiples of the same number • Multiply fractions (and mixed numbers) by a whole number • Explore percentage, decimal, fractions equivalence			• Coordinates in all four quadrants • Translation and reflection • Calculate intervals across zero as a context for negative numbers	

Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Converting units of measure		**Calculating with whole numbers and decimals**			**2-D and 3-D shape**		**Volume**	**Problem solving**	
• Convert between metric units of length, mass and capacity and units of time • Know and use approximate conversion between imperial and metric		• Mental strategies to add and subtract involving decimals • Formal written strategies to add, subtract and multiply involving decimals • Multiply and divide by 10, 100 and 1000 involving decimals • Derive multiplication facts involving decimals			• Classify 2-D shapes and reason about regular and irregular polygons • Properties of diagonals of quadrilaterals • Classify 3-D shapes • 2-D representations of 3-D shapes.		• Use cube numbers and notation • Estimate volume • Convert units of volume	• Negative numbers and calculating intervals across zero • Calculating the mean • Interpret remainders • Investigate numbers: consecutive, palindromic, multiples	

The Dimensions of Depth - Conceptual Understanding, Language and Communication and Mathematical Thinking - underpin all aspects of the curriculum; problem solving is at the heart and is embedded in all units.

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Figure A.2: Mathematics Mastery curriculum narrative: Year 5 Maths unit on angles
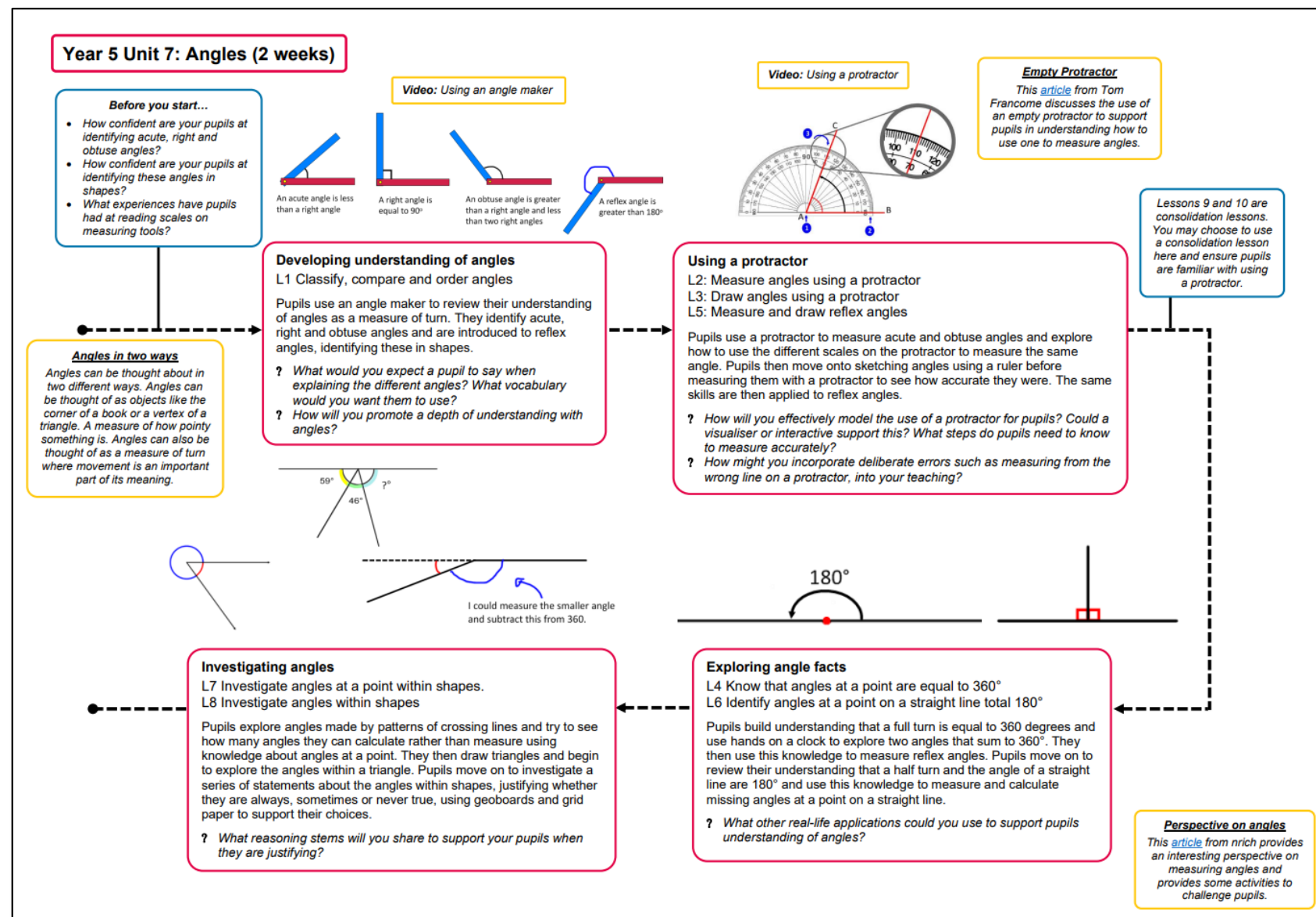
Figure A.3: Mathematics Mastery diagnostic assessment (excerpt): Year 5 Maths unit

Example quiz question from diagnostic assessment

Excerpt from accompanying teacher guide, which explains common student misconceptions and possible teacher responses

Figure A.4: Mathematics Mastery classroom materials: Year 5 Maths, Lesson 2: Measuring angles (excerpt)

Figure A.5: Mathematics Mastery classroom materials: Year 5 Maths, adjusted learning task (excerpt)

Mathematics Mastery

Y5 U7 L4 Independent Task
Original: Prompt Sheet

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Key Learning: To identify, compare and order acute, obtuse and reflex angles.

Use a geoboard to make shapes with the following properties:
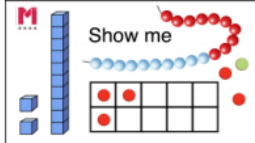
*   a quadrilateral with two internal obtuse angles
*   a pentagon with an internal reflex angle
*   an octagon with two internal reflex angles
*   a polygon with only acute angles

Key Learning: To identify, compare and order acute, obtuse and reflex angles.

Investigating angles within shapes

Use a geoboard to investigate whether these statements are true or false:

*   A triangle will always contain at least two acute angles

*   A pentagon cannot contain more than one reflex angle

First I... / Oh, I see! / Explain

Show me

Example independent learning task

Circle an **acute** angle: / Circle an **obtus**...

Draw an **acute** angle: / Draw an **obtuse** angle: / Draw a **reflex** angle:

Draw a shape with an **acute** angle: / Draw a shape with an **obtuse** angle: / Draw a shape with a **reflex** angle:

Example learning task with additional scaffolding (i.e. pictures of shapes included as prompts) for students who require more support

Example extension learning task – students use the same conceptual knowledge, but on a more complex task

A.2   EL Education curriculum materials: Year 8 English

A.2.1   EL Education

EL Education provides teachers with open access to a suite of curriculum materials for Foundation to Year 8 English, alongside training and professional support. Originally funded by the New York City Department of Education, EL (short for Expeditionary Learning) Education provides detailed lesson-by-lesson materials and guidance for teachers.

EdReports, an independent US-based curriculum reviewer, has rated EL Education's materials as well designed and easy to use.[69] A rigorous independent evaluation found that EL Education's curriculum materials and supports had a positive impact on teacher instructional practices and student learning – students gained an additional month of learning after two years, compared to students in comparison groups.[70]

A.2.2   EL Education curriculum materials: Year 8 English

Figure A.6 to Figure A.9 are excerpts from EL Education's Year 8 English literature unit on voices of the Holocaust. Before this unit, students have studied the history of the Holocaust and begun analysing the text *Maus* by Art Spiegelman. This unit focuses on voices of the Holocaust, analysing texts written by victims and survivors. This unit is expected to take 14 lessons and works towards two summative assessment tasks, including a written comparative analysis of the text *Maus* and an unseen poem.

Figure A.6 is an excerpt from the Year 8 curriculum map. This map gives an overview of each unit to be taught in Year 8 English, including the title, description, texts to be studied (and their Lexile range),

assessment tasks, and links to the national curriculum standards across year levels.

Figure A.7 provides a snapshot of the voices of the Holocaust unit. This provides teachers with a detailed plan for each lesson, including the link to the national curriculum standards, a summary of the lesson structure and learning tasks, learning intentions, formative assessment, and links to previous and upcoming lessons. This excerpt includes detail for Lesson 2, which is focused on close analysis of the poem 'Often a Minute' by Magdalena Klein.

Figure A.8 shows snapshots of some of the unit's classroom materials, all of which are editable. This includes detailed lesson plans, accompanying instructional guidance for teachers, and student workbooks. In this example, guidance includes stanza and word-level guidance on how to closely analyse the poem with students. This includes recommendations on how to read the poem (aloud to students, in paired partners), questions to ask and answers to probe students for, as well as pedagogical content knowledge related to language features and grammatical devices.

Figure A.9 is an excerpt from a mid-unit assessment task which requires students to analyse an unseen poem about the Holocaust. Accompanying teacher guidance notes and exemplar responses are also provided.

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69. EdReports (2021).
70. Dolfin et al (2019).

Figure A.6: EL Education: Year 8 curriculum map (excerpt)

Example curriculum map

Figure A.7: EL Education: Year 8 English, unit plan (excerpt): The Holocaust – Voices of victims and survivors

Example unit plan

Figure A.8: EL Education classroom materials: Year 8 English, Holocaust unit, Lesson 2: Close read: 'Often a Minute' (excerpts)

Voices of the Holocaust   Grade 8: Module 3: Unit 2: Lesson 2

Close Read: "Often a Minute" Note-Catcher

RL.8.1, RL.8.2, RL.8.4, RL.8.5, L.8.5

Name:_____ **Date:** _____

"Often a Minute"

by Magdalena Klein

1] Often a minute, a day, seems so slight.
My eyes glance at the news with fright
And I'm afraid to turn the radio on,
For again I hear of Jewish persecution.

2] First Germany, then Vienna:
Today Italy also enters the arena.
Even she can't stand these people
Who never did her any evil.

3] They haven't harmed, yet are disliked
And thrown prey to insult.
The youth that longs to live,
Is choked before it has a chance to breathe.

4] Why are we uselessly persecuted?
Why is our fate so desolate?

5] But fight and contempt give us strength
To bear the filth of hatred.
And shaking off every speck of dust
This indestructible nation shall stand just.

6] For Jewish brothers, let's not despair!
Our day, too, shall once come through
And the sun will brightly be shining.
Brothers, the Jewish spring will be arriving!

Klein, Magdalena. "Often a Minute." *Pearls and Lace*. Tra...
permission.

Poem and accompanying teacher guidance for class discussion and close analysis

Stanza 5

Excerpt of Text	Questions and Directions
Read from "But fight" to "stand just?"	• Direct students to reread the fifth stanza aloud with their partner. • Ask: "What is the poet saying in this stanza?" (As Jewish people, we will use this terrible treatment to become stronger.) • Ask: "How does the poet feel about what is happening? What evidence helps you understand how she is feeling?" (She no longer feels like a victim. Instead she feels that the Jewish youth, including herself, are strong and will not be destroyed. Words that reveal this: **strength, indestructible**, and **just**) • Ask: "What type of figurative language is the phrase: 'This indestructible nation shall stand just'?" (Personification.) "Why did the author include this figurative language, and why is the word **just** so important?" (**Just** is the opposite of unfair—it shows the shift in her thinking. This personification creates a visual for the reader of how strong and confident the Jewish nation can be, standing proud like a human figure.) • Invite students to work with a partner to answer question 7 on their Close Read: "Often a Minute" note-catcher. Cold-call students to share out, and clarify any misconceptions. Refer to the Close Read: "Often a Minute" note-catcher (for teacher reference).

Directions: During the close read of "Often a Minute" by Magdalena Klein, answer the questions below.

1. Stanza 1 ends with the phrase **Jewish persecution**. How does that structure affect the meaning of the stanza?

   a. It emphasizes how hopeful the speaker is, because she knows things are getting better.

   b. It emphasizes how frightened the speaker is, because it explains what she is hearing on the news.

   c. It emphasizes how intelligent the speaker is, because she is listening to the news at a young age.

   d. It emphasizes how thoughtful the speaker is, because she is thinking about others.

2. How does stanza 2 build on stanza 1?

   a. The first stanza describes the speaker listening to the news, while the second stanza gives more detail about the dates and locations on the news.

   b. The first stanza describes how fearful the speaker is, while the second stanza create a new sense of hope.

   c. The first stanza describes the news of the Jewish persecution, while the second stanza describes how the unfair persecution is getting worse.

   d. The first stanza describes the speaker's pride in her heritage, while the second stanza describes a new persecution beginning.

   ... build on stanza 2?

   _____

   _____

   _____

   _____

   ...es the author use in stanza 4?

Accompanying student worksheet

Figure A.9: EL Education mid-unit assessment (excerpt): Year 8 English, Holocaust unit

Example student assessment task

Accompanying teacher guidance notes

Voices of the Holocaust — Grade 8: Module 3: Mid-Unit 2 Assessment

Mid-Unit 2 Assessment: Compare and Contrast Structure and Meaning in a New Poem and *Maus I*

Name: _____ Date: _____

In this assessment, you will answer questions about language, structure poem, "The Action in the Ghetto of Rohatyn, March 1942." You will co theme of this poem with your anchor text, *Maus I.*

Directions: Read the poem and answer the questions below.

The Action in the Ghetto of Rohatyn, March 1942

by Alexander Kimel—Holocaust Survivor

Do I want to remember?
The peaceful ghetto, before the raid:
Children shaking like leaves in the wind.
Mothers searching for a piece of bread.
Shadows, on swollen legs, moving with fear.
No, I don't want to remember, but how can I forget?
Do I want to remember, the creation of hell?
The shouts of the Raiders, enjoying the hunt.
Cries of the wounded, begging for life.
Faces of mothers carved with pain.
Hiding Children, dripping with fear.
No, I don't want to remember, but how can I forget?
Do I want to remember, my fearful return?
Families vanished in the midst of the day.
The mass grave steaming with vapor of blood.
Mothers searching for children in vain.
The pain of the ghetto, cuts like a knife.
No, I don't want to remember, but how can I forget?
Do I want to remember, the wailing of the night?
The doors kicked ajar, ripped feathers floating the air.

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Voices of the Holocaust — Grade 8: Module 3: Mid-Unit 2 Assessment

The night scented with snow-melting blood.
While the compassionate moon, is showing the way.
For the faceless shadows, searching for kin.
No, I don't want to remember, but I cannot forget.
Do I want to remember this world upside down?
Where the departed are blessed with an instant death.
While the living condemned to a short wretched life,
And a long tortuous journey into unnamed place,
Converting Living Souls, into ashes and gas.
No. I Have to Remember and Never Let You Forget.

"The Action in the Ghetto of Rohatyn" © 2005 by Alexander Kimel. *Remember.org*. Web. Used by permission.

1. Read the following line from the poem:

   "Do I want to remember?"

   What is the function of the infinitive **to remember**? (L.8.1a)

   a. It is functioning as a noun that represents an action.
   b. It is functioning as the main verb of the sentence.
   c. It is functioning as an adjective describing **want**.
   d. It is functioning as an adjective describing I.

2. What type of figurative language is the phrase "Children shaking like leaves in the wind"? (L.8.5, L.8.5a, RL.8.4)

   a. metaphor
   b. personification
   c. simile
   d. hyperbole

3. What is the author comparing through this figurative language and why? (L.8.5, L.8.5a, RL.8.4)

   _____

   _____

   _____

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1. Read the following line from the poem:

   "Do I want to remember?"

   What is the function of the infinitive **to remember**? (L.8.1a)

   a. It is functioning as a noun that represents an action.
   b. It is functioning as the main verb of the sentence.
   c. It is functioning as an adjective describing **want**.
   d. It is functioning as an adjective describing I.

2. What type of figurative language is the phrase "Children shaking like leaves in the wind"? (L.8.5, L.8.5a, RL.8.4)

   a. metaphor
   b. personification
   c. simile
   d. hyperbole

3. What is the author comparing through this figurative language and why? (L.8.5, L.8.5a, RL.8.4)

   The author compares children with shaking leaves in the wind; this simile creates a visual for the reader of how small and vulnerable the children in the poem are, as they shake from the great power of the Nazi invaders.

Appendix B: Summary of the evidence on curriculum materials

Table B.1 overleaf summarises key studies comparing the effects of different curriculum materials on student achievement. This includes studies recommended by academics and cited in other reports on the impact of curriculum materials.[71] We found additional studies through targeted searches of key education research databases.

These studies are primarily from the US, because there is a lack of large-scale Australian studies. All studies in Table B.1 involved an intervention where teachers implemented a set of comprehensive curriculum materials that were developed by someone outside their school. Most interventions also included professional development to support teachers to use these materials in their classrooms. Given the overlapping nature of these interventions, results should be interpreted with care.

In developing the list of studies in Table B.1, we have preferenced studies which randomly allocate students, teachers, or schools to an intervention, because this helps to eliminate systematic differences between groups. Where available, we have included study detail on the sample size, timing of the intervention, use of standardised versus researcher-developed outcome measures, and treatment versus control conditions.[72] Unless mentioned otherwise, teachers in control groups continued using 'business as usual' (BAU) curriculum materials.

Where available, we have provided the ranking given to each study by the US Institute of Education Sciences' What Works Clearinghouse

(WWC) or the UK's Education Endowment Foundation (EEF). These rankings provide an indication of the rigour of a study.[73]

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71. Doan et al (2022); Steiner et al (2018b); and Steiner (2017).
72. These features of a study can influence reported student learning outcomes: see Kraft (2020).

73. WWC has a three-tier rating system, where studies are reviewed as either meeting WWC design standards without reservations, meeting WWC design standards with reservations, or not meeting WWC design standards. See What Works Clearinghouse (2021) for information about WWC's review protocol. EEF has a five-point scale for rating the study rigour. See Education Endowment Foundation (2019) for further information.

Table B.1: Summary of evidence

Study	WWC / EEF rating	Curriculum materials	Year level(s)	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Meta-analyses								
Lynch et al (2019)	Not available	Various	Various	95 studies	Researchers considered the results of 95 experimental and quasi-experiment studies which considered the impact on student outcomes of STEM curriculum and professional development.	47% used students' standardised test results	0.235 (average weighted effect size for the 75% of studies in which teachers received new curriculum materials and professional development)	'A typical treatment group student would be expected to rank about 8 percentile points higher than a typical control group student' (p. 271)
Randomised controlled trials								
Stokes et al (2018)	High evidence security: 4/5 (EEF)	Mathematical Reasoning	2	6,353 students 160 schools	Schools were randomised to either deliver a program of 10 units of mathematics designed by mathematics experts, or continue teaching mathematics as usual. Teachers in the intervention schools received one day of training, a visit from a Work Group Lead, and access to an online Maths Hub community.	Progress Test in Maths (GL Assessment) – standardised assessment	0.08	'Pupils who received Mathematical Reasoning made the equivalent of one additional month's progress in Maths, on average, compared to children who did not' (p. 4)

Continued on next page

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Vaden-Kiernan et al (2017)	Meets without reservations (WWC)	Open Court Reading	K-4	4,500 students 49 schools	Researchers followed a Grade K-1 and Grade 3-4 cohort over two years at treatment and control schools. Treatment schools implemented the reading curriculum, received five professional development sessions, and had access to a consultant.	Group Reading Assessment and Diagnostic Evaluation (GRADE, Pearson) – standardised assessment	No overall significant effects	
Borman et al (2008)	Meets without reservations (WWC)	Open Court Reading	K-2	679 students 5 schools	Classes within schools were randomly assigned to use Open Court Reading or continue with their usual reading curriculum for a school year. Teachers in the intervention group were given a comprehensive reading curriculum, which included lesson scripts and assessment packages, and training including 2-to-3 day workshops and feedback from Open Court consultants.	CTBS/5 Terra Nova Reading Comprehension and Vocabulary subtests – standardised assessment	• 0.26 (Reading vocabulary) • 0.12 (Reading comprehension) • 0.16 (Reading composite)	'The largest effect size for the vocabulary domain tells us that the average student from an OCR classroom outperformed nearly 58% of his or her control group counterparts' (pp. 402-05)

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Taylor et al (2015)	Meets without reservations (WWC)	Biological Sciences Curriculum Study (BSCS)	9-10	3,052 students 18 schools	Researchers compared results of science students over Years 9 and 10. The treatment condition used a science curriculum (BSCS) and the control groups continued business as usual. Treatment group received seven days of professional development each year.	Washington State Science Assessment – standardised assessment	0.09	'We estimate that treatment group students emerge from the study (i.e. start 11th grade) nearly four months ahead of comparison group students in science achievement' (p. 1,007)
Quint et al (2015)	Meets without reservations (WWC)	Success for All (SFA)	K-2	1,557 students 37 schools	Researchers compared pre- and post-test results of students after three years of a whole-of-school reading program, which included comprehensive curriculum materials alongside professional development, tutoring for students needing additional support, staff committees, and classroom social-emotional learning programs.	Standardised assessments including: • Woodcock-Johnson Word Identification, Word Attack and Passage Comprehension tests • Test of Word Reading Efficiency (Pearson)	For all students: 0.15 (Word attack) For low-achieving students: 0.23 (Word attack) 0.17 (Word identification) 0.19 (Reading efficiency)	'The impact on Word Attack score experienced by the students at an average SFA school in the study represents about 16 per cent of the annual growth for an average second-grade student, or about one-and-a-half months of learning' (p. 75)

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Hanselman and Borman (2013)	Meets without reservations (WWC)	Success for All	3-5	2,420 students 35 schools	Control schools adopted Success for All in K-2 (see below); their Year 3-5 students continued with business as usual to form the comparison. This design means the research estimates the unique effect of the Grades 3-5 Success for All curriculum program, and not the program's other school-wide elements (such as staff working committees).	Gates-MacGinitie Reading Test (4th edition, Riverside Publishing) – standardised assessments	No overall significant effects	

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Borman et al (2007)	Meets without reservations (WWC)	Success for All	K-2	1,936 students 35 schools	Schools were randomly assigned to use Success for All in K-2 or use it in Years 3-5. In this study, researchers compared the results of students in the K-2 longitudinal sample, who received the intervention, to students in comparison schools. Teachers in intervention schools received three days of training in the holidays, and eight days of on-site training in the first implementation year.	Woodcock Reading Mastery Tests – Revised (WMTR): Letter Identification, Word Identification, Word Attack, and Passage Comprehension	• 0.33 (Word attack) • 0.22 (Word identification) • 0.21 (Passage comprehension)	'The largest effect size... for the Word Attack domain tells us that the average student from a Success for All school outperformed about 64% of his or her control group counterparts' (p. 724)
Vignoles et al (2015)	Moderate-to-high security rating: 3/5 (EEF)	Mathematics Mastery (Primary)	1	5,108 students 90 schools	Schools were randomly assigned to use Mathematics Mastery: a comprehensive Mathematics curriculum developed by Ark Academy (a charity that runs a network of 39 schools). Teachers and school leaders received training and had access to online professional development.	Number Knowledge Test – standardised assessment	0.10	'The small positive effect can be estimated as equivalent to approximately two months' additional progress. However, the effect was not statistically significant, meaning that it is not possible to determine that it did not occur by chance' (p. 4)

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Jerrim et al (2015)	High security rating: 4/5 (EEF)	Mathematics Mastery (Secondary)	7	7,712 students 40 schools	Schools were randomly assigned to use Mathematics Mastery (see row above). Teachers and schools leaders received training and had access to online professional development.	Progress in Maths (GL Assessment) – standardised assessment	0.06	'The small positive effect can be estimated as equivalent to approximately one month's additional progress. However, the effect was not statistically significant, meaning that it is not possible to determine that it did not occur by chance' (p. 5)
Granger et al (2010)	Meets without reservations (WWC)	Greater Explorations in Maths and Science (GEMS) Space Science Sequence	4-5	2,594 students 140 teachers	Teachers were randomly assigned to teach space science over 24 one-hour classes using the GEMS curriculum. A control group addressed the same space science content using their normal district curriculum. Students were tested before the unit (pre-test), two-weeks after it (post-test) and at five-months after (follow-up test).	Space Science Content test (Sadler, Coyle, Cook-Smith, & Miller, 2007) – standardised assessment	0.17 (post-test)	WWC estimates the effect is equivalent to moving the average student from the 50th to the 57th percentile of the comparison group distribution (see What Works Clearinghouse (2012)).

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Agodini et al (2010)	Meets without reservations (WWC)	• Investigations in Number, Data, and Space (Investigations) • Math Expressions • Saxon Math (Saxon) • Scott Foresman-Addison Wesley Mathematics (SFAW)	K-2	8,060 students 110 schools	Schools were randomly assigned one of the four elementary mathematics curricula (including lesson plans and classroom materials). All teachers had access to training on their assigned curriculum.	Early Childhood Longitudinal Studies-K – Standardised mathematics assessment	• 0.11 (Grade 1: Maths Expressions compared to SFAW and Investigations) • 0.12 (Grade 2: Maths Expressions compared to SFAW) • 0.17 (Grade 2: Saxon compared to SFAW)	'For a second-grader at the 50th percentile in math achievement, these results mean that the student's percentile rank would be 5 and 7 points higher if the school used Math Expressions or Saxon, respectively, instead of SFAW' (p. xxiii)

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Darch et al (2006)	Meets without reservations (WWC)	Spelling Mastery	2-4	42 students 3 teachers	Students with a learning disability were randomly assigned to either receive the intervention (a rule-based spelling curriculum) or a basal spelling instruction curriculum (HBJ Spelling and Laidlaw Spelling, which introduce words in the context of stories, define the meaning of words, include sentence writing, and provide dictionary skill training). Both groups were taught for four weeks with 30-minute daily spelling blocks.	Test of Written Spelling (TWS) – Additional author-created tests	0.43 (weighted average of different domains)	WWC finds a substantively important positive effect and estimates the impact is equivalent to moving performance for the average student from the 50th to the 66th percentile of the comparison group distribution (see What Works Clearinghouse (2014)).
Quasi-experiments								
Jackson and Makarin (2018)	Does not meet (WWC)	Mathalicious	6-8	27,613 students 363 teachers	Teachers were randomly assigned to one of three treatments: receive licence to access lesson materials; receive licence and support (in the form of email reminders, a social media support group, and webinars); or receive neither (business as usual).	Virginia Standards of Learning Assessment – standardised assessment	0.09 (full treatment) 0.06 (licence only)	'The full treatment ... has a similarly sized effect as that of moving from an average teacher to one at the 80th percentile of quality, or reducing class size by 15 per cent' (p. 228)

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Zucker et al (2008)	Meets with reservations (WWC)	Technology Enhanced Elementary and Middle School Science (TEEMSS)	3-4	181 students	Students were taught a short unit on sound. Teachers were provided all the lesson materials, including physical materials such as probeware. The study used a historical comparison of students' results for the same teacher using both TEEMSS materials and business as usual (pre-intervention).	Sound unit test – author-developed assessment	0.65	No estimate given
Schoen and C. R. Hirsch (2002)	Meets with reservations (WWC)	Core-Plus Mathematics	9	1,050 students 11 schools	Students were sorted into comparable classes based on mathematics tests scores. Students in the intervention group were taught using the Core-Plus Curriculum; students in comparison groups were taught using a variety of other textbooks.	Iowa Tests of Educational Development mathematics subtest – standardised assessment	0.21	No estimate given

Table B.1 – *continued from previous page*

Study	WWCC / EEF rating	Curriculum	Year levels	Sample size	Study summary	Outcome measures	Effect size(s)	Impact estimated by researchers
Hirschhorn (1993)	Meets with reservations (WWC)	University of Chicago School Mathematics Project (UCSMP)	10	62 students 3 schools	Compared students who had four years of the secondary mathematics curriculum to two distinct groups of comparable students at three different sites (one urban and two suburban).	Standardised assessments: • Mathematics Level I Achievement Test (standardised assessment) • Application test (developed by UCSMP)	Significant effect for the applications test. No significant effects for the Mathematics Level I Achievement Test.	'UCSMP students significantly outperformed the age cohort comparison students on the applications instrument' (p. 155)

Appendix C: Case study methodology

Research for this report included case studies in five schools. Grattan Institute staff spent two days on-site at each school.

We sought to collect enough information at each school to be able to understand:

- school-wide and teacher-level curriculum planning processes, including identifying the key processes, practices, and structures that enable a whole-school approach to curriculum

- each school's change process, including the steps school leaders had taken over time and the barriers to moving to a whole-school curriculum approach, and

- the impact of moving to a whole-school approach, including the impact on teacher workload, expertise, and level of satisfaction; and on student learning.

Before on-site visits, Grattan Institute staff reviewed curriculum documentation provided by the school. This included school-wide curriculum maps, unit plans, assessment schedules and timetables, classroom materials (such as PowerPoints, quizzes, and textbooks), and accompanying policies or guidelines (e.g. a school's instructional handbook or professional development policy).

Before and during on-site visits, Grattan Institute staff had separate meetings with:

- the principal (multiple times)

- the school leadership team (multiple times)

- curriculum leaders (e.g. Heads of Department or Literacy Leaders), and

- classroom teachers from across year levels and subject-areas (in focus groups).

Meeting staff at different levels and in different roles provided us with a range of views on curriculum planning and implementation in each school.

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