

Flexibility in senior secondary schooling

Flexible Curriculum Delivery Working Group findings

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Key findings

Understanding flexibility

Queensland senior secondary schooling's nature and requirements are changing. Student cohorts are increasingly diverse, which means schools need to provide students with multiple pathways as well as flexible and supportive study options. In secondary schooling curriculum and assessment, flexibility can be categorised three main ways:

- flexibility of mode, e.g. blended learning, online learning, flipped pedagogies and face-to-face classrooms
- flexibility of accommodations, e.g. learning in schools, learning in the workplace, vocational education and training, pre-tertiary studies, and delivering learning in different locations
- flexibility of time, e.g. compression or extension of curriculum timelines, and increases or decreases in minimum enrolment expectations.

Strategies for flexibility

This report discusses the range of strategies used in Queensland and around Australia that provide flexibility for school communities in senior curriculum and assessment systems. Examples of each strategy are provided through case studies. These strategies include:

- variable progression, including extended completion, accelerated completion and early completion (see Case study 1 and Case study 2)
- partner (or shared campus) arrangements involving schools partnering to support student access across regional and remote locations (see Case study 3, Case study 4 and Case study 5)
- online delivery strategies, including distance education, shared school arrangements, school providers and internal school arrangements (see Case study 6, Case study 7, Case study 8 and Case study 9)
- compressed curriculum involving shortening the duration of the course from two years and concentrating the learning into one calendar year. Courses can be partially or fully compressed (see Case study 10, Case study 11 and Case study 12)
- stand-alone delivery of Units 3 and 4
- combined classes involving multiple ages (multi-year levels) in the same class. Approaches to combined classes include differentiated concurrent instruction, Year A/Year B composite model and Year 10/11 students combined (see Case study 13).

Introduction

Queensland's current system of externally moderated school-based assessment has given schools significant flexibility to respond to student needs and local circumstances.

On 18 October 2016, the Queensland Government announced its final position on the new senior assessment and tertiary entrance systems that will commence with Year 11 students in 2019.

These new systems will:

- combine school-based assessment developed and marked by teachers with external assessment developed and marked by the QCAA
- introduce new processes to strengthen the quality and comparability of school-based assessment
- replace the Overall Position (OP) with an Australian Tertiary Admission Rank (ATAR).

Senior syllabuses have been redeveloped to support the introduction of these new systems.

This process has included:

- the adoption of the senior secondary Australian Curriculum as the basis for syllabus redevelopment, in accordance with the *Education (Queensland Curriculum and Assessment Authority) Act 2014*
- the development of instrument-specific marking guides (ISMGs) to support school-based assessment moderation processes
- increasing the clarity and specificity of learning expectations to support school-based assessment moderation processes as well as the introduction of a common external assessment.

At its May 2016 meeting, the QCAA Board approved the establishment of a Combined Classes Working Group (CCWG). The CCWG was asked to explore solutions for schools operating combined classes. The initial terms of reference for this group were to:

- research the extent and nature of combined classroom arrangements in Queensland schools
- analyse other jurisdictions' combined classroom curriculum and assessment approaches
- produce a number of case studies about both Queensland and other jurisdictions that reflect the different approaches schools have taken to manage small cohort enrolments. Schools and school communities can consider the case studies outlined in this report when preparing for the new senior assessment system.

Following initial research and the first round of site visits, the CCWG found that the issues arising went beyond the exploration of solutions for combined classes. It became apparent that schools and other jurisdictions were exploring flexible curriculum delivery approaches more broadly to accommodate changing student needs. Combined classes were a subset of this broader consideration. The CCWG subsequently reframed its brief to include options for flexibility that extended beyond the management of small cohorts and changed its title to the Flexible Curriculum Delivery Working Group (FCDWG).

This report presents the FCDWG's findings. It also considers the literature related to exploring the changing nature of senior secondary schooling, including the need to provide multiple pathways as well as flexible and supportive study options for increasingly diverse student cohorts.

Understanding flexibility

Flexibility is a complex term with multiple meanings and interpretations (Palmer, 2011). Previous conceptions of flexible education or learning have often conflated the idea with distance education. More recent understandings tend to relate the idea of flexibility to online learning, though this often refers to particular aspects of flexibility. Flexibility is more than just being synonymous with distance education and online learning (Collis & Moonen, 2012). As Palmer (2011) suggests, the definition and understanding of flexibility will vary depending on who, when and where you ask.

Flexibility in education needs to be understood as multi-dimensional and multi-faceted. Flexible learning options increase the likelihood of attainment of educational credentials. They also increase student confidence and knowledge, and skills for work, life and further study (te Riele, 2014). Collis, Moonen, and Vingerhoets (1997) offer a model of understanding flexibility that suggests five dimensions of flexibility in learning. Palmer (2011) supports this model. The five dimensions describe flexibility related to:

- time
- content
- entry requirements
- instructional approach and resources
- course delivery and logistics.

Flexibility is about the ability to change and respond. Within education, this is related to responding to changing student cohorts. However, proposing concepts of flexibility without qualification and/or clarification of context and uncertainties is more likely to confuse a problem than propose a solution (Kickert, 1984; Saleh et al., 2009). Therefore, it is important to narrow the concept of flexibility, with a focus on the design of a system of education (which includes the relationships between timetables, administration, curriculum, teachers, pedagogies and students among many other elements of an educational experience) that responds to student cohorts' changing needs and demands.

Translating these dimensions to secondary schooling curriculum and assessment can frame flexibility as being experienced across three key dimensions:

- flexibility of mode. This means that flexibility can be understood as the delivery of content and teaching and learning through multiple modes, e.g. blended learning, online learning, flipped pedagogies and face-to-face classrooms
- flexibility of accommodations. This can be understood as flexibility in the location of learning (e.g. learning in schools, learning in the workplace, vocational education and training and pre-tertiary studies), as well as accommodating content and delivery (e.g. delivering learning in different locations)
- flexibility of time. This involves considerations around how long a period of study for a student should be and the level of study demand required at particular times, e.g. compression or extension of curriculum timelines, and increases or decreases in minimum enrolment expectations.

Why do flexibility?

The drivers for flexibility in secondary schooling and education are diverse and complex. Secondary schools are challenged to respond to changing policy landscapes where there is greater focus on retaining students to complete senior schooling, and in a similar vein, where schools are looking to adapt to different cohorts' learning needs.

Models of flexible learning need to both support excelling students through acceleration and early engagement with post-secondary education (Guine, 2016) and provide alternative options for students who would otherwise disengage with schooling and education (Msapenda & Hudson, 2013). Such models also need to account for learning context (e.g. rural and regional areas) as well as student learning intention and future pathways.

Flexibility and the changing digital world

Evolutions in digital technologies are transforming and challenging assumptions of how, when, where and why learning and teaching should take place (Finger & Lee, 2014). Schools are transforming within this rapidly changing environment. As Finger and Lee (2014, p. 66) suggest 'schools now find themselves situated in a fundamentally different, digital, networked and global environment that differs from the 19th and 20th century in which many of our current systems and structure of schools were conceived and shaped'. This is challenging school leaders and policy makers to redefine and develop new understandings of what is understood about the concepts of 'the school' and 'schooling'.

Largely, schools are still conceptualised solely as physical spaces comprised of buildings and physical structures, and the schooling day is seen as situated within a structured timetable. Each year, the New Media Consortium (NMC) publishes the *NMC Horizon Report*, which maps technologies, trends, developments and challenges across three adoption horizons: one year or less, two to three years, and five or more years.

In 2016, in the long-term (five or more years) adoption horizon, the report identified two key trends for schooling: redesigning learning spaces and rethinking how schools work (Adams Becker et al., 2016). To accommodate the learning of future-focused students, the report suggests that there is a need for greater flexibility, collaboration and technology integration. It suggests that the 'overly regimented learning of traditional schools is being eclipsed by the recognition that formal education should mirror the way people learn and work in the 21st century' (Adams Becker et al., 2016, p. 10). These new models are being shown to have as much, if not more, benefit for at-risk learners as well as those students who are already successful in schools.

Elements of flexibility

The capacity of a school or learning experience to flexibly adjust to the needs and demands of students is influenced by a range of elements. Collis and Moonen (2012) suggest that there are four key components that need to intersect and interact to produce real flexible learning outcomes for students. These components are identified as:

- technology
- pedagogy
- implementation strategies
- institutional frameworks.

Possibilities and motivations

While the 'how' of flexibility in learning is often considered, there is also value in considering the 'why' as well. Kitty te Riele (2014) proposes a further model that can be used to understand the possibilities and motivations of flexible learning. This model has evolved from an extensive review of case studies and vignettes of 23 different flexible learning programs, generally stemming from the National Partnership on Youth Attainment and Transitions. At the core of this model is a focus on valued outcomes from the learning experience. That is, identifying that which counts as a success in the perspectives of the various stakeholders. Attaining these valued outcomes is shaped by three dimensions:

- actions (activities to support success)
- principles (philosophy or vision of the program)
- conditions (enablers and hindrances for success).

This model further focuses on conceptualising flexible learning as a response to social and economic disadvantage. Within such a focus, flexible learning involves seeking to offer transformative educational experiences that respond to each student's individual needs. That is, this model focuses on personalisation of learning. This is different from other models' approaches, where personalisation is a product of the activities of flexibility but not the motivator. Te Riele further develops this model into a framework for quality flexible learning programs by attempting to articulate elements within each of the dimensions. In this framework, different programs may place different weightings on the various aspects, but all programs aim for a learning program that is valued and appropriate for the context, student cohort and staff expertise (te Riele, 2014).

These models provide ways of conceptualising and understanding flexibility in learning. Consistent across all models is that to achieve flexibility, consideration must be given to the intersections of the many factors that shape and form education. Emerging technologies provide tools and supports that can shape learning in different ways and enable greater flexibility. Yet what is evident in te Riele's (2014) model, and implicit in the others, is the need to understand the purpose and intent of flexibility. That is, flexible learning is best understood as a means and not an end to quality learning (Chen, 2003).

Flexibility of mode

In education, the description of 'mode' relates particularly to the delivery of learning experiences across a spectrum that ranges from face-to-face teaching to purely online teaching and learning. As suggested in the previous section, flexibility occurs at an intersection between technology, pedagogy, content and context. This is even more the case when considering the flexibility of mode, as this presents the most direct interface with technology that supports learning. Across this spectrum of modes appear concepts such as blended learning, technology-enabled learning, distributed learning, e-learning, m-learning (short for mobile learning), and mixed-mode or multimodal learning.

Blended learning

Blended learning offers teachers an approach that provides innovative educational solutions through the integration of 'traditional' teaching practices with online technologies. Dziuban, Hartman, and Moskal (2004) suggest that blended learning should be understood as a pedagogical approach that combines the effectiveness and socialisation of the classroom with the technologically enhanced opportunities of the online environment. They further suggest that blended learning requires a redesign of the instructional model, shifting toward an active and

interactive model that is student-centred, with students engaged directly with teachers, outside resources and other students, and reviewed with integrated forms of assessment (Dziuban et al., 2004). Blended learning, in this sense, reflects good teaching practice, where teachers present opportunities for engagement through the use of diverse approaches and resources. The difference between previous generations' diverse or adaptive pedagogies and the opportunities of blended learning are the affordances of new technologies that allow for the greater personalisation of learning for students and the capacity to go beyond the classroom walls (Dziuban et al., 2004).

The Victorian Department of Education (Watterston, 2012, p. 6) offers a more precise definition of blended learning:

... blended learning refers to the planned implementation of a learning model that integrates student-centred, traditional in-class learning with other flexible learning methodologies using mobile and web-based online (especially collaborative) approaches in order to realise strategic advantages for the education system.

The above definition highlights the integration of the two worlds of the classroom and online, meaning that teaching and learning can inhabit a vast array of environments and spaces, no longer being solely bound by the physical constructs of the school building or the restraints of the timetable. The Victorian report further highlights that the possible advantages of blended learning include: increased access to educational opportunities, flexibility in student engagement and learning, and cost benefits. Blended learning is an integral part of school reform, allowing schools to customise student learning through differentiated course offerings and meet a wide variety of student needs (Picciano, Seaman, Shea, & Swan, 2012).

Online learning

Blended learning presents as a middle ground between classroom-based teaching and learning and pure online learning, which form the extremes of the spectrum of modes. However, in offering a flexible curriculum, a purely online approach may be an option where students are unable to access in-person facilitators or teachers.

Online learning is defined here as the use of online technology to mediate between teacher and student and student and student, with separation of space and possibly also separation of time (Mallan, Ashford, & Singh, 2010). This definition incorporates what had previously been considered distance education. But online learning goes beyond just learning at a distance and is often used to complement and extend other learning or experiences, e.g. in a blended learning experience where one student is completing a subject (or more) online, while undertaking other subjects within the physical school.

Some argue that a new learning environment has emerged with the development of new technologies, but that this new environment requires new understandings of teaching and learning (Lopes, O'Donoghue, & O'Neill, 2011). The form and nature of the channels of communication vary significantly between the physical and online learning environment, involving new and innovative pedagogies, with the ongoing development of teachers in e-pedagogies and use of technology presenting an important challenge for the introduction and support of online learning (Darlinda, 2016).

Further, attrition of students in online learning is an ongoing challenge, with significant numbers of students, particularly in post-compulsory education, failing to complete an online course (Drysdale, 2013). However, flexibility of learning is one of the great advantages of online learning as it enables schools to complement the range of other competing priorities students face (Serhan, 2010).

Flexibility of accommodations

With the changing demands of students' future workplaces and study pathways, and with increasing numbers of students staying in school and completing senior schooling, learning experiences need to accommodate more diverse learners and educational outcomes (Zammit et al., 2007).

Flexibility of accommodations is a commitment to the belief that each young person has particular strengths (te Riele, 2014). That is, rather than looking at where young people may have failed in the past, flexible learning programs work to find and build on young people's strengths (te Riele, 2014).

Flexible learning affords a holistic education that recognises that learning occurs in the realities of life, and that schooling is a core element of a student's life. Education can enable and empower students, and flexible accommodations enable students to shape their experience to best match their expectations and realities (te Riele, 2014). The challenge for teachers and schools is being able to identify the opportunities for flexibility in accommodations within the curriculum framework.

Flexibility allows students to engage with myriad learning opportunities outside the classroom, accommodating the future work and study pathways that students envisage, including engaging in pre-employment training, vocational education, university pathway programs, and experiential learning opportunities (Boyd, McDowall, & Ferral, 2006).

The introduction of the Queensland Certificate of the Education (QCE) provided for flexibility in what is learnt, as well as where and when learning occurs, and a diversity of learning options, including vocational education and training (VET), workplace and community learning, and pre-tertiary studies (Commonwealth of Australia, 2009)¹.

By certifying diverse and flexible learning programs that meet the needs of different students, the QCE has allowed for a wider range of students to engage with and complete their senior schooling. However, it is suggested that current systems lack flexibility in accommodating students' learning requirements, despite recognition that a 'one-size-fits-all' model does not meet all students' needs (Commonwealth of Australia, 2009). In a submission to the 2009 Commonwealth Parliamentary Inquiry, the Gwydir Learning Region is quoted as stating:

Often students are forced into particular learning paths by timetables, by what competencies or interests or qualifications particular teachers have in that area and what the school has traditionally offered. I think that across the state there are communities that still think that way: the student has to fit in with the school rather than the school fit in with the student.

This quote captures the tensions in the school context between intent, policy, reality and practice. In particular, the recognition that the student, rather than the school, often makes accommodations. A more flexible approach to learning refocuses it toward the possibilities for accommodations that better meet students' needs. While such practice has been evident in approaches to inclusive education and teaching students with a disability, it is challenging to consider how this philosophy may extend to an even wider diversity of students.

Middleton (2007) argues that as senior schooling has evolved due to demands of a changing workplace and post-compulsory study environment, expectations of student outcomes have focused more on certain 'essential learnings' that all students need to fully participate in society. This is a shift away from previous conceptualisations of education that saw schooling as a progressive process of elimination, or a meritocratic logic to schooling. Middleton suggests that

¹ Also see: www.qld.gov.au/education/career/qualifications/pages/qce.html and <https://studentconnect.qcaa.qld.edu.au/12616.html>

this change in the logic of education (from meritocracy to universal achievement) creates three main implications:

- time no longer needs to be fixed and common to all students studying a discipline
- senior schooling is no longer a two-year calendar
- schools need to accommodate a range of pathways.

Flexibility of time

A progression from considerations of accommodations and flexibility often extends to conceptualisations of time. Flexibility of time pertains to the understanding of the length of study as well as how time regulates study, e.g. timetables. As suggested by Duncheon and Tierney (2013), time within schools can be understood as ‘clock time’ (linear units of time), socially constructed time (conceptions of time emerging from socially dominant understandings) and virtual time (the undermining of linear time sequences through the nature of engagement with technology). Duncheon and Tierney (2013, p. 238) argue that:

The construct of time is central to the ways in which researchers understand educational inputs and outcomes, policymakers conceive of schooling, administrators make decisions, educators design their instruction, and students acquire skills and knowledge.

Understanding how time is perceived and experienced is thus a necessary prerequisite to constructing policies and pedagogical practices that increase educational opportunity.

A school’s timetable determines more than simply how long a teacher interacts with their students. It is an embodiment of educational priorities (Meraw, 2005). Because timetables create opportunities for or hindrances to teachers’ work, practices in schools are shaped by and interpreted through the lens of time (Hargreaves, 1990). For example, to fully reap the benefits of online learning, fundamental assumptions about time in education need to be challenged, shifting from seeing time as a set input to a length that is focused less on time and more on a mastery of outcomes (Duncheon & Tierney, 2013).

If the position is adopted that learning in senior schooling aims for universal achievement (noting that this does not mean all students achieve the same score or outcome, but that all students reach and master a minimum benchmark), then it must be accepted that learning takes time, and that some students learn more quickly or slowly than other students (Middleton, 2007). Therefore, learning times must vary accordingly. That is, a student may complete senior secondary in a shorter timeframe (e.g. running a course across one year instead of two) or a longer timeframe to provide for additional support (e.g. completed in a part-time manner alongside other external study, paid work and/or community activity).

Middleton (2007) suggests that flexible time is important for students who:

- are capable of learning faster than most as they are in danger of disengagement
- are motivated to undertake a specific personal project or subject
- normally speak a language other than English outside school
- have not achieved the required levels of literacy in early schooling
- have definite goals but need more time than most to achieve them.

The parliamentary report into flexible senior schooling also highlighted that, despite greater flexibility being available in senior certification, flexibility of time — in particular part-time secondary study — remains largely unused and unexplored (Commonwealth of Australia, 2009). Creating opportunities for flexibility does not necessarily mean a complete abandonment of

existing timetabling practices and methods, but may be simply seeking opportunities for flexibility at the boundaries (Middleton, 2007). The intersection of the physical and virtual school presents opportunities for the exploration of flexible timing of learning without necessarily completely revolutionising the traditional approaches of a school setting.

Flexibility and equity

Discussions of flexibility in education intersect with discourses of equity and fairness of access to learning. These discussions predominantly intersect in two ways:

- the relationship between flexibility and increased access to resources and learning, namely equality of opportunity
- flexibility and production of different learning outcomes, particularly how different modes can support or adversely affect learning outcomes.

Attainment of key skills, knowledge and understanding is critical in ensuring future pathways in employment, future study and as lifelong learners. To maximise these opportunities, senior students require access to a range of school-based and non-school based learning options, including VET, business and industry engagement, and subject diversity (Dawkins, 2006).

Flexible delivery of education is argued to be a more student-centred approach that is responsive to the challenges of education (Palmer, 2011) and contributes significantly to enabling disadvantaged young people to complete school and access further study and work (te Riele, 2014, p. 19).

In reviewing blended learning and research in Victoria, the government report found that flexibility through blended learning delivered benefits, particularly in rural and regional communities because it allowed students in these contexts better access to resources and experts (Watterston, 2012). This report cited blended learning case studies, which benefited students with special learning needs. Blended learning alternatives provided approaches for personalised learning, supported different learning styles, and allowed exciting learning opportunities for students with disability or communication challenges. Flexible learning has demonstrated success in terms of learning, gaining qualifications, personal development and community contributions, particularly for students who had disengaged or were at risk of disengaging from mainstream education (te Riele, 2014).

It should be an expectation that all Australian students should have access to a broad and comprehensive curriculum that provides the basis for achieving high standards (Dawkins, 2006). Realisation of this expectation is more challenging for students who are located in rural and regional communities, given the often lack of access to key resources. Flexible models of curriculum, and in particular the use of online and blended learning models, improves access and the chances for attainment of education goals. The benefits of flexibility have been realised also in the Finnish education system, where it has been suggested (Sahlberg, 2007, p. 167) that flexibility:

... promoted what Fullan (2005) calls lateral capacity building and hence enabled schools and municipalities to learn from each other and thus make best practices universal by adopting innovative approaches to organizing schooling, encouraging teachers and schools to continue to expand their repertoires of teaching methods and individualizing teaching to meet the needs of all students.

It must be acknowledged that flexible learning places additional demands on teachers, schools and systems, and it demands greater investment, particularly in planning time, resource development and instructional design (Chen, 2003). One of the significant resource demands in current times in being able to deliver more flexibility in learning is in the connectivity of the internet

and access to high-speed broadband (Watterston, 2012). Teacher development and educational reform are also critical to ensuring successful implementation of flexibility in schools (Finger & Lee, 2014; Palmer, 2011; te Riele, 2014; Watterston, 2012).

Methodology and initial observations

The FCDWG completed its research by using a qualitative research methodology involving interviews and observations. The case studies outlined in this report were informed by visits across settings in Queensland, New South Wales and Victoria, and discussions with South Australian sites.

The FCDWG initially observed a number of common characteristics across sites exploring flexible curriculum delivery options, including:

- school support — in all circumstances explored, schools made significant contributions towards flexible curriculum delivery, including the provision of both human and physical resources, technological support, and often financial support beyond normal funding arrangements. Schools often worked together to split workloads or provide teachers with relief time so that they could deliver online courses to partner schools. On some occasions, school sites provided dedicated separate spaces and technologies for teachers to use. Schools also did the 'legwork' to inform school communities of the possibilities, issues and requirements for alternative curriculum delivery strategies
- sector support — it was apparent that sectors provided support for the implementation of flexible curriculum delivery strategies. This was achieved through policy or the provision of technology and staffing support. Sector investment was high in cases where these strategies were proving successful and generating interest. Some sectors provided representatives who acted as conduits, connecting like schools from their sector, identifying outstanding practitioners and nominating subjects that might be delivered through alternate means. On some occasions, sectors also provided financial support of either a 'seed funding' nature or as recurrent financial support. Some sectors, or groups within sectors, established positions to support and coordinate the provision of subjects through online delivery
- jurisdictional management of flexible curriculum delivery strategies — in some instances jurisdictional policy made some strategies unworkable, or provided parameters in which the strategies were required to work. This was mostly due to the rules surrounding the scheduling and administration of external assessment. Jurisdictions required notification of schools intending to use these alternate strategies so they could be prepared for the external assessment requirements
- jurisdictional support — while jurisdictions did not promote a particular flexible curriculum delivery strategy for schools, in most instances they were supportive of schools exploring alternatives to meet the students' needs.

On visiting school sites, it became apparent that in all instances schools used multiple alternative strategies to deliver senior curriculum. Schools, sometimes with the input of employing authorities, made decisions about which subjects could be delivered through alternative means. Schools also made decisions after analysing available resources (physical, human and financial) to offer alternative strategies.

Schools also made decisions about the number of students required in a year level subject before cohorts became combined. There was no standard rule and varied between subjects and school sites.

Schools identified that the student's nature and the support required to ensure they could learn and manage the demands of summative assessment was a significant consideration. This was especially important in circumstances that allowed students to accelerate their learning.

Schools and school communities also reported that significant lead-in time to enact strategies was required when considering options for flexibility. In all schools visited, the broader school

community was involved in both deciding on strategies and enacting these strategies. Depending on the strategy, implementation timeframes ranged from six months to two years.

The initial focus tended to be working with the broader school community and then working specifically with teachers and students. Many schools maintained ongoing communication with the school community, notifying them of any changes but, more importantly, of successes. Schools were also continually reviewing and evaluating the strategies employed for flexible curriculum delivery.

Strategies for flexibility

Queensland schools decide how senior curriculum will be implemented and in some instances, explore different approaches for whole school cohorts, selected subjects and/or individual students. This report presents a range of strategies that maintain flexibility for school communities in the new senior curriculum and assessment systems.

Each approach requires lead time, considered consultation with the school community, timetabling, staffing and resource adjustments, and ongoing evaluation and management. There may be some overlap or variations within approaches.

This report provides 13 case studies from the FCDWG's site visits. These case studies are designed to help schools considering and planning for flexible and alternative curriculum delivery strategies. They are not meant to be prescriptive or exhaustive, and schools are strongly advised to consider the local context and community needs when deciding on flexible school curriculum delivery approaches.

Variable progression

Variable progression encompasses a number of delivery methods where courses of study are commenced and completed earlier, commenced early and finished later, or commenced normally but finished later. In some instances, these strategies are used for individual students with special requirements. In other instances, these strategies are used for particular subjects. Variable progression is a feature of Queensland's current senior schooling landscape and is also commonly used in other jurisdictions. Variable progression may include:

- extended completion — students complete their senior studies over three years. Unlike other options that do not extend the time students spend at school, this option requires students to complete an additional year of schooling. Summative assessments may be spread over this period and be completed in all years or in the final two years. Variable progression may mean students are on a reduced timetable (e.g. elite athletes) or completing a full timetable with more time provided for each subject (e.g. students with disability). This strategy is used in New South Wales, Victoria, South Australia and Queensland.
- accelerated completion — students commence some senior subjects when they are identified by the school as having the ability to do so. Depending on the instruction method used by the school for these students, they may also complete the course in a shorter time than normal. This strategy is used in New South Wales, Victoria, South Australia and Queensland
- early completion — students commence some senior subjects in Year 10 as part of their entry into the senior phase of learning. This early commencement affords students the opportunity to complete some subjects by the end of Year 11. This option does not aim to 'compress' curriculum but rather provide an earlier entry point and in turn exit point for some subjects. This strategy is commonly used in both New South Wales and Victoria and, to a lesser extent, in Queensland.

Examples of variable progression are provided in:

- Case study 1
- Case study 2.

Partner (or shared campus) arrangements

Queensland schools have a strong history of partnering to support student access in regional and remote locations. Schools broaden their curriculum offerings by partnering with nearby schools. When schools are geographically close, students will often travel between each site to access curriculum offerings, specialist staff and facilities. This strategy is also prevalent in New South Wales, Victoria and South Australia.

Examples of partner (or shared campus) arrangements are provided in:

- Case study 3
- Case study 4
- Case study 5.

Online delivery

Schools broaden their curriculum offerings by enrolling students in online courses. These online courses may be facilitated by a distance education provider or by schools (or school clusters) developing local online solutions. Students may complete online study during regular timetabled lesson/s as after- or before-school instruction, through asynchronous delivery to suit individual student needs, as a private study moderated by a tutor at key junctures, or through a delivery strategy that is a combination of some or all of these. Online delivery strategies include:

- distance education — distance education providers seek to support the learning of students who are:
 - geographically isolated
 - overseas, i.e. children of Queensland families travelling or temporarily residing overseas
 - travelling, i.e. children of families travelling in Australia or Australian waters
 - unable to attend their local school for medical reasons
 - being home schooled through distance education
 - in government and non-government schools but whose school does not offer a particular subject/s.

This strategy is used in New South Wales, Victoria, South Australia and Queensland

- shared school arrangements — in this delivery method, geographically distant or isolated schools identify a teacher who has expertise in a subject. This teacher becomes the teacher of the subject across those school sites. Schools share costs and coordinate timetables for this to occur. Various delivery modes are used, including recorded lessons, Skype, online tutorials, and online resources and activities. This strategy is used in New South Wales, Victoria, South Australia and Queensland
- school providers — schools with particular expertise and facilities devise courses and provide staff to support the delivery of online courses. Other schools or individual students from across the state can access these courses. The school provider charges for these services. This strategy is used in New South Wales and Victoria
- internal school arrangements — this delivery method may be used for those subjects that are unable to be delivered during the normal school day. Schools use various delivery methods, including classes timetabled offline, recorded lessons, online tutorials, and online resources

and activities. This strategy is used in New South Wales, Victoria, South Australia and Queensland.

Examples of online delivery are provided in:

- Case study 6
- Case study 7
- Case study 8
- Case study 9.

Compressed curriculum

This strategy is broadly captured within the scope of current variable progression rate provisions in Queensland, but is more commonly referred to as ‘compression’ in other jurisdictions. It involves shortening the duration of the course from two years and concentrating the learning into one calendar year. This is typically achieved by doubling the time students study a subject during the year of delivery. Summative assessment is undertaken during that year.

Compressed courses may be offered annually to support students seeking to spread their learning over two years, or it might be offered in alternate years as part of a strategy to maintain small candidature enrolments with vertical candidature (Year 11 and Year 12 students enrolled together). Compressed courses can be described as:

- partially compressed — schools deliver some, but not all subjects, using a compressed model. This strategy is being increasingly used in New South Wales and is currently being considered by Victorian authorities
- fully compressed — all subjects are offered through a compressed curriculum. Schools ‘compress’ the four units of study in all subjects, but students only study three subjects at any given time. Based on a student studying six subjects, a fully compressed curriculum would involve students completing three subjects in Year 11 and a further three subjects in Year 12. This strategy is being increasingly used in New South Wales and is currently being considered by Victorian authorities.

Examples of compressed curriculum are provided in:

- Case study 10
- Case study 11
- Case study 12.

Stand-alone delivery of Units 3 and 4

The syllabus construct organises learning as two pairs of two units. Each pair of units covers all syllabus objectives. That is, Units 3 and 4 revisit all syllabus objectives experienced in Units 1 and 2. For some learners and in some subjects, students can commence and complete Units 3 and 4 learning without having completed Units 1 and 2. In making this provision for flexibility, students may elect to study only the final two units and complete a subject by the end of Year 11. This strategy is used in Victoria.

Combined classes

A delivery strategy that combines multiple ages (multi-year levels) in the same class. A common strategy used in primary education, it has been a mechanism used in senior schools to maintain a breadth of curriculum delivery and/or to cater for subjects with small candidatures. Approaches to classroom management and instruction vary, but include:

- differentiated concurrent instruction — students are timetabled into a composite class, but the teacher differentiates the instruction for each group. Common themes or objectives may be used to guide instruction and/or lessons may be phased to split the direct instruction time for one year level with the consolidation time for the other. This strategy is used in New South Wales, Victoria, South Australia and Queensland
- Year A/Year B composite model — a strategy where developmental courses are re-modelled to allow Year 11 and Year 12 students to study the same curriculum and undertake the same assessment in each year of the two-year course. Student entry is either in Year A or Year B of the course. Summative assessment opportunities are provided in each year of the course, and these summative requirements differ on a biennial basis. This strategy is used only in Queensland
- Year 10/11 students combined — the practice of accommodating curriculum breadth by timetabling Year 11 and Year 12 students together in composite classes is shifted to Year 10 and Year 11. This is most readily done for subjects that are already elective in Year 10 and for which students are likely to continue in Years 11 and 12, e.g. languages. Students are supported to complete their summative assessment in Year 12 in a stand-alone class. This strategy is used in New South Wales, Victoria, South Australia and Queensland, but is not commonly adopted.

An example of combined classes is provided in:

- Case study 13.

Case studies

The following 13 case studies are not meant to be prescriptive or exhaustive, and schools are strongly advised to consider the local context and community needs when deciding on approaches to flexibility.

Case study 1: Early commencement of senior subjects (A)

Context

This school is a coeducational government school in Brisbane. Students are drawn from a wide range of cultural, geographical and socio-economic contexts. The school offers students the opportunity to commence Mathematics B in Year 10 and complete the subject by the end of Year 11. In Year 12, these students are then given the opportunity to choose a tertiary course to study, choose another subject to enhance options for tertiary rank calculations or use the 'spare line' to support other subjects.

How the model works

Students are selected for the program based on their achievements in the junior secondary years (consistent A-standard achievement in Year 7 Mathematics and commensurately high demonstration of effort and application). Once these students have been identified, provisions are made to meet the requirements of the P–10 Australian Curriculum by the end of Year 9.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • spreads summative assessment load over both senior years • fast-tracking allows for university studies to commence in school and enhance tertiary selection ranks • benefit of experiencing tertiary study expectations while in senior secondary education. 	<ul style="list-style-type: none"> • school can establish strong relationships with universities by offering a breadth of university courses to students in Year 12 • engaged students because the curriculum plan can be tailored to the individual and fast-tracked as appropriate.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • transitions from pre-senior study to tertiary pathways • pathway changes or subject changes must be well managed and limits to changes established. 	<ul style="list-style-type: none"> • management of students who have 'spares' in Year 12 due to fast-tracking of some subjects • school communities need to be informed.

Case study 2: Early commencement of senior subjects (B)

Context

This school is a single-sex, selective enrolment state school close to Melbourne's CBD. It has an enrolment of approximately 900 students, and the students have a wide range of cultural, geographical, and socio-economic backgrounds. The students are able to access Victorian Certificate of Education (VCE) subjects from Year 10.

The school focuses on the purposeful acceleration of learning balanced with student welfare. The students' social and emotional skills are supported by a designated wellbeing team that includes social workers and psychologists. Peer mentors also provide academic counselling and support.

How the model works

Students enter the school with high academic achievements. By Year 9, students have completed the F–10 ACARA requirements. The school is cognisant of developing VCE skills while students undertake all learning. Accordingly, students can start VCE units in Year 10.

The school blocks the timetable for Years 10, 11 and 12. To commence study of a VCE subject, Year 10 students need a Grade Point Average (GPA) of Very High Achievement/High Achievement. Each student identified may undertake one or possibly two VCE subjects. The onus is on the student to prove that they are capable. The program is very successful, with all Year 11 students completing at least one Unit 3 and 4 course. Some subjects are not considered suitable for fast-track learning, e.g. Mathematics and Chemistry.

Usually, a VCE subject requires a minimum of 17 students to run, but some small candidature subjects will run with fewer students, e.g. Music for approximately 12 students. The school has combined Year 11 and 12 classes in The Arts and Languages. These subjects have similar structures but different expectations. However, learning is still structured in a developmental progression of differentiated learning.

The school also engages in a Wednesday afternoon co-campus arrangement with Melbourne High School for an integrated Information Technology program. The school also offers VET courses, with approximately 30–40 students enrolled each year.

With students being able to complete one or two VCE courses in Year 11, many students undertake university study in Year 12. The school encourages and supports this option.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none">• breadth of curriculum offering• spreads assessment load over both senior years• fast-tracking allows for university studies to commence in school• individual student pathways, including undertaking university courses in Year 12• strong support (academically and emotionally).	<ul style="list-style-type: none">• school can establish strong relationships with universities by offering a breadth of university courses to students in Year 12• engaged students because the curriculum plan can be tailored to the individual and fast tracked as appropriate• stability of curriculum offerings for both students and staff.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • focus on Units 1 and 2 sequence in Year 11 may drop due to emphasis placed on Units 3 and 4 sequence • introduction of senior courses into Year 10 (and Year 9 in some cases) increases the academic demand. 	<ul style="list-style-type: none"> • student wellbeing team established to provide academic and emotional support • timetable structure offers stability in choice • strategic management of student achievement data (including course completion and student achievement) • school structure — senior phase of schooling incorporates Years 10–12 • management of students who have ‘spares’ in Year 12 due to fast-tracking of some subjects • school communities need to be informed .

Case study 3: Shared campus delivery (A)

School context

This case study is of two medium-sized secondary schools in regional Queensland. One school has a total enrolment of 450 students from Years 7 to 12. The other has 400 students across the same years with approximately 60–70 students in each of Years 11 and 12. The schools are separated by a short bus trip.

In order to meet QCAA subject time requirements, each subject offered at both schools is allocated eight 50-minute lessons per fortnight. The schools offer stand-alone Year 11 and Year 12 classes in most subjects and for many years have offered a selection of shared classes on two of their lines to cater for low-candidature subjects. The timetables are aligned Periods 3 to 6 each Tuesday and Thursday. A bus owned by one school transports the students to and from the schools at recess, lunchtime and the end of the day.

How the model works

Each school recognises that it will need to continue with the shared-subject arrangements. The executive teams from each school meet regularly to consider implications of the new senior curriculum. The schools have agreed to increase the allocated time for each subject to nine 50-minute lessons per fortnight.

They are considering:

- sharing another subject line. This would result in three of the seven lines being shared across six days of the fortnightly timetable
- sharing more 2019 Year 11 classes with smaller numbers, rather than combining them with Year 12 students studying under the current system
- catering for smaller 2019 Year 12 classes for the one year or sharing more 2019 Year 12 classes, rather than combining them with Year 11 ATAR students
- sharing teachers rather than students for these classes. The teachers will travel to the school with the greatest population in the classes
- using the remaining subjects in the three shared lines to resolve individual student subject clashes.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none">• access to a more diverse curriculum given school capacity to sustain low-candidature subjects• ability to focus on the introduction of the new ATAR structure for 2019 Year 11 students without a compressed, combined or composite class arrangement.	<ul style="list-style-type: none">• capacity to sustain low-candidature subjects• offset the need to increase staff numbers to cater for small stand-alone classes by sharing 2019 Year 11 classes• sharing teachers may allow the two schools to have the best teacher delivering subjects.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none">• some flexibility is required with the travel requirements.	<ul style="list-style-type: none">• requires an excellent inter-school relationship, including open communication channels and shared school ideologies• schools must agree on a timetable that allows common lesson times• reporting and attendance arrangements for each school must align• proximity of schools• provision of resources.

Case study 4: Shared campus delivery (B)

Context

In this case study, three small geographically separated schools with insufficient numbers to offer a subject at their campuses have combined and share teachers and curriculum delivery. The schools are within a 110-kilometre radius of each other. Senior school populations range between 100 and 150 students. The schools decided to seek cluster-school alliances when the combined class size dropped below sustainable numbers or an expert teacher of that subject was not available at their school site.

How the model works

The cluster model involves one school offering Biology, another Chemistry, and the third offering Physics. The principals of these three schools met to identify a common time where students at the base school are able to attend a weekly video conference with the teacher from the host school. This is currently one lesson per week. Each principal separately timetables one lesson per week of contact time with a science teacher at the base school (preferably timetabled in a laboratory) to allow students to conduct experiments and two lessons per week of independent student learning.

Students are expected to contact the teacher at the host school via a digital learning platform, and the schools use a combination of delivery methods, including flipped classroom and video conferencing. Each term, students participate in an excursion to the host school for an intensive one-day workshop.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none">• students able to access broad curriculum offerings• may improve student learning independence.	<ul style="list-style-type: none">• retain enrolment numbers• teachers with passion for subject are still able to deliver it• expert teachers model best practice• provides opportunity for informal mentoring of another teacher in base school by teacher in the host school to maximise support to students.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none">• nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence• need to have learners confident in the use of technology.	<ul style="list-style-type: none">• common timetabled lessons• suitability of subjects for this model• base school needs to provide teachers for delivery of one subject and support of students in other subjects• cooperation, communication, collegiality between schools is essential for this model's success• induction process for new staff• need to inform stakeholders about advantages and disadvantages• dependent on each school having the necessary technology to support the model.

Case study 5: Shared curriculum delivery — ACCESS Program

Context

Initiated by the NSW Department of Education, the Access Program supports school clusters across rural and remote New South Wales. Schools, in conjunction with the department, develop shared curriculum delivery arrangements in order to offer their students subjects by accessing teachers from other school sites.

The Access Program provides a shared curriculum for senior secondary students across five clusters of isolated schools. Between three and five schools are involved in each cluster. Small groups of students interact with each other and their teacher through videoconferencing and collaborative technologies. This enables rural students to complete their secondary education at their local school with the support of their community, without having to live away from home.

How the model works

The Access Program provides a choice of senior patterns of study, courses and course levels that have a local area interest or established need, including those which recognise the expressed or perceived needs of individual students.

Schools, in conjunction with the department, organise subjects to be delivered by a base school. Schools negotiate with other schools in the cluster how these subjects will be supported through both human and technological resources. The schools use various strategies to ensure that students are supported in their learning. These strategies are specific to the school contexts, student demographics and the isolation of one school site from another.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • students able to access subjects at their base school • may improve student learning independence. 	<ul style="list-style-type: none"> • retain enrolment numbers • teachers with passion for subject are still able to deliver it • expert teachers model best practice • provides opportunity for informal mentoring of teacher in base school by teacher in the host school to maximise support to students.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • need to have learners confident in the use of technology. 	<ul style="list-style-type: none"> • base school needs to provide teachers for delivery of one subject and support of students in other subjects • cooperation, communication, collegiality between schools is essential for this model's success • induction process for new staff • need to inform stakeholders about advantages and disadvantages • dependent on each school having the necessary technology to support the model.

Case study 6: Online curriculum delivery across campuses

Context

This school is a virtual, selective high school that provides students in rural and remote areas the chance to study specialist subjects using the latest technology. It has a current enrolment of 141 students and focuses on students who aim to gain tertiary entrance post-school.

The school groups students into a selective strand covering English, Mathematics and Science. It delivers the curriculum via computer technology and personal contact. Students are co-enrolled in the selective class and in their local secondary (base) school, meaning that they can access a challenging academic program without having to leave their home or friends.

How the model works

Students attend classes by logging on to the online conferencing system. Teachers can see and hear each student using webcams and microphones. The learning management system allows teachers to set classwork, homework and assignments, and securely receive student work.

Twice a year, students are brought together for a residential camp. This provides a chance to complete the practical work, science experiments and more. Students also have the chance to join together and experience the host area through excursions, activities and events. Year 7 entry is partially selective, and students undertake English, Maths and Science. Senior students can select from a total of 19 online courses.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • program understands the learning needs of gifted and talented rural and remote students • greater access to a wide range of subjects • student can remain at their base school • reduces cost to parents and support for family businesses, e.g. property management • students receive instruction from discipline experts • students have ongoing access to online resource materials • students meet twice a year for residential program to develop skills, knowledge and friendships. This breaks down the feeling of isolation through connection with students from other base schools • improved ability to work independently and communicate through technology/digital devices • tertiary education readiness. 	<ul style="list-style-type: none"> • the base school retains students • builds strong school communities through the greater involvement of parents/carers • base school teachers gain access to mentoring and professional learning • reduces isolation of teachers, connecting them to other educators • retention of curriculum breadth.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none">• nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence• induction and upskilling — technology skills and use of software applications.	<ul style="list-style-type: none">• the school's timetable is set first, with the base school timetable secondary. The base school needs to align its timetable and adapt calendar of events accordingly• bandwidth and internet speed• video conference and digital equipment resources• upskilling students and staff in software packages to support delivery• assessment and reporting authority and oversight• parent support of school systems is necessary for this model to work.

Case study 7: A school as an online learning provider

Context

With over 1700 students in Years 11 and 12, this school is Victoria's largest provider of the VCE, Victorian Certificate of Applied Learning (VCAL) and Vocational Education and Training in Schools (VETiS).

The school offers a rich learning environment specifically tailored to meet the needs of young adults and help them achieve their potential. The school provides an adult environment that fosters sound work ethics, self-discipline and independent learning skills. A range of online courses and self-directed learning options are available to students who would prefer to learn at their own pace. Students are recognised statewide for their results, including at the Premier's VCE Awards and the VCE Season of Excellence Awards. The school is an accredited member of the Council of International Schools and benchmarks itself against international standards.

NETschool is an extension to the school program, providing curriculum access for 15- to 18-year-old students who have been outside mainstream schooling or training. *NETschool* provides both online and face-to-face delivery of VCE, VCAL and VETiS units.

The school also runs a significant online program under which it delivers VCE subjects to students in other schools around Victoria. In 2016, 40 other schools benefitted from this program, and this number is expected to expand significantly in coming years.

How the model works

The school leadership team has worked extensively with teachers to ensure a sophisticated understanding of study design process and systems to maximise VCE achievement. Students are encouraged to study Units 1 through to 4 sequentially across Years 11 and 12. Flexibility exists for students to study only Units 3 and 4, if they are determined to have the prerequisite knowledge.

Each teacher is responsible for a group of approximately 15 students, and careful advice is provided to students when changing subjects. A comprehensive case management system is in place to support student learning/course planning. The college supports students' wellbeing by providing dedicated advisors, online information for students, parents and teachers, and a multi-disciplinary team of student welfare officers.

The school provides online learning for students enrolled on campus. Students from 40 other schools within Victoria currently access the online learning on a fee-for-service basis. The school offers quality interactive courses in a range of subjects, including Specialist Mathematics, Mathematical Methods, Health, Physics, Chemistry and Psychology. Specialist teachers are responsible for delivering these courses to students throughout the state. They visit students at their base schools at the beginning of the school year and periodically through the year.

Building rapport with students is essential to student success in courses delivered in an online mode. The teachers use interactive digital learning tools to engage and support students' learning. Students receive a work booklet to facilitate and guide their learning. The school tracks student learning by digitally monitoring students' progress against study units. The online learning courses are also accessible to students who miss periods of schooling as a result of illness.

Teachers are part of the decision-making process when choosing to run low-candidature subjects. Low-candidature subjects such as languages and The Arts run combined classes. Combined classes have a minimum number of 17 students. The school found that it needed to provide additional hours and support for students in combined classes.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • dedicated senior model — offers extensive curriculum choice and program offerings • advisors guide and monitor student program choice and achievement • online program offering access flexibility for students • mean study score for students who complete a Units 3 and 4 sequence in Year 11 is higher than when completed in Year 12 • valuable opportunity for students to develop skills in Year 11 required for VCE success • opportunity to revisit learning • manage learning independently. 	<ul style="list-style-type: none"> • staff develop expertise in online curriculum development • school able to dedicate staff to solely delivering online curriculum for a number of schools.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • staff expertise facilitates student success • students have wide flexibility with regards to course design and curriculum offerings. 	<ul style="list-style-type: none"> • staff retention a feature of the system success • parents have access to tracking student learning through an online portal • management of delivery methods and resources.

Case study 8: Curriculum delivery through online strategies

Context

The Online Education Centre (OEC) is an initiative of a local employing authority and has operated as an alternative to distance education for 15 years. It supports students in Catholic secondary schools and colleges across New South Wales to study a variety of preliminary and HSC courses that may not be otherwise available to them at their school. There are currently about 300 students enrolled across the courses. Courses with a substantial practical component are not offered through the scheme.

Table 1: Courses offered through the Online Education Centre (OEC)

• Aboriginal Studies	• Ancient History
• Business Services (VET)	• Economics
• Engineering Studies	• History Extension
• Indonesian (Beginners)	• Information Processes and Technology
• Japanese (Beginners)	• Software Design and Development

How the model works

Students enrol for both the preliminary and the HSC courses. This equates to a two-year course of study. Students may replace a school subject or take one of these courses as an extra subject. Students are required to demonstrate that they have the capacity to undertake these courses.

The time required is six hours per week, which includes two classes of one-hour online delivery. This is mostly completed through lecture-style classes undertaken in the evening. All materials and resources for courses are online for students to access at any time.

The OEC identifies teachers who are recognised as exceptional practitioners and who have the capacity and interest to develop and deliver these courses. This is completed in partnership with the teacher's base school. On some occasions, semi-retired or retired staff are employed to deliver online courses. When teachers are based at a school, the delivery of these courses contributes to a quarter of their teaching load.

Teachers meet the students enrolled in their courses at their base school at least once per term. Teachers also provide students with support via internet or telephone in the evenings. Schools where students are undertaking these courses are required to provide a contact or mentor at the school. This may be the librarian, or a teacher who is not a specialist in that subject.

Students are monitored through a learning management system and regular correspondence with the student's base school mentor. Teachers delivering the courses report directly to the students and parents and not through the student's base school.

The current cost per student for a course through the OEC is \$350 per annum.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • access subjects not available on timetable • experience with online education • flexible time • attendance tracked using learning management system • able to accelerate, e.g. start in Year 10 , so reduce Year 12 load • manage learning independently • preparation for tertiary education. 	<ul style="list-style-type: none"> • diversity of subject choice — able to provide for individual students • staff able to develop courses that can be delivered for students both within and beyond their own school • provide valuable subjects that have low numbers in many schools • removal of geographic barriers.

Table 2: Implications and considerations of this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • requires access to appropriate technology and have the skills to use it • pathway changes or subject changes must be well managed and limits to changes established. 	<ul style="list-style-type: none"> • provision of suitable environment, if course delivery is during school time • funding of course delivery incurred by the school or passed on to parents • resourcing — provision of technology, books, supervising teacher • capacity to support teachers engaged by the OEC — availability at night, coverage during periods of absence due to site visits of students, their technological expertise • financial contribution to system to support a coordinator of the program.

Case Study 9: Online and face-to-face curriculum delivery

Context

This Victorian school site is an extension of the parent school. It is approximately 50 kilometres away from the parent school and caters for 16- to 21-year-old students who have disengaged from earlier education. Teachers work with students who are preparing for both VCE and VCAL.

How the model works

Learning is achieved through both online delivery of courses and face-to-face teacher visits. Teachers work between both campuses. Although there are small classes for some subjects, most curriculum delivery is on a one-to-one basis.

Students can access curriculum at any time. This arrangement suits many of the students as they are also often working part- or full-time jobs. The one-to-one facility is also important as many of the students have learning difficulties and this delivery best suits their learning needs.

The school receives further funding through the Department of Education to support some of its education initiatives.

This case study is a mixture of online delivery and shared campus arrangements.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • students are able to access a range of subjects • blended mode of delivery incorporating face-to-face teaching and online instruction via video conferencing software • opportunity to revisit learning • manage learning independently. 	<ul style="list-style-type: none"> • sustains enrolment at base school • flexible delivery by specialist teacher • retention of curriculum breadth.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence. 	<ul style="list-style-type: none"> • hours of duty considerations to enable teacher to travel between campuses • significant logistical considerations between campuses, teachers and students is required • need for ongoing professional development for teachers in the use of technology for curriculum delivery, including the design of online resources • consideration needs to be given to class size to minimise the risk of further disengagement • management of delivery methods and resources.

Case study 10: Semi-compressed vertical integration (A)

School context

This school is a medium-sized secondary school in regional New South Wales with a total enrolment of 500 students from Years 7 to 12. This includes approximately 70 students in each of Years 11 and 12.

In order to meet the time requirements of New South Wales Education Standards Authority (NESA) of 60 hours per semester, each subject offered is allocated four 60-minute lessons per week.

The school offers stand-alone Year 11 and Year 12 classes in most subjects, and offers a small number of low-candidature subjects under a compressed vertical integration model. Under this model, low-candidature subjects may be offered annually or bi-annually and are allocated eight 60-minute lessons per week.

How the model works

John is a student of the school who studies:

- English (Standard)
- Mathematics General
- Chemistry
- Biology
- French (Beginners)
- Music.

English (Standard), Mathematics General, Chemistry and Biology are high-candidature subjects and are offered as stand-alone classes. French and Music are low-candidature subjects that the school offers under a compressed vertical integration model. This allows Year 11 and Year 12 students to access the subject simultaneously.

John's course of study is represented below.

Subject	Year 11	Year 12
English (Standard)	Units 1 & 2	Units 3 & 4
Mathematics General	Units 1 & 2	Units 3 & 4
Chemistry	Units 1 & 2	Units 3 & 4
Biology	Units 1 & 2	Units 3 & 4
French (Beginners)	Units 1, 2, 3 & 4	
Music		Units 1, 2, 3 & 4

John is one of 15 students studying French (Beginners). John is in Year 11, but the class includes five other Year 11 students and nine Year 12 students. In John's case, he will commence and complete Units 1–4 in French across his Year 11 school year. He will sit his HSC examinations in French at the end of Year 11. These results will be credited toward his HSC in the following year and will be available for use in calculating John's ATAR once he completes Year 12.

The following year, John commences Music as a Year 12 student. This is a class of 21 students and includes eight Year 11 students along with 12 of John's Year 12 peers. John will complete four units of Music in his Year 12 school year and will sit his Music HSC exams along with his HSC exams in other subjects at the end of Year 12.

Table: Benefits of this model

Student	School
<ul style="list-style-type: none"> • concentrated and focused study under compressed vertical integration model • access to a more diverse curriculum given school capacity to sustain low-candidature subjects • students introduced to assessment model earlier and able to extend this mindset across other subjects • Year 12 students able to share knowledge and experience with Year 11 students • spreads the summative assessment load of six subjects over two calendar years. 	<ul style="list-style-type: none"> • capacity to sustain low-candidature subjects • development of performance culture in senior schooling • ongoing monitoring of student achievement throughout senior phase of learning.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • support for dual programs, especially how to enact and support assessment • assistance for individual students' programs of study • effective time management skills required • transitions from pre-senior study to tertiary pathways • pathway changes or subject changes must be well managed and limits to changes established. 	<ul style="list-style-type: none"> • human resources and timetabling, especially when considering specialist teachers • disruptions to learning need to be carefully considered, e.g. excursions • significant lead-in time to establish (1 ½ – 2 years). Approach requires working with the school community prior to implementation and then ongoing education of the school community and public • tighter monitoring of school timetable • may be more suitable for some subjects than others.

Case study 11: Semi-compressed vertical integration (B)

Context

This small secondary school in regional south-east Queensland has 400 students enrolled in Years 7–12. There are usually 70–80 students in each of Years 11 and 12. To provide maximum subject choice, the school has offered composite subjects (mostly on a Year A/Year B model), with English, Mathematics A and B and Physical Education being the only stand-alone subjects.

Some subjects have been offered as composite because of low student demand, but a number of the composite subjects have been offered more than once (e.g. Business Management on four lines, Biology on two lines, etc.) to maximise student subject choice.

The school wishes to continue to offer subjects that can be accessed simultaneously by Year 11 and 12 students because of class sizes and student choice, and because having Year 11 and 12 students in the same class has proved successful over the years.

How the model works

The school is moving to a compressed model of instruction via a transition approach.

The final study pattern will include:

- English/Essential English offered as stand-alone Year 11 and 12 classes
- General Mathematics/Mathematical Methods as stand-alone Year 11 and 12 classes
- two compressed subjects taken by both Year 11 and 12 in Year A
- two compressed subjects taken by both Year 11 and 12 in Year B.

The school has mapped its transition over the period 2018 to 2022 to demonstrate how it intends to progress this model and support its current ways of working.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • summative assessment load of two subjects in Year 11 and four subjects in Year 12 • benefits of having Year 11 and 12 students in same class in relation to work ethic — ‘senior’ school students rather than separate year levels • with compressed subjects, students see teacher more frequently and less time needed for review each lesson • still able to access same range of subjects • study for four subjects rather than six • reduction in external assessments in November period. 	<ul style="list-style-type: none"> • still able to offer same range of subjects • continuity for teachers seeing students more regularly and able to reinforce skills • enhanced flexibility to use discipline expertise across senior and junior schools • change is managed incrementally — teachers have familiarisation time before compression is implemented.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • transitions from pre-senior study to tertiary pathways • pathway changes or subject changes must be well managed and limits to changes established. • impact of student absences, e.g. illness, excursions, other commitments. 	<ul style="list-style-type: none"> • transition period must be well managed and consider: <ul style="list-style-type: none"> – scheduling time for two separate Year 11 and 12 lessons each week in the initial implementation years, e.g. early/late starts in 2019/2020 – supporting teacher pedagogy for lessons scheduled together during the transition years, including ‘flipping’ and ‘peer learning’ approaches – timetabling implications to develop subject lines that become Year 12-only lines in 2019 and 2020 – increased staffing required to support stand-alone delivery to Year 12s in 2019 and 2020 • need to explain changes to community well in advance of implementation to ensure parents and students are aware of requirements • development of line structure — students will need to know their planned learning for the two years at the beginning of Year 11 • staff who have only one senior teaching area need to be accommodated in alternate years.

Semi-compressed model				
2018	Year 11 11 English 11 Maths 11/12 Line C 11/12 Line D 11/12 Line E 11/12 Line F	All subjects 3 x 70-minute lessons per week		
		These are the composite 11/12 classes, a continuation of the current model		
2019	Year 12 12 English 12 Maths 11/12 Line C 11/12 Line D 11/12 Line E 11/12 Line F	Year 11 11 English 11 Maths	3 x 70-minute lessons per week in English and Mathematics	
		11/12 Line C 11/12 Line D 11/12 Line E 11/12 Line F	4 x 70-minute lessons per week for combined 11/12 classes — requires an extra 70-minute lesson per week (Note: Year 12 students still need QCS preparation time) Classes in same room but with different syllabuses 2 lessons in common — time for teacher conferencing, individual student work 2 lessons separated for Yr 11 only and Yr 12 only — direct teaching for the year level syllabus	
2020	Year 12 12 English 12 Maths 11/12 Line C 11/12 Line D 11/12 Line E 12 Line F	Year 11 11 English 11 Maths	3 x 70-minute lessons per week in English and Mathematics	
		11/12 Line C 11/12 Line D Compressed Line E (Students complete one subject in this year)	4 x 70-minute lessons per week lines C and D (2 in common; 2 separate) Line E — Yr 12 3 x 70-minute lessons, Yr 11 6 x 70-minute lessons (with Yr 12 students for 3 lessons) Line F — Yr 12 only 3 x 70-minute lessons	
2021		Year 12 12 English 12 Maths 11/12 Line C Compressed Line F 12 Line D (Students complete five subjects in this year)	Year 11 11 English 11 Maths Compressed Line C Compressed Line F (Students complete two subjects in this year)	3 x 70 minute lessons per week in English and Mathematics
				Line C — Yr 12 3 x 70-minute lessons, Yr 11 6 x 70-minute lessons (3 together) Line F — Compressed, 6 x 70-minute lessons (Yr 11 and 12 together) Line D — Yr 12 only 3 x 70-minute lessons

Semi-compressed model				
2022		Year 12 12 English 12 Maths Compressed Line D Compressed Line E (Students complete four subjects in this year)	Year 11 11 English 11 Maths Compressed Line D Compressed Line E (Students complete two subjects in this year)	3 x 70-minute lessons per week in English and Mathematics 6 x 70-minute lessons per week for Lines D and E

Case study 12: Fully compressed curriculum

Context

This school is a small-sized coeducational secondary school in regional New South Wales with an enrolment of 400 students in Years 7 to 12. Due to declining enrolments, the school consulted widely with the employing authority, staff, parents and students. Each group agreed, in principle, to a changed method of curriculum delivery to sustain the breadth of subjects currently on offer to students in Years 11 and 12.

How the model works

Following a period of stakeholder engagement in 2014, the school implemented a compressed curriculum in Term 4, 2015. This commenced with Year 11 (2016) students and has extended to include Year 12 in 2017. Students complete three subjects to Higher School Certificate (HSC) level in Year 11 and the remaining three subjects in Year 12. The school operates a fortnightly (10-day) timetable, and students complete 15 one-hour lessons per cycle in each subject. VET and online courses still operate on a traditional 'two-year senior' model. Students also have a flexible block on Wednesday afternoons where no classes are scheduled, allowing students to access their TAFE programs without losing class time.

To meet NESA requirements, the school starts the courses in Week 6, Term 4 of the preceding year, with the preliminary course requirements completed by the end of Term 1 and HSC courses completed by the end of Term 3. Students sit the HSC examinations during Term 4 before commencing their new subjects in Week 6, Term 4 for the following year.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> • access to broad range of subjects maintained • focus on three subjects rather than five or six allows more concentrated study • spreads external assessment load • increased contact time to reinforce learning • aids students' retention of knowledge • allows students to build stronger relationships with teachers who know them better as 'learners' due to the increased frequency of contact time. 	<ul style="list-style-type: none"> • enrolments sustained due to maintenance of subject offerings • capacity to sustain low-candidature subjects • teachers indicate that they complete course requirements earlier due to frequency of contact, and this allows for greater time for revision.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> • nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence • transitions from pre-senior study to tertiary pathways • pathway changes or subject changes must be well managed and limits to changes established • effect/s of student absences, e.g. illness, excursions, other commitments. 	<ul style="list-style-type: none"> • human resources and timetabling, especially when considering specialist and support teachers • disruptions to learning need to be carefully considered, e.g. excursions • significant lead-in time to establish (1½ – 2 years). Approach requires working with the school community prior to implementation and then ongoing education of the school community and public • tighter monitoring of school timetable

	<ul style="list-style-type: none">• may be more suitable for some subjects than others• possible work intensification for teachers.
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Case study 13: Combined classes in a small, remote school

Context

This small, remote school is a five-hour drive north-west from Melbourne, almost on the border with South Australia. The school is a P–12 school of approximately 200 students, with 100 students in the senior school. Although the school population fluctuates, it has been around these numbers for the past 10 years. The school draws on a particularly low socio-economic demographic.

In the senior school, subjects in The Arts learning area are often delivered through combined classes. The Visual Arts teacher has taught a combined class for the past few years.

How the model works

The Visual Art class consists of three Year 11 and two Year 12 students. The students are taught as separate cohorts. However, the curriculum has common aspects that can be taught at the same time. While the pedagogical and conceptual aspects of the subject are developmental, there are similarities across the course. These similarities can be reinforced across the teaching of both years concurrently.

This case study is an example of combined classes using a concurrent teaching approach.

Table 1: Benefits of this model

Student	School
<ul style="list-style-type: none"> students provide feedback to one another in a collaborative approach to learning provision of feedback by peers broadens students' experiences and is valuable preparation for summative assessment students learn to work independently greater individual student attention because of small class sizes. 	<ul style="list-style-type: none"> maintains enrolment flexible delivery by specialist teacher able to offer a range of subjects as above retention of curriculum breadth.

Table 2: Considerations for this model

Student	School
<ul style="list-style-type: none"> nature of the learner and degree of support required, e.g. student study skills, organisational skills, learner independence. 	<ul style="list-style-type: none"> allocation of resources supports small class sizes in an effort to provide a breadth of senior subjects school staffing ratios and effects on maintenance of small candidature enrolments on other class sizes balance between teacher workload for preparation/marking for different year levels and small number of students.

References

This reference list relates to the Understanding flexibility section, which starts on page 3.

- Adams Becker, S., Freeman, A., Giesinger Hall, C., Cummins, M., & Yuhnke, B. (2016). *NMC/CoSN Horizon Report: 2016 K–12 Edition*. Austin, Texas: The New Media Consortium.
- Boyd, S., McDowall, S., & Ferral, H. (2006). *Innovative pathways from school: Taking the first step — Final Report*. Wellington: New Zealand Council for Educational Research.
- Chen, D. T. (2003). Uncovering the Provisos behind Flexible Learning. *Journal of Educational Technology & Society*, 6(2), 25–30.
- Collis, B., & Moonen, J. (2012). *Flexible learning in a digital world: Experiences and expectations*. London: Kogan Page.
- Collis, B., Moonen, J., & Vingerhoets, J. (1997). Flexibility as a Key Construct in European Training: Experiences from the TeleScopia Project. *British Journal of Educational Technology*, 28(3), 199–217. doi:10.1111/1467-8535.00026
- Commonwealth of Australia. (2009). *Adolescent Overload? Report of the inquiry into combining school and work: Supporting successful youth transitions*. Canberra: The Parliament of the Commonwealth of Australia.
- Darlinda, P. M. (2016). From on-campus to online: A trajectory of innovation, internationalization and inclusion. *International Review of Research in Open and Distance Learning*, 17(5). Retrieved from <http://search.proquest.com.libraryproxy.griffith.edu.au/docview/1829492394?accountid=14543>
- Dawkins, P. (2006). *Federalist Paper 2: The future of school in Australia, A report by the states and territories*. Melbourne: Council for the Australian Federation.
- Drysdale, J. S. (2013). *Online facilitators and sense of community in K–12 online learning*. (Doctor of Philosophy), Brigham Young University, ProQuest Dissertations & Theses Global.
- Duncheon, J. C., & Tierney, W. G. (2013). Changing Conceptions of Time: Implications for Educational Research and Practice. *Review of Educational Research*, 83(2), 236–272. doi:10.3102/0034654313478492
- Dziuban, C., Hartman, J., & Moskal, P. (2004). Blended Learning. *Centre for Applied Research: Research Bulletin*, (7), 12. Retrieved from <http://net.educause.edu/ir/library/pdf/ERB0407.pdf>
- Finger, G., & Lee, M. (2014). Leadership and reshaping schooling in a networked world. *Education Science*, 4, 64–86.
- Guine, N. (2016). *Babes in baccalaureates: A multivariate analysis of accelerated learning programs in the state of florida*. (Doctor of Education), Capella University.
- Hargreaves, A. (1990). Teachers' work and the politics of time and space. *International Journal of Qualitative Studies in Education*, 3(4), 303-320. doi:10.1080/0951839900030401
- Kickert, W. J. M. (1984). The Magic Word Flexibility. *International Studies of Management & Organization*, 14(4), 6–31.
- Lopes, E., O'Donoghue, T. A., & O'Neill, M. H. (2011). *Education of Children in Geographically Remote Regions Through Distance Education: Perspectives and Lessons from Australia*. Charlotte, US: IAP-Information Age Publishing, Inc.
- Mallan, K., Ashford, B., & Singh, P. (2010). Navigating iScapes: Australian youth constructing identities and social relations in a network society. *Anthropology and Education Quarterly*, 41(3), 264–279.
- Meraw, D. (2005). *The impact of improved shared decision-making on the timetable process at George Elliot secondary school*. (Master of Arts in Leadership and Training), Royal Roads University, Victoria, Canada.
- Middleton, M. (2007). *Timetabling and other practical ideas: Some possibilities arising from the Review of the syllabuses for the senior phase of learning*. Brisbane: Queensland Studies Authority Retrieved from https://www.qcaa.qld.edu.au/downloads/publications/snr_syll_rv_ppr_tmtbl_prac.pdf.
- Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
- Msapenda, V., & Hudson, C. (2013). Flexible learning options: The experiences and perceptions of regional youth. *Youth Studies Australia*, 32(3), 46–53.
- Palmer, S. R. (2011). The Lived Experience of Flexible Education: Theory, Policy and Practice. *Journal of University Teaching and Learning Practice*, 8(3), 1–14.

- Picciano, A. G., Seaman, J., Shea, P., & Swan, K. (2012). Examining the extent and nature of online learning in American K–12 Education: The research initiatives of the Alfred P. Sloan Foundation. *The Internet and Higher Education*, 15(2), 127–135. doi:http://dx.doi.org/10.1016/j.iheduc.2011.07.004
- Pitman, J., & Herschell, P. (2002). *The Senior Certificate: A new deal* (Q. D. o. Education, Trans. Q. D. o. Education Ed.). Brisbane: Queensland Department of Education.
- Sahlberg, P. (2007). Education policies for raising student learning: the Finnish approach. *Journal of Education Policy*, 22(2), 147–171. doi:10.1080/02680930601158919
- Saleh, J. H., Mark, G., & Jordan, N. C. (2009). Flexibility: a multi-disciplinary literature review and a research agenda for designing flexible engineering systems. *Journal of Engineering Design*, 20(3), 307–323. doi:10.1080/09544820701870813
- Serhan, D. (2010). Online learning: Through their eyes. *International Journal of Instructional Media*, 37(1), 19–24.
- te Riele, K. (2014). *Putting the jigsaw together: Flexible learning programs in Australia*. Melbourne: Victoria University.
- Watterston, J. (2012). *Blended Learning: A synthesis of research findings in Victorian education 2006–2011*. East Melbourne: Victorian Department of Education and Early Childhood Development.
- Zammit, K., Sinclair, C., Cole, B., Singh, M., Costley, D., Brown a'Court, L., & Rushton, K. (2007). *Teaching and leading for quality Australian schools: A review and synthesis of research-based knowledge*. Sydney: Teaching Australia.