The school curriculum: about time

When it comes to the school curriculum, it’s about time we asked a question about time.

An essential feature of the school curriculum is the specification of what teachers are to teach and students are to learn at particular times in the schooling process. In other words, the curriculum spells out not only what teachers are to teach and students are to learn, but also when this is to occur.

This intention usually is captured in a ‘scope and sequence’ chart of some kind. The scope and sequence chart (http://syllabus.nesa.nsw.edu.au/assets/global/files/maths_s3_samples3.pdf) for the Year 6 mathematics curriculum in New South Wales is one of many examples that can be found in school curricula throughout the world.

The NSW curriculum specifies the strands and sub-strands of mathematics to be covered by teachers in each of the four terms of Year 6, the recommended amounts of time to be spent on these strands and sub-strands each week, and the outcomes students are expected to achieve as a result. In common with most school curricula, this plan for mathematics teaching and learning is strongly time-bound; it specifies what should be taught and learned in each school year, during each term, and how much time each week teachers should spend on different aspects of mathematics.

The timed nature of the school curriculum reflects the current organisation of schooling. Students progress with their age peers through their time at school, which is made up of weeks, terms, semesters and school years. Given this, it has seemed logical to specify what all students should be taught at particular times in their schooling.

Most aspects of school are then built around this timed curriculum. For example, teachers often see themselves as teachers of particular year levels; textbooks are written for each year of school and encourage timed, lock-step progression through curriculum content; and all students are assessed at the same time to establish how much of the delivered curriculum they have mastered. Traditional ways of organising
schools reflect and reinforce timed curriculum delivery.

It is also commonly believed that the best way to ensure successful learning and high achievement is to tie expectations (‘standards’) to time. If the curriculum makes clear what all students are to be taught and should learn by particular times in their schooling, for example, by the end of Year 6, and if all teachers and students are held accountable for meeting these time-based expectations, then overall levels of achievement should improve. At least that's the belief.

A problem

An obvious problem with this approach is that not all students are equally ready for the same learning experiences at the same time. Under current arrangements, the most advanced students in any year of school are typically five to six years ahead of the least advanced students in that year. This means that the most advanced students often are capable of working with ideas and content well in advance of the content considered appropriate for their year level, while the least advanced students often are not yet in a position to benefit from year-level content. In other words, for some students, there's a fundamental problem of curriculum timing.

This is important because successful learning is most likely when teaching and learning opportunities are well targeted on where individuals are in their progress at any given time. Educational psychologist David Ausubel made this point almost half a century ago in the preface to *Educational Psychology: A cognitive view* (http://catalogue.nla.gov.au/Record/575643) when he underlined the importance of first establishing where individuals are in their learning and then targeting teaching to meet individuals’ current learning needs:

> If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him [sic] accordingly.

More specifically, learning is maximised when individuals are provided with learning opportunities that stretch and challenge them, rather than being in their comfort zones or so far ahead of them that they lack the prerequisites for successful engagement and learning. At any given time, this ‘zone of proximal development’, as Lev Vygotsky called it, is likely to be different for different learners.
Too often in our schools, the time-bound curriculum does not deliver learning experiences matched to individuals' present levels of achievement and learning needs. When all students are delivered the same year-level curriculum, less advanced students often are exposed to content for which they are not yet ready, resulting in some falling further behind with each year of school. More advanced students often are exposed to content they have already mastered and so mark time in their learning. And many students in between operate in their comfort zones and are not challenged to make the progress they could. Addressing this issue may be more effective in raising achievement levels in our schools than holding all students to the same year-level expectations.

**A time-free curriculum?**

So what would it mean to remove the time dimension from the school curriculum? What would this look like and how might it work in practice?

A curriculum that is not time bound would describe the nature of long-term progress in an area of learning. It would be a ‘roadmap’ that describes the progression of learning. It would make clear how current learning builds on prior learning and lays the foundations for future learning. It would be informed by typical sequences of learning and make clear the role of prerequisites in learning success. And, at points along the roadmap, it would identify common errors and misunderstandings that can function as roadblocks to further learning progress, accompanied by advice on how to address these. It would describe in detail what learning progress looks like, but it would not specify when learning should occur. In particular, it would not assume that all students of the same age or year level are more or less equally ready to learn the same content at the same time.

In a sense, a time-free curriculum flips the focus of attention from progression through time to progression through a learning domain. In the traditional curriculum, students progress through time and what they are taught is determined by where they are on this timeline, for example, Term 1 of Year 6. In a time-free curriculum, the primary focus is on a student’s progress through a learning domain and what they are taught is determined by the point they have reached, regardless of when they reach that point.

Such an approach depends on a well-developed, richly described and illustrated ‘roadmap’ for a learning domain. This roadmap describes the long-term progression of learning – the sequence in which students typically progress toward higher levels of knowledge, skills and understandings in a learning area over an extended period of time. Maps of learning progress are strongly informed by research and teaching
experience.

Rather than packaging the curriculum into year levels and having teachers of different year levels deliver these different packages, this approach recognises that all teachers require a deep understanding of the same curriculum roadmap. For example, many students in Years 5, 6 and 7 are at similar points in their long-term learning progress. Teachers of these year levels (if ‘year levels’ are to be retained at all) require a good understanding of the same section of the curriculum roadmap because they are all likely to have students at various points along it.

A time-free curriculum also depends on the use of assessment processes to establish and understand where individuals are in their long-term progress – in other words, the points they have reached on a learning progression. This can be done in varying degrees of diagnostic detail, for example by drilling down to establish the misunderstandings that individuals have developed.

Good understandings of the points students have reached in their learning are essential for identifying effective starting points for teaching and for setting ambitious targets for further learning. These two activities, establishing where learners are in their learning and then using this information to identify and implement strategies to promote further learning, are the core of effective teaching practice.

**A matter of equity**

It might be considered ‘equitable’ to provide all students in the same year of school with the same curriculum. But this practice can be highly *inequitable*. Inequity is often the result of ignoring the uniqueness of individuals and attributing to all members of a group the presumed characteristics of that group – a mistake we risk making when we infer an individual’s learning needs from their age or year level.

In the context of the school curriculum, an equitable approach is one focused on establishing the stages individuals have reached in their learning; using this information to identify starting points and ambitious targets for each student’s further learning; and expecting every student to make excellent progress, regardless of their age, year level or starting point.

Of course, in a particular class, all students may begin at more or less the same point in their learning and so be ready for the same teaching and learning experiences. However, in most mixed-ability classes, this is not the case. Teachers sometimes respond to this variability by grouping students who are at different stages in their
learning and differentiating their teaching. Nevertheless, all students are often then graded against the same year-level curriculum expectations.

A focus on growth

The primary focus in a time-free curriculum is on establishing where individuals are in their long-term progress and targeting teaching and learning opportunities accordingly. This approach invites a different definition of what it means to learn successfully, one based not on common year-level expectations, but on the progress – or growth – that individuals make, regardless of their starting points. It is always possible to identify points on a learning progression that students might ideally reach by particular ages or stages in their schooling. But in a time-free curriculum, time-based aspirations of this kind are a secondary consideration rather than the primary determinant of what students are taught and how learning success is evaluated.

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