Specialist Schools and Academies Trust
EXCELLENCE AND DIVERSITY

System Redesign – 3

Curriculum redesign

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Mission of the Specialist Schools and Academies Trust
The Specialist Schools and Academies Trust works to give practical support to the transformation of secondary education in England by building and enabling a world-class network of innovative, high performing secondary schools in partnership with business and the wider community.

THIS PUBLICATION

Audience
Educational practitioners at all levels

Aims
To explore approaches to curriculum redesign being used successfully in schools, and the ways in which they advance personalisation and form part of a wider system redesign.

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01 Curriculum design for the 20th century

The Education Reform Act of 1988 signalled two decades of change on an unprecedented scale in English secondary schools. This Act set out a statutory curriculum for learners in state schools. It also introduced four key stages for students from ages 4–16, at the end of which the attainment of a number of learning objectives were to be assessed. The establishment of an entitlement curriculum marked an important shift in the control of the curriculum, away from the school and the teacher and towards the then Department for Education.

Yet despite nearly 20 years of change in many aspects of schooling, students' daily experience of learning remains remarkably similar to that experienced by students before the 1988 Act. In fact in many classrooms it is not significantly different to that experienced by students at the time of the 1918 Education Act, which made secondary education compulsory up to age 14. For example students still sit with peers of the same age, and learning is organised in subjects and taught in 45–60 minute blocks.

In a fascinating MORI poll carried out in 2004 for the Campaign for Learning, students aged 11–16 were asked what teaching style they most commonly encountered in their schooling. According to the students surveyed, the most commonly encountered teaching styles were copying from the board or book and listening to the teacher talk 'for a long time'. The results of this survey support the view of Andy Schofield, headteacher of Varndean School, Brighton, who observed recently when asked to comment on the changing nature of schooling in the last 20 years: 'everything has changed but nothing has changed.'

The findings of the MORI survey were shared with over 100 colleagues in iNet (SSAT's international arm) in Australia, USA and South Africa in July 2007. Educators in these countries confirmed that they would expect the results to be similar if such a survey were carried out in their own schools. The traditional pedagogy of copying and listening to the teacher prevails in schools across the globe whether the curriculum content is determined at local, regional or national level.

It is clear that we have still not redesigned schooling enough to ensure that the learning experience is appropriate for our 21st century students. This is the challenge of system redesign, and it has relevance to educators in schools all over the world. Peter Drucker pointed out: 'So far we have no one who does what, in the seventeenth century, the great Czech educational reformer Johann Comenius did, or what the Jesuit educators did when they developed what to this day is the "modern" school and the "modern" university.'

In England the Education Reform Act of 1988 stimulated a great deal of debate within the profession. Politicians and subject associations in particular argued their case for the inclusion of their favoured texts, period of history or subject area in the national curriculum. There followed a similar debate as to how this curriculum should be tested (see *System Redesign – 2*).

The initial impact of the 1988 Act led to an overcrowded curriculum accompanied by an elaborate series of frameworks to ensure that teachers covered every detail of the newly specified content in each subject area. In an attempt to appease powerful factions, the first version of the national curriculum was not only overcrowded but also uncoordinated. For example, similar content on plate tectonics featured in both the science and geography programmes of study. Curriculum innovation, which had been flourishing in a number of subject areas in the 1980s, was stifled. A culture of compliance prevailed as many teachers became anxious to cover every aspect of content in the new statutory orders.

By 1993 the Department for Education acknowledged the problem with content overload. Sir Ron Dearing was asked to carry out a review of the national curriculum content, which led to further debate about authors and periods of history to be studied but did result in a slimmed down version of the programmes of study.

While a more realistic body of content was now specified in each subject area, educators, students and parents were expressing serious concerns about the assessment regime. These are documented in *System Redesign – 2*.

Since the 1988 Act, provision of vocational education for students in the 14–19 age range has expanded. In 2004, Sir Mike Tomlinson, the former chief inspector of schools, published a report proposing reforms for the curriculum and qualifications structure for 14–19 year olds. The report recommended the introduction of a diploma that would bring together both vocational and academic qualifications and ensure that all pupils had a basic set of core skills. Many educators welcomed this proposal as a successful challenge to the perception that vocational education is the poor relation to academic qualifications. It is proposed that the current qualifications will evolve into this diploma over the next decade, but whether the government will follow the recommendations is yet to be seen.

Through iNet we continue to meet with colleagues from other countries who recognise that the status of vocational education is an international issue. Even where there is greater investment in vocational education, as in the Netherlands, the status of vocational education remains a problem with many educators, students, parents and employers. However, a substantial investment in vocational education can make the learning experience more personalised, stimulating and accessible.

Since its inception in 1988, the national curriculum has been considered by the profession to be highly prescriptive with minimal flexibility for innovation. Consequently a generation of teachers have progressed through their careers with limited experience of curriculum redesign. Within this context, the curriculum innovation being led by an increasing number of educators in the last five years is most impressive. With limited experience, they are, within the confines of a highly centralised national curriculum and assessment system, discovering flexibility to improve the student experience of learning.

In the realm of curriculum design we are moving from a culture of compliance to a culture of creativity. The challenge to personalise learning more effectively for students is acting as a major stimulus for educators to rediscover their exciting roles as curriculum innovators. Debates about curriculum content, while important, have very limited impact on improving engagement for many disaffected or disinterested students. With content issues now relatively stable in the 2007 version of the national curriculum, there are now opportunities to create a more engaging and sustainable experience for more learners through redesigning curriculum structures.

As with previous versions of the national curriculum, there is no requirement within the 2007 version to organise learning in any one particular way. The flexibility to innovate continues to exist, but now it is actively being promoted to all schools from the centre, including the Qualifications and Curriculum Authority. The schools described in this pamphlet and those featured in *Deep experience – 1* and *Deep experience – 2* have been using that flexibility in developing new structures appropriate for their learners for some time. Such innovations can perhaps indicate the way ahead for the system as a whole.

This pamphlet aims to illustrate through a number of case studies how educators are challenging standard organisation of curriculum design to create a more engaging and personalised experience for all students.

02 Curriculum redesign for the 21st century

How, then, shall we approach the design of the curriculum for the 21st century? In *System Redesign – 1*, 20 reconfigurations of schooling are described. (For convenience, the full list is included as an appendix to this pamphlet.) The reconfigurations are elements of conventional 20th century schooling, or the relations between two or more such elements, which are first questioned and then configured in a new way to meet the challenges of 21st century schooling.

Many (but not all) of these reconfigurations are strongly exemplified in the emerging practice for curriculum redesign. For the purpose of describing the case studies in this pamphlet they have been grouped together into three sets:

- Reconfigurations around **grouping learners**
  – Flexible and permeable age cohorts
- Reconfigurations around **time as a flexible resource**
  – School day, terms and year
  – Flexible time schedules
  – Competence-based, trans-disciplinary curriculum

- Reconfigurations around **distributing leadership**
  - Flatter, less hierarchical staff structures
  - Decision-making methods
  - From single to multiple institutions
  - Merging of phases – primary/secondary/special/further
  - School and workplace
  - Partners as teachers

In matters of curriculum redesign, then, schools tend to work on a selection of reconfigurations, not all of them. Those selected for development are not just a random mix of reconfigurations, but are worked on together because of a special relationship they have with one another.

This special relationship between reconfigurations is best captured in the word **complementarity**, a term coined by John Roberts[1] in his book on the modern firm. His concern is that some organisational designs fit one another and their environment in such a way that they produce a better organisational performance than others do. Organisational designs are made up of components. These components are in a complementary relationship to one another when doing one of them increases the benefits of doing the other(s), with the effect that the impact of the group of components in such a complementary relationship is greater than the sum of the individual components.

[1] John Roberts, *The modern firm: organizational design for performance and growth*, Oxford University Press, 2004.

This sounds very abstract, but is easily illustrated. In our work, the nine gateways might be treated as design components of a school. In *Deep leadership – 1* it was argued that the three gateways that make Deep learning – student voice, assessment for learning, and learning to learn – are potentially complementary. A school could commit itself to the development of just one of these three gateways, or start work on two of them as completely separate projects. But many school leaders understand, if perhaps intuitively, that these three gateways are potentially complementary to one another. Various aspects of student voice help students to articulate their views on learning and teaching and to share their perspective constructively with staff. Because the same student qualities are needed to get the best out of assessment for learning, the introduction of assessment for learning, concurrently or consecutively, is made easier. In the same way, learning to learn activities increase students' meta-cognitive control over their learning by helping them to think about their thinking and increase their general learning capacity. These skills then also contribute usefully to activities to create assessment for learning. In short, it is easier to make progress on deep learning as a whole if staff understand and then exploit the potential complementarity of the three gateways involved.

Some schools are exploring the potential complementarity in the relationships between the four deeps, and this will be explored in a later pamphlet.

In this pamphlet, a parallel argument will be made to treat the 20 reconfigurations as design components of schooling. Some of the reconfigurations have the potential to achieve complementarity, when they can work together in mutually supportive ways, increasing the benefits, and making the impact of the group of reconfigurations far greater than the effect of any reconfiguration treated in isolation.

03 Curriculum redesign: grouping learners

Across the world, the 45–60 minute lesson is the daily standard fare in schools and is widely accepted as the normal, and perhaps best, model for effective learning and teaching. That learners move through their educational career in a group of 20–30 peers of the same age is similarly a standard form of school organisation. These two configurations are deeply entrenched in school systems: indeed, it is these two that most of all make schools recognisable as schools.

But are 'lessons' and 'year groups' the only way? Are they based on some profound theory of teaching and learning? If so, what is this theory? Or have they simply come to be part of the natural order of schooling that never needs to be justified? Do year groups endure because of their administrative convenience? Even in the present year group structures, the oldest student is closer in age to almost half the students in the year ahead, and the youngest pupil is closer in age to nearly half the students in the year behind. This fact exposes the arbirary nature of the year group.

So are there alternatives that ought to be considered? Would they necessarily be less convenient from an administrative point of view? Might some of these alternatives support different forms of curriculum design that create better personalisation of learning?

As explored in *Deep experience – 2*, an increasing number of schools feel less constrained by the concept of the key stage. This is especially true of key stage 3, where innovative approaches change curriculum organisation from a rigid three-year start to secondary education to redesigns that aim to reduce the risk of disengagement, which in the 11–14 age group can be permanently damaging, and thus to increase engagement to support progression in learning.

Challenging the concept of the year group is less common. In *System Redesign – 4: personalising relationships*, the benefits of all-age tutor groups is explored. But can the same principle be applied to the curriculum and to learning groups?

If so, this would entail a new assumption, that age should no longer be the main factor in deciding on the composition of a learning group. Of course it will often be sensible for students of about the same age to work together, but they are not compelled to do so. They will work together because they are close in their attainment, and this is a more important matter than their age. Some schools now design a curriculum at key stage 3 where by various means learners are grouped by current and target attainment rather than age. To differentiate this approach from one based on year groups, which can be called a horizontal model, it is usually refered to as a **vertical curriculum design**.

Bridgemary Community Sports College: vertical curriculum

In *Deep experience – 1* Bridgemary Community Sports College was a case study of a 'stage not age' model for the curriculum. Later in this pamphlet, we shall see where Bridgemary went next in its journey. However, it is useful to revisit the original work to design a mixed-age structure and examine how it was achieved in practice.

What is the curriculum redesign?

Moving to a vertical curriculum for core subjects early in the secondary phase might at first seem difficult to do, but there is a mechanism to achieve it that revisits more conventional curriculum designs – banding and setting. In England, few secondary schools *stream* their students, that is group by some general ability/attainment measure that then operates as a permanent grouping across all subjects. It is common practice in many comprehensive schools to split year groups into two or more mixed-ability *bands* (A and B), each of which contains two or more classes.

In some schools, such banding is applied in just some subjects, such as English and humanities, and in other subjects, such as mathematics and modern languages, there is more elaborate setting. In the example to follow, we assume the simpler form of banding, as illustrated below.

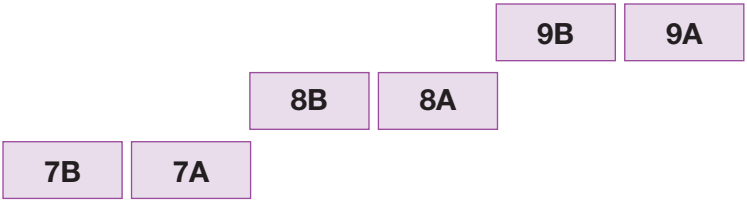

Figure 1: Simple banding

The vertical curriculum redesign entails timetabling the higher band in one year group alongside the lower band group in the one above. This creates a vertical curriculum structure that allows for groups of students with similar needs to be grouped together.

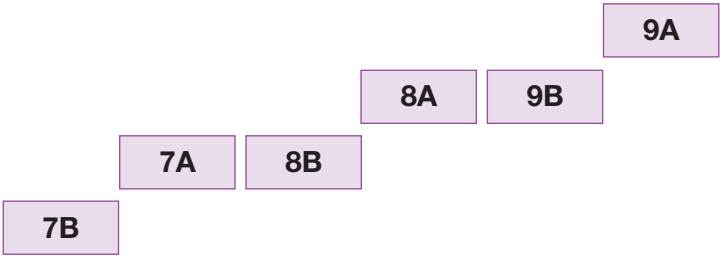

Figure 2: banding allowing groups of similar needs to be grouped together

How does the redesign help to personalise student learning?
This curriculum redesign at Bridgemary Community Sports College allows a subject leader to create eight teaching groups across two year groups. In a traditional year-based setting system, each block of eight sets would need to cover the full distribution of ability and progress. By creating mixed year groups, where learners of more closely matched ability are together, each set addresses a much narrower range of ability and progress.

Placing students from two year groups together within a timetable slot means that any student can be working with peers either a year younger or older than them. This doesn't mean a leader has to mix students wholesale: it is possible to adopt a more conservative policy and have only a few students working outside their age cohort. What matters is that when students are working with others of the same age, it is because that is the best solution for their learning, not because 'the timetable said so'.

It is important to remember that there may well be a different mix of students in different subjects. Each student potentially has a unique timetable, depending on the grouping decision for each subject. So there is the advantage of setting – that is, students work with others of a very similar level of attainment rather than age – but there is far less risk of lower achieving students seeing themselves as members of a permanent 'bottom set'.

As the headteacher Cheryl Heron puts it: 'What we've been doing for so long is trying to meet the needs of learners around the structure, trying to get them to fit into the structure that we've tried and tested. Instead we now need to do the reverse, where we fit the structure about the needs of an individual learner.'

How is complementarity achieved?

The vertical curriculum redesign brings together students of different ages for learning and teaching. It would therefore be odd for pastoral grouping to be based on year groups. At Bridgemary, vertical tutor groups were instituted before the vertical curriculum. The two reconfigurations are complementary. When students are in mixed-age tutorial groups, it is easier and more natural for them to accept mixed-age curriculum grouping – and vice-versa. One advantage of this complementarity is that the combined redesign encourages mentoring and coaching between students of different ages. Complementarity requires that the combined reconfigurations achieve more than the sum of their individual parts. This is true at Bridgemary, for going vertical in both academic and pastoral aspects had the effect of reducing bullying and aggression between year groups and thereby increasing student satisfaction with their experience of the school.

Questions

- What forms of curriculum grouping do you have in your school? Is it ever questioned? How does the senior leadership team explain its origin and rationale?
- Does your system yield more benefits than the Bridgemary design? Does your system achieve a high level of personalisation in learning? If not, what might you learn from the Bridgemary design?
- Have you achieved complementarity between your pastoral and academic groupings?
- If you were a senior leader at Bridgemary, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

Serlby Park School: vertical options curriculum

Serlby Park School (Nottinghamshire) designed a vertical curriculum structure around optional areas of study. The leadership team consider that organising options within a single year group has no significant educational benefits, reduces flexibility unnecessarily, and is not efficient in terms of room usage or staffing cost.

What is the curriculum redesign?
At Serlby Park, option blocks in key stage 4 are common to all year groups. The one barrier on choice prohibits year 11 students from beginning two-year option courses.

All optional subjects at key stage 4 take place on two days each week – Tuesday and Thursday.

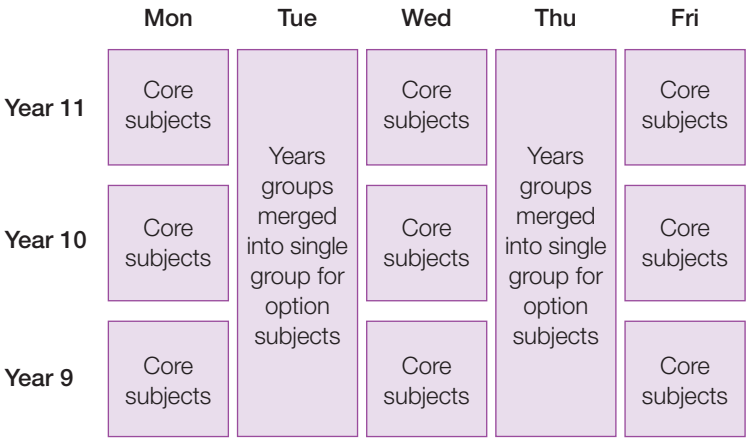

Figure 3: option blocks at Serlby Park

Serlby Park and other organisations in the area have agreed that all collaborative curriculum work across schools happens at these times. This ensures that such opportunities are available to all students without detriment to their progress in core subjects in their home school.

How does the redesign help to personalise student learning?
By removing the arbitrary constraint that students in option classes must all be from the same year group, the school capitalises on several advantages, both for the organisation and for individual learners. The pool from which any optional subject can draw students is now much larger than in conventional option systems confined to a single year group. This has several important consequences.

- In popular option choices learners may be grouped according to need. For example, instead of three mixed-ability groups in Y9, Y10 and Y11, more appropriate groups based on achievement or aptitude may be formed. Subject leaders are able to plan ahead with a high level of certainty over the demand for places several years into the future.
- In any particular school year, when the demand for places outstrips availability, learners can be assured that they will be given a place either one or two years into the future.
- It is much easier to create viable groups in the less popular subjects, partly because the group draws on a larger pool and partly because not every option needs to be offered in every school year. Student satisfaction increases since fewer students end up with second choices because the option they preferred does not run due to insufficient demand.
- There is also more efficient use of staff time as the frequency of very small teaching groups declines.
- Compressing option subjects into two days of the week leads to more concentrated periods of study – either for extended periods of work or for a combination of longer and shorter sessions in the same day.

How is complementarity achieved?
The increase in personalisation at Serlby Park achieved through its vertical options scheme is based on **Reconfiguration 3: the introduction of flexible and permeable age cohorts**, and **Reconfiguration 5: flexible time schedules**. These two reconfigurations are complementary: either reconfiguration on its own would reduce the degree of personalisation provided by the combination.

Since several institutions contribute to this common timetable of options, the area-based collaboration means an increase in the number of alternative courses available to each learner, wherever they are based. Schools working together in this way can meet the needs and aspirations of students more fully than is possible by any member school on its own. That is, to reconfigurations 3 and 4 is added **Reconfiguration 1: partnership and collaboration across institutions**.

In short, the three reconfigurations enhance complementarity and ensure that the three add up to more than the sum of the individual parts.

Questions

- How does your option scheme compare with that of Serlby Park School? Does yours offer a higher or lower degree of personalisation in student choice?
- What opportunities are available to you for cross-institutional collaboration to enrich option schemes?
- How might a vertical options curriculum influence the way you introduce the new specialist diplomas?
- If you were a senior leader at Serlby Park, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

04 Curriculum redesign: time as a flexible resource

Some schools increasingly question the 45-60 minute lesson as the invariable, basic building block of the timetable. Why do we have lessons of this kind, combining into what becomes a standard, rigid timetable?

It is certainly not based on any theory of learning or teaching. Its origins in the secondary school probably lie in the need to allocate time to all the different subjects and the wish of each subject department to have more than one slot during any one week. The school week is prey to territorial infighting between the subjects, and the most a school leader usually achieves is reluctant assent from heads of department/faculty to a division of the spoils that most do not really believe is just.

Five or six lessons a day can seem tediously predictable to young people, with work begun and then put aside in what are arbitrary blocks of time, interrupted at regular intervals by the need to move from room to room. From the teachers' point of view, the design of activities is heavily constrained to fit into these small slots. Activities that need longer blocks of time – and especially project work – either cannot be undertaken or are squeezed unsatisfactorily into a sequence of lessons with large time gaps in between.

Simple changes in the way in which time is chunked can strongly affect learners' experience of schooling and their motivation and engagement in learning. Different approaches – including ones that are common in primary schools but much rarer in the secondary phase – are now being designed. These give the learner a varied experience of the school day, week, term and year. Examples include:

- lessons lasting for a half-day or a whole-day
- concentrated blocks of time at the start and end of a curriculum theme for subjects to pull together wider themes and relate learning in different areas into a coherent whole
- 'study weeks' within a school calendar, in which the normal cycle is put aside for more intensive or varied activities
- inbuilt longer sessions for certain subjects or areas where the single lesson barrier is not conducive to good teaching and learning.

Leasowes Community College: extended blocks of time

The standard way of allocating time is to take the number of days on which the school must be open, and construct a timetable for a whole school year, divided into between three to six terms or semesters. Within that, each working day, set within a weekly or fortnightly cycle, is divided into a set number of lessons, usually five or six.

Departure from the conventional timetable at Leasowes Community College (Halesowen) was first reported in *Deep experience – 2*. Once a week the conventional timetable is abandoned to provide opportunities for more intensive study and more varied models of teaching and learning. Leasowes' model of Flexible Fridays has influenced practice in a number of other schools.

On Flexible Fridays, learning is every bit as managed and purposeful as on any other day: this isn't a 'collapsed timetable' day where the real curriculum is put on hold. Nor is it 'enrichment time', with the implication that the rest of the week is somehow impoverished and needs livening up at end of the school week. Flexible Fridays are allocated to subject areas in exactly the same proportion as the rest of the working week. So a subject with 10% of time from Monday to Thursday will have 10% of Fridays over a year.

The experiences for learners over the course of a year are scheduled, and schemes of work are planned and delivered, and outcomes assessed, much like any other part of the week. As some staff teams may not have the numbers or resources to cope with whole year groups, not all students may do all the planned activities in the same order. The Flexible Friday sessions are typically planned to be able to stand alone at any time in the year.

While the management of content to be covered on Flexible Fridays is recognisable as consistent with normal practice, the impact in terms of learner experience is dramatic, and there are significant organisational benefits. It is a more flexible structure than a day of timetabled lessons. Slots can be swapped between subject departments to take advantage of opportunities as they occur – a practice that is far more difficult in the Monday to Thursday timetable.

What is the curriculum redesign?

Recently the school has taken curriculum redesign even further, by which whole-week blocks are scheduled at certain times of year as two-, three- or four-day learning slots for students.

In this development there are six weeks in the year when, going beyond the Flexible Friday model, the school introduced a pattern of longer sessions. In Figure 4 each team of staff works with a whole year group for one, two or three days at a time, varying according to what is judged to be the best approach for that year group and subject area. The school introduced a two-year key stage 3 in the year from which this example was taken, so both year 8 and year 9 students have intensive periods working in their core subjects, using a more project-based approach to reinforce and further develop understanding. Similarly the way the six-day block is used for other students varies according to their particular needs.

	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
11X	Lang		Hum	Tech		
11Y	Tech			Hum	Lang	
10X	OPT E X			Science		
10Y	Arts Opt Y			OPT E Y		
9X	Science		English		Maths	
9Y	Maths		Science		English	
8X	Science		English		Maths	
8Y	English		Maths		Science	
7X	COPE (Hums)		COPE (Lang)		COPE (Hums)	
7Y	COPE (Hums)		COPE (Lang)		COPE (Hums)	

Figure 4: Leasowes' six-day blocks allow session lengths to be varied to suit different groups of students at different stages

How does the redesign help to personalise student learning?
The redesign should not be seen as merely altering the mechanics of timetabling, but rather as the way the students' experience of learning can be transformed by using time as a flexible resource. The personalisation of learning is increased in the following ways.

- As the focus is on the task within the right timeframe, rather than its being just another 'geography lesson' in which a task is inserted, the learner is more likely to be engaged with the content.
- It is easier for the teacher to design tasks that challenge and develop multiple intelligences.
- There is more opportunity to provide learners with high levels of feedback: assessment for learning is easier to achieve in one longer learning session than a series of short ones.
- There is more opportunity for teachers to give individual attention to students – and to ensure that all students get a fair share of attention.

How is complementarity achieved?
The Leasowes curriculum redesign is based largely on two reconfigurations: **Reconfiguration 4: school day, term and year**; and **Reconfiguration 5: flexible time schedules**. It is obvious that there is huge potential for complementarity in the combination of these two reconfigurations. However, several other reconfigurations are then added to this complementary combination in a way that increases the complementarity yet further.

- **Reconfiguration 7: competence-based, trans-disciplinary curricula, with problem-based and project-based learning.** Projects work best, as primary school teachers well know, when they are set within large blocks of time. Some of the features of the most effective project-based learning simply cannot be realised in short lessons.

- **Reconfiguration 11: co-construction between stakeholders.** The standard length lesson is too short to permit detailed co-construction between teachers and students of learning objectives, methods and outcomes. Larger blocks naturally allow time, especially at the beginning, for the co-construction that can be so important in gaining student commitment to a jointly determined task.
- **Reconfiguration 15: partners as teachers.** Adult help for activities can be scheduled much more cost-effectively. In the conventional timetable it is very difficult to accommodate outside partners, as the lessons in which visitors need to be involved are spread across the week at variable times of day. School timetables are not at all consonant with the way the rest of society use their time. Large blocks of time are a real incentive for partners to come into the school – or to provide out-of-school activities. What teacher has not been frustrated that an out-of-school visit or trip is banned because it threatens to disrupt the timetable!
- **Reconfiguration 18: student leadership.** Larger blocks of time provide far more opportunity for group work among students – one of the opportunities for students to engage in student leadership, often in the form of mentoring and coaching.

Questions

- How often do you provide extended blocks of time in your school? What gains might accrue if there were more of them?
- What objections would your staff bring against treating time as a flexible resource? How might you counter such objections?
- What is the response of the person in charge of your timetable to this chapter? Is it a threat or an opportunity? Either way, is a visit to a school such as Leasowes Community College a necessary part of this person's CPD?
- If you were a senior leader at Leasowes, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

Revisiting Bridgemary Community Sports College: from attendance to presence

Staff at Bridgemary Community Sports College are also looking at the way they use time to redesign their curriculum. This is a school where the premise that all students need to be onsite at fixed times is yielding to the conviction that what matters is not attendance, but presence, and this entails individually negotiated patterns of presence at school, perhaps mixed with work at other locations and learning online as appropriate.

What is the curriculum redesign?

The school acknowledges that the best time for learning is not the same for every student. So it is creating **learning windows**, in which the school day has a core section mandatory for all learners, plus an early and late window in which optional courses and enrichment take place. This solution, in response to extensive consultation with stakeholders, also matches the resources available.

The curriculum for learners working at Level 1 and above (post SATS) consists of:

Early learning window (7.30am)	Optional subjects timetabled as an early window (in year groups)
Core (8.30am)	Core subjects blocked in the middle of the day
Late learning window (2.30pm to 4.30pm)	Optional subjects timetabled as a late window as vertical options (as in the Serlby Park example above)

An enhancement curriculum, in the form of project-based learning, runs alongside options in both the early and late learning windows. It includes a healthy lifestyle programme and guidance sessions. Students must opt into a minimum number of such sessions over the week. Some are offered off-site, and some are arranged in longer blocks of time.

In addition there are enrichment activities in both the early and late learning windows, together with support activities such as study clubs. E-learning activities are also being introduced.

The conventional way to ensure that students are present in school is to set attendance times and then enforce attendance at the set times by whatever means. Bridgemary's approach is to negotiate with students their presence at a suite of opportunities over the week, some in school, some off-site or online, then manage the outcome of the emerging agreement. Learners have both the opportunity and the responsibility to shape their working week with support, within agreed parameters.

How does the redesign help to personalise student learning?
Bridgemary has many students whose family lack positive experience of schooling and who are easily disengaged from the traditional educational offer. The changes are designed to give students much more control of their educational experience – what a student studies, when and where. School becomes closer to the kind of autonomy these young people enjoy outside school and in their leisure. It demands considerable flexibility in institutional structures and teacher values and attitudes.

How is complementarity achieved?
Bridgemary is thus taking co-construction to a new level. Teachers have progressively more flexibility to co-construct with students not just the content but also the location and time of their learning. With that, however, comes the need to take responsibility for ensuring that the range of experiences planned meets both local and national curriculum requirements. As the college seeks to increase off-site provision, and ensure that the programmes delivered by such partners form an integral part of the learners' education, co-construction embraces external partners as well as students.

In short, **Reconfiguration 11: co-construction with stakeholders** becomes a key to maximising the complementarity provided through the combination with **Reconfiguration 1: from single to multiple institutions** and **Reconfiguration 15: partners as teachers.** In addition, collaboration with employers and with FE colleges adds two further complementary reconfigurations: **Reconfiguration 10: school and workplace** and **Reconfiguration 2: merging of phases.** Bridgemary has redesigned itself more radically than most schools known to us, and is achieving an unusually high degree of complementarity between the reconfigurations.

Questions

- How far do you think you want to go in your school in allowing students more say in the what, when and where of their education?
- Do you think the Bridgemary approach is an extreme one, designed to fit its exceptional circumstances, or do you think it may point the way to what will in due course become the standard pattern of schooling for all secondary students?
- Could you with advantage adapt aspects of the Bridgemary model for some of your students?
- If you were a senior leader at Bridgemary, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

05 Curriculum redesign: distributing leadership

As we have seen, in many secondary schools the timetable is centrally planned, and once set is treated as relatively inflexible. The curriculum is organised around fixed department/faculty teams of specialists who have to compete for resources of various kinds, especially time.

Schools are now making modifications to render the timetable a more flexible framework within which people can make adjustments according to need and opportunity. The curriculum is managed around the needs of the learner and enough authority is devolved to staff and learners to empower them to co-construct decisions about learning. Such flexibility can be achieved by making subtle changes in a subject-based timetable structure, or by moving to a much more radical redesign.

Eastbourne Technology College: pooling subjects

Eastbourne Technology College (ETC) revived an old timetabling concept to empower middle leaders to flex the curriculum and better meet the needs of learners – pairing subjects.

What is the curriculum redesign?
ETC faced two problems that led to their redesign.

First, the college's staffing and accommodation did not allow for more than half a year group to be taught within a single faculty at a time. This meant that where staff wished to establish setting they were working with wider ability spreads in each class than they regarded as ideal.

Secondly, ETC has embarked on a collaboration with other schools in the area that entails fixing shared options on two days of the week, which constrains their own organisational freedom. If the core subjects for older students are compressed into three days a week, inevitably younger students will be much more likely to have their own core curriculum pressed into the gaps that remain. As in the case study of Serlby Park School above, this could be considered a problem that would lower the quality of provision for younger learners.

In resolving both problems ETC have used this compression of core subjects creatively. Recognising that subjects like English and humanities in key stage 3 were already very likely to be scheduled close together in the timetable, they decided to treat pairs of subjects as single entities.

On the one hand this limits the freedom of middle leaders because it means they have less autonomy in setting groups – mathematics and science for example have to agree on common sets. On the other, it gives middle leaders double-length sessions in which they jointly have the whole of a year group. This allows them a new flexibility to innovate a range of alternative structures such as:

- all the classes having a single lesson in mathematics followed by a single lesson in science, or vice versa (but with eight sets rather than two groups of four)
- double lessons in science and mathematics when required
- joint topics where the team of staff teach across disciplines for a number of weeks.

The key is that the middle leaders affected can mix and match the strategies they want to use over the course of the year. For example, at the start of a year they may have an introductory short unit that is delivered jointly on data-handling before breaking up into single lessons in subjects for five weeks. Particular sets can have proportionally more or less time in a subject at different times of year, according to need. Where staff are able to teach either subject and resources allow, the flexibility is even greater.

The school timetable changes are illustrated in figures 5 and 6 below.

From

Mon A band	Mon B band	Wed A band	Wed B band
Eng	Hums	Tech	ICT
Hums	Eng	ICT	Tech
Maths	Science	Arts	PE
Science	Maths	MFL	PE
PE	Arts	Eng	Hums
PE	MFL	Hums	Eng

Figure 5: original timetable

To

<table>
<tr><th>Mon A band</th><th>Mon B band</th><th>Wed A band</th><th>Wed B band</th></tr>
<tr><td colspan="2">English & Humanities</td><td colspan="2">Tech & ICT</td></tr>
<tr><td colspan="2" rowspan="2">Maths & Science</td><td>Arts</td><td>PE</td></tr>
<tr><td>MFL</td><td>PE</td></tr>
<tr><td>PE</td><td>Arts</td><td colspan="2" rowspan="2">English & Humanities</td></tr>
<tr><td>PE</td><td>MFL</td></tr>
</table>

Figure 6: timetable with grouped subjects

In this example humanities and English, ICT and design technology, mathematics and science all have to adopt common sets, but then enjoy much greater flexibility. Languages, expressive arts and PE chose to retain their independence at present.

With experience, some staff come to value this increased flexibility. Moreover, new appointments are being made with this model in mind. In consequence the school is now pairing across years too – so English and humanities in year 7 are paired with maths and science in year 8. Potentially this will enable vertical grouping in those subjects and increased flexibility to make changes within the year.

How does the redesign help to personalise student learning?
Although the discussion above focuses on the needs of, and benefits to, teachers and middle leaders in particular, learners also enjoy several benefits:

- Older learners have collaborative, options-based days in the week, the advantages of which were explored in the Serlby Park case study above.
- Younger students have access to a curriculum that is experienced as more coherent, since links between subjects are made explicit.
- For younger students the curriculum varies over the year, in that a number of different patterns break up the routine weekly cycle.
- Co-construction between learners and teachers becomes more meaningful when staff are able to respond quickly to students' needs and flex the timetable as required.

How is complementarity achieved?

The changes at ETC stemmed from tighter inter-institutional coupling. The need to work collaboratively across Eastbourne, with fixed days for collaborative work in the curriculum, reduced the school's freedom to design and manage its own curriculum. This led to problems in the way lessons could be scheduled, and the solution to these lay in some internal reconfigurations, which entailed tighter professional coupling (see *System Redesign – 1*, pp 9-11). ETC staff have in consequence forfeited some of their former autonomy, as they are no longer free to set groupings independently of their colleagues, and for much of the year must plan learning as part of a wider team. This has, though, allowed them to have looser institutional coupling in which they can make decisions about the way time is used for learning both proactively and in response to changes in circumstances.

The new arrangements support **Reconfiguration 7: competence-based, trans-disciplinary curriculum** as there is now more opportunity to introduce project-based learning, and **Reconfiguration 17: distributed leadership**, as key decisions about curriculum design can be made by the teams of staff themselves, who are no longer restricted to one negotiation with senior leadership at the start of the school year. The effect is to boost complementarity in the overall redesign.

Questions

- Would there be benefits to (i) staff and (ii) students in pooling subjects in your school?
- Which subjects in your school might gain most from pooling?
- How strongly do you think your staff and subject teams would resist the loss of some of their traditional autonomy? What might you argue in response?
- If you were a senior leader at ETC, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

Djanogly City Academy: multi-disciplinary teams

Djanogly City Academy (Nottingham) has implemented a project-based approach for the year 7 curriculum based on the competency-led Queensland New Basics project (http://education.qld.gov.au/corporate/newbasics/). As its purpose is to prepare students for their future, it deals with new student identities, new economies and workplaces, new technologies, diverse communities and complex cultures. Above all, New Basics is about improving the learning outcomes of Djanogly's students.

What is the curriculum redesign?
Learners in year 7 work in pods of 70 students with a group of staff attached to them for the whole week (except for physical education). Each pod undertakes five term-long projects per year, each of which has specialist staff providing expertise specific to that piece of work (eg a drama teacher supporting the planning and execution of a performance).

The team of staff supporting the pod work within set parameters – the end dates for projects, the assessment framework, availability of subject experts and certain key resources. Within this broad structure, they are free to tailor the detail of the curriculum more responsively for learners, and grasp new opportunities as they arise. Pod team members are mutually supportive, multi-disciplinary and focused on the learner rather than the contributing subjects.

How does the redesign help to personalise student learning?
No longer is a teacher solely responsible for the delivery of one part of the curriculum. Instead, team members have joint responsibility for the whole curriculum for every learner in their care. There is much greater continuity with primary education.

How is complementarity achieved?

The three major reconfigurations at Djanogly are **Reconfiguration 2: merging of phases, Reconfiguration 3: flexible time schedules** and **Reconfiguration 7: competence-based, trans-disciplinary curriculum** with project-based learning. The three have been combined to achieve complementarity. Other reconfigurations that play a supportive role to maximise complementarity are Reconfiguration 11: co-construction with stakeholders and Reconfiguration 17: distributed leadership. As this is a new academy, the building is designed to allow groups of 70 learners to work together, or in smaller groups, with the use of new technologies to support collaborative work, thus using to advantage **Reconfiguration 6: design of buildings and learning spaces.**

Questions

- Are there any aspects of this Djanogly reconfiguration that might help you to improve the learning of year 7 students in your school?
- In what ways does Djanogly curriculum redesign affect the qualities and skills needed by middle managers?
- What kind of professional development do middle managers need to implement this kind of curriculum redesign?
- If you were a senior leader at Djanogly, which other reconfiguration(s) do you think could achieve complementarity with their current redesign?

06 21st century curriculum redesign: the default settings

Teachers in England welcome the increased flexibility over curriculum that they have been given recently,[2] but many are sceptical that the change has gone far enough. They are convinced that the national curriculum is still too prescriptive and often inappropriate to the needs and circumstances of many pupils, especially those least attracted to the study of single academic subjects.

In this pamphlet we have sought to show that while teachers have less control over curriculum content than they would like, there are ways of redesigning how the curriculum is experienced by students to give teachers more control in shaping students' experience and making the content more engaging.

[2] www.qca.org.uk/curriculum

The case studies in this pamphlet report changes in curriculum redesign that combine in many varied ways the 20 reconfigurations that we believe are the main building blocks of system redesign (annex A). Such redesigns are transforming the way teachers and students experience schooling in their day-to-day lives. Are these schools departing from the norm in ways that are merely fads and fashions that will soon fade into history? Or are they pioneers who are taking steps in a process of redesign that will over the next few years affect the majority of secondary schools in England and in many other countries?

Sir Dexter Hutt, the executive head of the much-praised Ninestiles School, believes that what might be called the default setting of the 20th century school – the ubiquitous configurations of age-cohorts and timetabled lessons – will before long be replaced by new default settings that will be characteristic of 21st century schooling. Is it clear what these default settings might be? No, it is not. But it is possible that some of the practices reported in this pamphlet are sketching the direction of travel for the redesign of the education system.

Although schools have started to redesign in different places and for different purposes, the extent to which their solutions use similar tools makes it possible to put together a high-level description of where many schools may be in 5–10 years' time.

From 20th century defaults…	…to 21st century defaults
School students work in their age-cohort in groups of 20-30 learners, in mixed-ability groups, sets or streams	Students are grouped by need, based on progress, current level of attainment and target level rather than birth date
Five or six lessons per day every day of the school year, with a small number of days off-timetable for enrichment. Optional after school activities outside the main curriculum	A variety of time structures used over the course of a year, including short workshop sessions, hour-long lessons, half-day, full-day and multi-day blocks
Time and place of learning, like curriculum content, predetermined in standard forms by teachers	Teachers negotiate with students what, how and when they learn in a personalised way
Learning organised mainly around subjects	Single-subject teaching complemented by competency-based, thematic, and trans-disciplinary approaches, including problem-based and project-based learning
Centrally planned curriculum structure negotiated between senior and middle leadership and in place for the academic year	Teams of staff operating within an overall structure for the school and cluster, with the flexibility to make changes where necessary
Curriculum planned and managed within a single school, with occasional external collaboration set up on a case-by-case basis for certain groups of learners	Collaboration with other institutions becomes the norm and is firmly embedded in planning and quality management systems
Common start and finish times for all, with optional additional activities	An increasingly fluid school day with progressively less emphasis on common start and finish times and term dates

The list is not a prediction: it is a composite description of practice already in place in schools like those reported in this pamphlet. It is school leaders who will determine whether this description of minority practice in system redesign will eventually become the new default setting for English secondary schools.

'Lenin spoke for many leaders when he said "Freedom is good but control is better." And our quest for control has been oftentimes as destructive as was his.' Margaret Wheatley, Leadership and the New Science

'Stalin used to do our timetable.' Richard Carlyle, Vice Principal, Bridgemary Community Sports College

Annex A

The reconfigurations of system redesign

Institutional reconfigurations (10)

1. From single to multiple institutions
Over the last 25 years there have been several developments leading secondary schools to build various forms of partnership and collaboration. In recent times this trend has increased markedly: there are more such partnerships and some of them are much tighter and more enduring – for example federations of schools.

2. Merging of phases: primary/secondary/special/ further/higher
The boundaries between the different phases of education are less rigid and more permeable. The transition between primary and secondary school is an area of innovation and experimentation; special schools are more closely allied to mainstream schools, and increasingly will be co-located with them; 3–16 or 3–18 'all-through' schools are emerging; in the interests of vocational education links between schools and further education colleges are growing; and some sixth form students are involved in university study.

3. Flexible and permeable age cohorts

In English secondary schools, the age cohort (year group) has been a universal organising device. Most adults looking back on their schooldays will talk about 'people in my year'. Schools are letting some or all of their students complete the three years of the national curriculum in key stage three (years 7 to 9 for pupils aged 11–13) in two years, so that increasingly pupils in different years are being taught together. The more radical version of this is a 'stage not age' approach, in which pupils are grouped in different subjects by their level of attainment, not their age. This is a powerful, personalised alternative to both setting and streaming to which politicians are so addicted.

4. School day, term and year

In many schools the day is being extended; or being re-scheduled by starting earlier and finishing earlier; and the traditional three-term (three-semester) year is turned into five or six terms, of very similar length. In the more radical versions, the school is moving towards a 24/7, 364 offer. Students, of course, attend for a standard, overall time, but the points at which they attend can vary, eg a student might attend during afternoons and evenings, but not mornings.

5. Flexible time schedules

Traditionally the secondary school day has been divided into between five and seven lessons of 40–50 minutes, with a 'double period' for some subjects such as science. Schools are experimenting with variable blocks of time, as time is now seen as a flexible resource that can be packaged in many different ways – which is far more common in primary schools. In the radical versions, the conventional timetable of lessons is abandoned for one or more days (or for the occasional week) and students and teachers spend a whole day (or the week) working together on one subject or topic.

6. Design of buildings and learning spaces
Space is also being treated as a variable resource that may be deployed according to how the design of teaching and learning might gain from a different size and shape of space. This is a particularly important aspect of Building Schools for the Future.

7. Competence-based, trans-disciplinary curriculum
Most students and teachers devote most of their time in school to the study of the single subjects of the curriculum, yet there is growing interest in curricula that are conceptualised in terms of competences rather than knowledge acquisition; in project-based, problem-based learning, and in trans-disciplinary questions that cannot be answered by subject knowledge alone; and in various approaches to a curriculum designed for learning-to-learn and to improve students' learning capacities. Among the more radical versions is the Royal Society of Arts *Opening minds* curriculum.

8. Academic/pastoral division
The design architecture of the comprehensive school in England has traditionally been built around the twin pillars of the academic aspect (the subject departments or faculties) and the pastoral aspect (usually the year group). Because this arrangement tended to cause a split between student learning (the academic side) and their welfare (the pastoral side), many schools are redesigning the pastoral aspect to become an explicit support for learning. Often this involves designing vertical tutoring (see *System Redesign – 4*), which creates a further erosion of a rigid age cohort (reconfiguration 3).

9. Smaller units within schools
Secondary schools in England vary enormously in size. Even the largest ones, with 2000+ students, are not particularly large by some international comparisons. But there is a growing concern that many students need to belong to a smaller, more intimate unit within the school, where stronger relationships between teachers and students, and among the students, can be forged. There is thus a growth of 'mini-schools' and 'learning villages' as well as vertical tutoring (see *System Redesign – 4*).

10. School and workplace
The boundaries between the school and workplace are becoming more permeable, in the light of major new developments in vocational education. These include work-based learning in key stage 4 and the new specialist diplomas, as well as increased interest in how schools might foster entrepreneurship and enterprise.

Role reconfigurations (5)

11. Co-construction between stakeholders
Co-construction of schooling is a major theme to emerge from the best work on personalising learning, though some schools have found it difficult to go beyond student voice. Co-construction with other stakeholders, especially parents, is more difficult. Co-construction with other agencies is central to the effective implementation of Every Child Matters.

12. Governance
Changes in school governance inevitably arise from reconfigurations 1 and 11.

13. Widespread, school-based innovation
High levels of school-led and school-based innovation are now to be found in the schools that have been more effective in personalising learning. As was the case in the business world, innovation is essential to achieve personalisation and the transformation involved.

14. Initial teacher training and continuing professional development

For some 20 years initial teacher training (ITT) and continuing professional development for serving teachers (CPD) have been enjoying linked experimentation. Various new schemes of ITT are more school-based than conventional models, and CPD is, in parallel, moving away from a model in which teachers attend occasional courses outside school to advance their knowledge and skill in specialist fields. Now they are more likely to undertake school-based, school-led professional development that focuses more on generic issues about learning and whole-school improvement. Expert-to-novice transmission is being replaced by peer-to-peer mentoring and coaching; and inter-school networks are seen as crucial to such developments.

15. Partners as teachers

Teachers are now being supported internally by a wide range of teaching assistants as well as outside partners as mentors and coaches. Parents are actively recruited as home teachers and students are also assuming teaching roles as mentors and coaches for fellow students.

Leadership reconfigurations (5)

16. Flatter, less hierarchical staff structures

English secondary schools were once notable for extensive hierarchies among the staff. Following business models, staff structures are becoming flatter.

17. Distributed leadership

Leadership is becoming distributed. Note that distributing leadership need not be associated with flattening the hierarchy, just as flattening the hierarchy does not necessarily entail more distributed leadership.

18. Student leadership
A concern to expand and develop student leadership arises out of several of the above reconfigurations, especially numbers 3, 7, 8, 11, 13, 15, 16 and 17.

19. Leadership development and succession
This is in many schools a natural response to reconfigurations 16 and 18.

20. Decision-making methods
Changes in leadership structures and cultures noted in reconfigurations have in some schools generated high levels of participation that demand new methods of decision-making.

Annex B

Websites of the case study schools

Bridgemary Community Sports College
www.bridgemary.hants.sch.uk

Djanogly City Academy
www.djanogly.notts.sch.uk

Eastbourne Technology College
www.etc-sch.com

Leasowes Community College
www.leasowes.dudley.gov.uk

Serlby Park School
www.serlbypark.notts.sch.uk/

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Longfield School
Saffron Walden High School
Serlby Park School
St John's School

This pamphlet is the third in the third series of SSAT publications on personalising learning:

System Redesign – 1: The road to transformation in education

System Redesign – 2: Assessment redesign

System Redesign – 3: Curriculum redesign

System Redesign – 4: Personalising relationships

This series develops the themes identified in the first and second series of SSAT pamphlets on personalising learning:

First series

Personalising learning – 1

Personalising learning – 2

Personalising learning – 3

Personalising learning – 4

Personalising learning – 5

Personalising learning – 6

Second series

A new shape for schooling?

Deep learning – 1

Deep experience – 1

Deep support – 1

Deep leadership – 1

Deep experience – 2

Deep leadership – 2

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