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Using Technology to Support the 14 – 19 Agenda

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Acknowledgements

With thanks to those who have contributed:
Christine Vincent, Stuart Gardner, participants
of the focus groups and case study contributors.



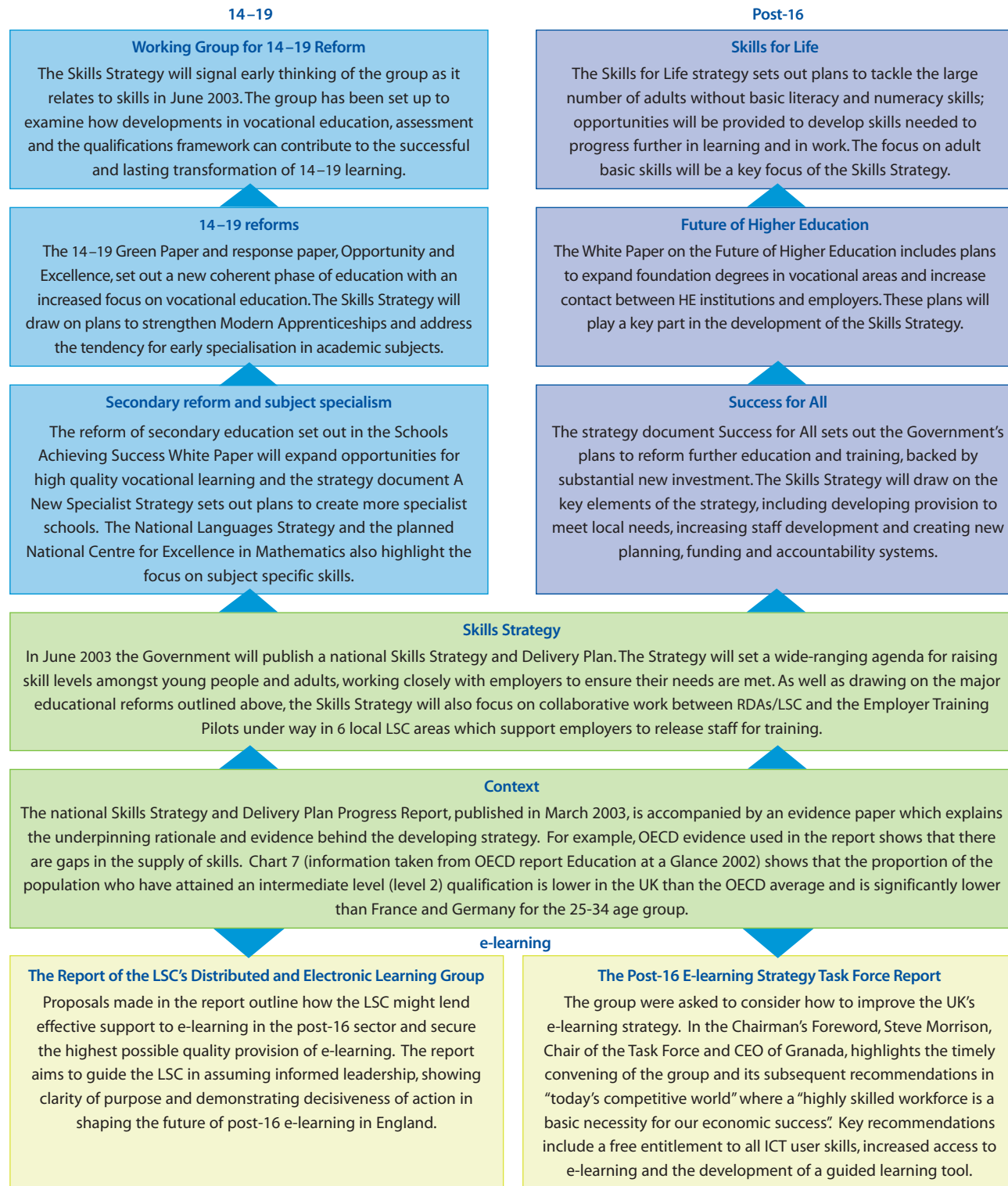
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05/2003-04/060/a/JO/5k



Summary of Post-14 Strategy

Part I – Introduction



This document aims to highlight the key areas in which ICT can support the implementation of cross-sector 14-19 education, concentrating on the systems and structures which underpin the management of learning. Part I looks at what the 14-19 agenda is and the impact this will have on the delivery of education in schools, colleges and work-based locations. The second part of the document looks at the part ICT can play in enabling some of the more challenging implications of the 14-19 agenda.

Introduction

The NLN (National Learning Network) programme has been charged with supporting the development of ILT in post-16 education. The National Grid for Learning (NGfL) funding stream (now ICT in Schools) has been responsible for pushing forward similar aims in schools, largely within the pre Key Stage 3 (under 14) age group.

But 14-19 education is changing. The publication of a Green Paper, Extending Opportunities, Raising Standards, in February 2002 and a response document, Opportunity and Excellence, in January 2003 has mapped out a way forward for a new coherent and inclusive phase of 14-19 education. The proposed timetable is challenging. Some 25 Pathfinder projects working through the major aims of the 14-19 agenda were announced in January 2003 and further pilot studies will follow, with a national rollout of some of the key proposals (including changes to the core curriculum) by 2004-5.

A working group, convened for 18 months and chaired by Mike Tomlinson, will look at:

- strengthening the structure and content of vocational programmes and offering greater coherence of learning programmes
- assessment arrangements appropriate to different types of courses and styles of teaching and learning
- a unified framework of qualifications which recognises different levels of achievement, including discussion on the development of a Baccalaureate-style award.

Key objectives are that it should no longer be considered acceptable for a young person to leave education or

training at the age of 16, and a young person's learning programme should no longer be decided by what an individual school or college can offer. Instead it will be the responsibility of schools and colleges to put together programmes which meet the needs and aspirations of learners. In many cases, individual schools or colleges will still be able to meet these needs. However, for some, a tailored programme will only be achieved through partnership between schools, colleges and employers.

This presents a huge challenge to all partners looking to cope with the new flexibility expected in this distinct 14-19 phase. Much that is good practice is already happening, and this has been recognised by the Government in its policy agenda. The key point is that ICT has the potential to support and drive forward this challenging rethink of post-14 education. It will not be a back-seat role: development of ICT opportunities in schools and in colleges, whether NLN or ICT in Schools inspired, will have to move forward in partnership.

Note: ICT is the term used to describe the use of technology to support learning and teaching in schools. ILT is the term used by the college sector. Throughout this document, we will refer to ICT.

The 14-19 proposals in brief

General issues

- 14-19 education will be split into three clear phases: a progress review at 14 identifying long-term goals and informing students of available options; a core phase concerned with learning leading to qualifications and personal development; and an end phase potentially culminating in an overarching award at 18-19 to recognise a variety of achievements. An effective careers development programme throughout Key

Stage 3 will enable students to choose appropriate individual learning pathways. Connexions Service Personal Advisers will be available throughout the 14–19 stage, particularly for those at risk of disengaging from learning. A new framework for Careers Education and Guidance has been developed by the Qualifications and Curriculum Authority, covering the whole age group from 11 to 19.

14–19 curriculum

- Key Stage 4 learning (nominally from 14 to 16) would reduce the number of core subjects to English, Maths, Science and ICT (with ICT gradually becoming an integral part of other subjects). Non-assessed essential subjects would include citizenship, religious education, sex education, physical education, careers education and work-related learning. Subjects to which students would have an 'entitlement' include MFL, Design and Technology, Humanities and the Arts. This entitlement could be met through students taking these courses at the local specialist school or college. Greater flexibility would be allowed for students to follow other options, including vocational courses in flexible locations and at a flexible pace.

16–19 curriculum

- All 16–19-year-olds would be entitled to continue to study literacy, numeracy and ICT until they reach at least Level 2, pointing to flexibility of pace.
- Within 16–19 education, Modern Apprenticeships will continue to be encouraged, with an entitlement by September 2004 to a place for 28 per cent of young people who are deemed to have acquired the necessary basic skills.
- Schools and colleges will be encouraged to enter students for exams when they are ready.
- The range of Advanced Extension Awards will be extended.

Vocational education

The *Opportunity and Excellence* summary states: 'One of the most persistent shortcomings of our education

system is the weakness of our vocational offer. While there has been progress – such as better co-operation between schools and colleges on work-related learning – learning a trade has still to become a truly valued option.' Hence:

- A 14–19 learning programme should be considered to comprise 'general' and 'specialist' courses, rather than 'academic' and 'vocational'. Plumbing and Hairdressing are as much specialisms as History and Law.
- The 'vocational' tag would be dropped from GCSEs to reinforce equal status, and it is envisaged that GCSEs could gradually evolve to a mid-term 'progress check', with flexibility to take these exams early, later, or not at all. Vocational A levels would follow the same AS/A2 model, and again, the vocational tag would be dropped. The consultation response has paved the way for the introduction of 'hybrid' GCSEs, in which either academic or vocational pathways could be taken. Science and Geography qualifications will be the first to be piloted.
- There will be an emphasis on local innovation and partnership, reflecting local differences such as the labour market, the pattern of existing educational institutions and the increasingly distinctive specialisms of local schools and colleges. Employers will be increasingly involved in the development of work-based learning and work experience.
- All students will learn about work and enterprise.

A science teacher believes that the core curriculum is appropriate if it achieves flexibility without losing the accessibility of a broad and balanced curriculum for all. She welcomes the proposal to create vocational pathways for those more suited to learning via the practical application of their skills. She will be keen to see Applied Science introduced as a GCSE subject when the school has committed itself to introducing more vocational subjects. This is expected to happen in 2003/04. She feels that the GCSE is a useful marker and gives students a goal to aim towards.

14–19 timeline

Feb 2002	Green Paper published
May 2002	Consultation period ends
January 2003	Government response to consultation: <i>Opportunity and Excellence</i> and public announcement of Pathfinders
April 2003	Connexions service to be available nationally
September 2003	Hybrid GCSEs in science and geography trialled
Jan 2004	Tomlinson task force interim report on qualifications and vocational learning
April 2004	Connexions service to be available nationally to all students
By 2004	Modern Apprenticeships available to 28% of young people (from 16)
June 2004	Tomlinson final proposals published
September 2004	Education Maintenance Allowances extended nationally Expansion of vocational GCSEs
2004 onwards	Entitlement to study literacy, numeracy and ICT to level 2 until age 19

The place of ICT in the government's 14–19 agenda

Although ICT is not singled out as a separate theme within the Green Paper or its response, it has a major part to play. The complexity of offering the level of choice and flexibility of course and pace to individuals suggested by the Paper would not be possible without it. The need to provide flexible delivery of courses and remote access to course materials involves coherent infrastructure, online resources and ideally some form of online tracking and assessment. Teaching and learning will of necessity be shared across physical school and college boundaries. ICT is integral to the successful implementation of the reforms.

The response paper refers explicitly to the use of e-learning to bring together the best of teaching

from schools, FE and work-based provision. It also sees a place for ICT in supporting and managing individualised learning in a variety of institutions and in enhancing learning for all.

This document will go on to look in more detail at the areas in which ICT can be of practical benefit.

National Issues

Content

The demand for flexibility in learning inferred by the 14–19 agenda will increase the need for appropriate digital learning content, to be accessed at any time and in any place. Curriculum Online is leading the national market for schools-focused digital learning content and a similar service for post-16 content currently known as 'College Online' is being discussed. Through Curriculum Online, schools now have access to a database of content, and to e-learning credits with which to purchase them. The Regional Broadband Consortia, who help to secure broadband connectivity for schools, serve as a regional focus for the development of additional broadband content for schools and subject associations offer a national curriculum-based focus. City Learning Centres and similar bodies can also undertake a content development role for their school and college audiences. More informally, web-based resources such as the National Grid for Learning, Ferl, the Teachers' Resource Exchange and Virtual Teacher Centre provide access to a vast body of resources, both online and traditional in nature.

800 hours of curriculum materials are hosted on the Hull City Learning Centre's Virtual Learning Environment. The Centre is working with schools that are creating curriculum materials and making these, and assessment tools, available to all users of the VLE.

Assessment

The 14–19 agenda flags up the issue of multi-location study and assessment, which must be dealt with

Curriculum Framework 14–19

consistently by all exam boards. Exam boards may be required by the 14–19 reforms to develop:

- rolling assessment to cope with the need for flexible pace
- online assessment to enable the full use of flexible learning locations
- accreditation of 'external' activity
- assessment of Modern Apprenticeships which is clear, consistent and avoids the mountain of paper evidence associated with NVQs
- appropriate assessment of the Applied (vocational) and proposed hybrid GCSEs.

With the increased stress on vocational options, the potential for new and mixed methods of assessment must be considered. For example, some elements of the vocational GCSEs could lend themselves to the development of electronic portfolios, with the use of digital video to record and assess practical elements.

The use of ICT for formative assessment is increasing. Many colleges now use their learning platforms to undertake some form of ongoing assessment, whether through the use of online multiple-choice quizzes or through the submission and return of more analytical work online.

A southern City Learning Centre has introduced digital video for assessment in PE for a local school. GCSE groups of all abilities were provided with the opportunity to present their coursework for analysis and improvement of performance on video. The percentage of students submitting coursework rose from 75% in 2001 to 100%, and achievement of A-C grades doubled.

The 14–19 Pathfinders and ICT

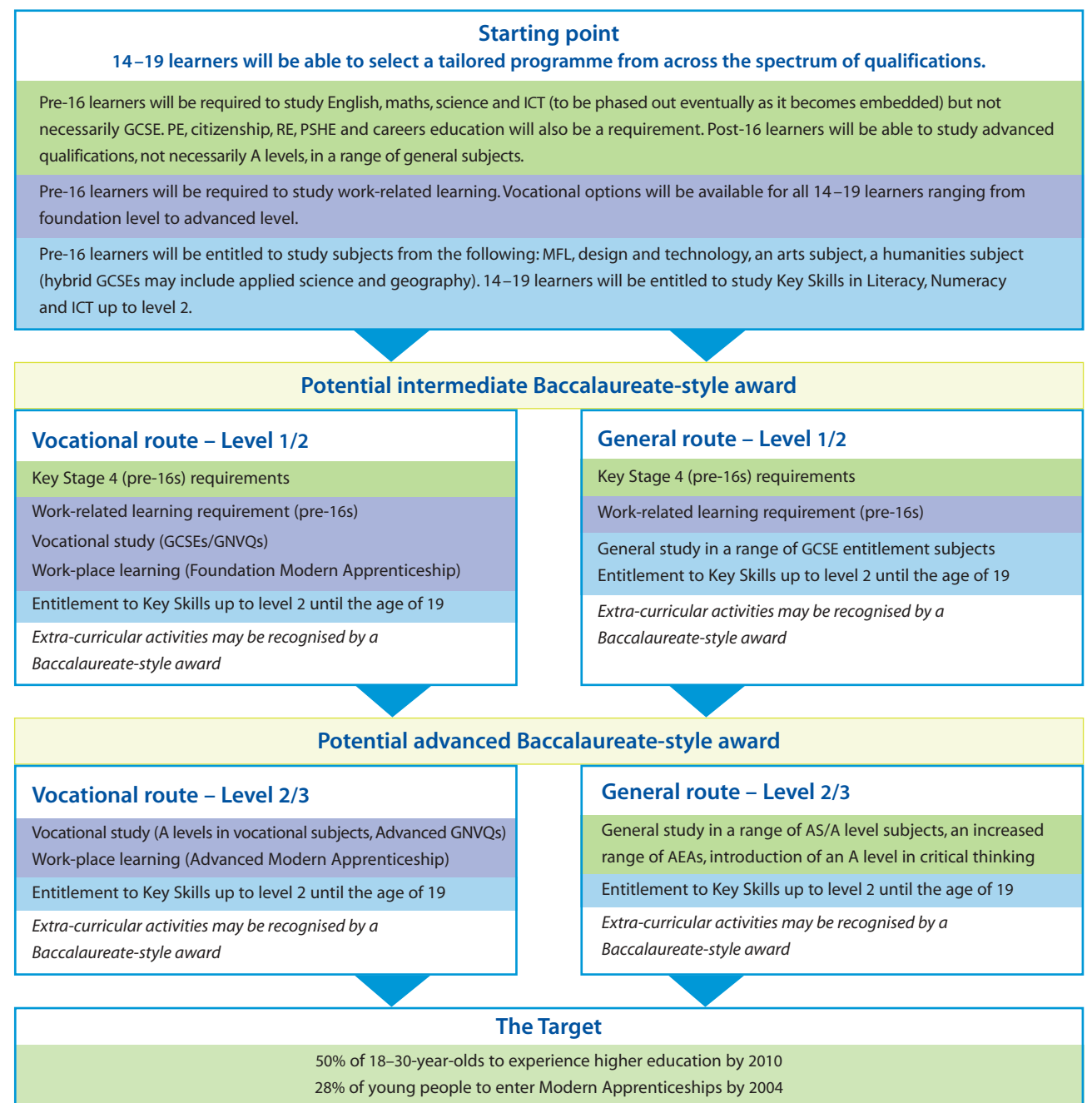
14–19 Pathfinders were proposed in the Green Paper; the proposal was warmly received by the great majority of those who responded to the consultation. The DfES

and LSC are jointly funding 25 14–19 Pathfinders for 2002–2003, a further tranche for 2003–4 and a final round in the following year. The DfES Pathfinder website states that 'the objectives for pathfinders are to test a variety of new ways of working, including increased collaboration amongst institutions in different circumstances, in order to secure a greater choice of curriculum pathways.' Key aspects to be tested included the development of full partnerships between providers, the offering of a broader curriculum, enabling a flexible pace of learning, an entitlement to aid to reach level 2 in literacy, numeracy and ICT post-16, the extension of work-related programmes and enterprise education, the use of new vocational options (including vocational GCSEs) and coherent advice and guidance on progression and career routes.

It is in the Pathfinder projects [<http://www.dfes.gov.uk/14-19pathfinders/>] and existing good practice across the country that creative uses of ICT to support this 14–19 agenda can be isolated. Many Pathfinders are utilising e-learning to support flexible course delivery; others mention the creation of a region-wide Managed Learning Environment, the utilisation of e-learning for vocational skills and the creation of virtual workplaces, the use of e-mentoring and e-buddies schemes, video conferencing and the development of online learning materials. Similarly, the ICT Testbed Project [<http://www.dfes.gov.uk/icttestbed>] is examining how effective use of ICT can support the wider government agenda of school reform. The project has identified three 'clusters' each of between eight and eleven schools and a linked post-16 college. The project is concentrating on clusters as a means of fostering greater co-operation between the schools and with their local college and achieving the project aims.

The Cumbria Pathfinder will work with five locally based projects to test developments against a range of area-based needs and priorities and identify transferability issues. Activity will include the development of a rural academy and virtual learning centres.

Opportunity and Excellence strives to move away from the distinction between academic and vocational pathways. This diagram aims to illustrate the equal status of provision.



Part II – A place for ICT

Introduction

The government's vision of 14–19 education relies on every education provider committing to membership of educational partnerships which can provide an individual programme for each learner. This local and regional pooling of skills and strengths provides the required broad-based curriculum, but is dependent on the learner travelling to access the learning, or the learning travelling to the learner. In addition, data about the learner's attendance and performance must move with the learner to all of the host institutions, and potentially to the providers of formal accreditation. Without the effective exploitation of ICT, this will not happen with the necessary speed and ease to support learners, practitioners and managers.

The Shropshire 14–19 Pathfinder is looking at a region-wide VLE and the London Grid for Learning has tackled some of these issues with schools through providing a central repository of learning materials.

It is therefore vital that the systems and structures underpinning the management of learning are sufficiently flexible to enable differentiated pace and place, and take sufficient account of the needs of partnership to operate within a wider context than that of a single institution.

Partnership and collaboration

There are a number of key issues which need to be addressed in order to enable effective local partnerships. Most of these will be eased by the application of technology.

Transfer of student data. Currently, much student data is duplicated - and given separately to schools, colleges, Connexions services etc. Discussions between the LSC and the DfES are under way on the creation of a unique student identifier which would be carried between providers; however, progress is slow, and the dataset under discussion is small. Some regional pilots are looking to share this baseline information.

Student assessment and tracking. This can be a function of a good learning platform. ICT provides an excellent means of formative assessment. However, sharing learning

Increasing numbers of local councils are using webcasting technology to broadcast their meetings to a wider public. Picture quality is poor, but good enough for the more creative councils to extend their services to weddings and similar events, and to broadcast local events such as Newcastle's annual New Year's Eve celebrations. Slow connection speeds are keeping take-up low, but the potential for education, over higher bandwidth, would be far greater.

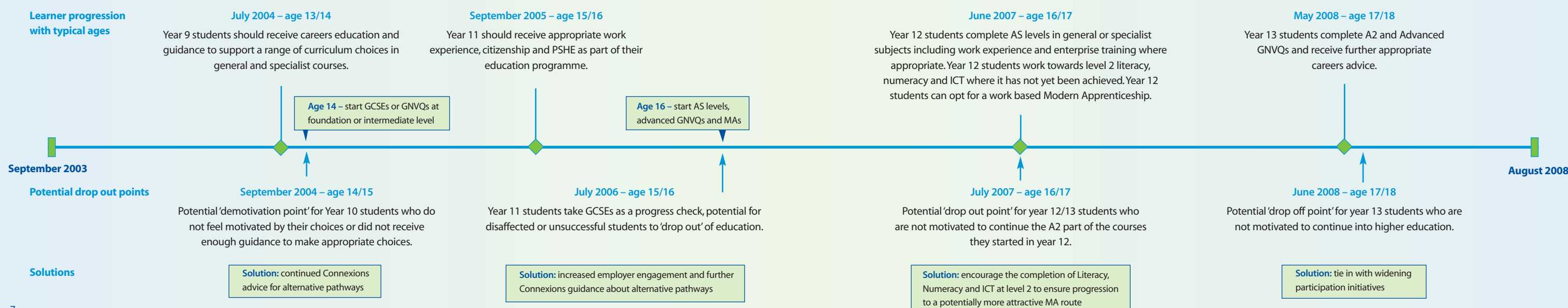
platforms between providers, or ensuring compatibility of data between different learning platforms needs joint buy-in and increases the onus on joint working. Data protection issues come to the fore when data is shared outside a single institution. This is an area in which colleges have much expertise to share with schools that are less familiar with the use of learning platforms.

Student support. This could be identified through appropriate tracking before serious problems occur. The

Connexions service particularly needs to have timely access to data. Advice needs to be given to teachers and lecturers supporting online learning, particularly if this is happening at a distance. Online mentoring and web communities are two approaches currently being piloted. Online support, particularly where a student is taking courses at a slower pace, could help to keep that slower pace low key, and avoid the imposition of a 'low status' tag.

Duty of care issues. These are more likely to occur in a college situation, and most likely in areas of vocational training. Appropriate guidelines need to be made available to all staff in all institutions dealing with the 14–16 age group. For those vocational training areas which may cause problems, the use of digital cameras and webcasting are excellent solutions. An agricultural college is already utilising this technology to bring activity in the lambing pen to younger students. Transport of 14-year-olds is an issue which regularly arises – a member of school staff needs to travel with them and, where greater distances are involved, then whole- or half-day chunks need to be timetabled into the school and college day unless the learning travels to the learner.

Learner timeline with potential 'drop out' points



The sharing of content and access to learning resources.

This is another learning platform issue. The use of video conferencing and webcasting technologies can help with remote learning, but they are technologies which require a great deal of support. Similarly, partnerships with local employers flag up issues of network suitability, internet connectivity and data security, alongside a potential role for the Regional Development Agencies.

Parity of staff and student experience. On a national level, courses are going to be taught in different

locations by different people from different organisational cultures. For example, a vocational GCSE could be taught in a school or college, or conceivably both. Ongoing, formative, online assessment will enable appropriate tracking for learner and practitioner, regardless of location.

Management of collaboration. There is a real need for a central co-ordinator, and 'ownership' of the individual student experience. This student 'management' role is likely to require access to comprehensive data management systems.

Key areas in which ICT can support 14–19 education

	Examples of current/potential institutional systems	Example of current/potential regional systems and requirements	Example of cross sector systems required
Management and leadership	The development of institutional ICT strategy	Disseminating information about national strategies and their influence at institutional level	The development of joint ICT strategies
Administration	Student registration system	Monitoring attendance and providing access to appropriate services	Making electronic data about student registration accessible across institutions
Teaching and learning	Access to digital learning content for use and repurposing	The development and purchase of content to be available via regional mechanisms	Enabling cross-institution access to digital learning content and repurposed content via a learning platform
Student tracking	Using a learning platform or spreadsheet to record and track progress across the institution	Setting and auditing regional targets – tracking progress against national targets	Enabling cross-institution access to student progress reports via a learning platform
Student support	Using recorded assessment and tracking data to identify students in need and provide access to additional materials/support	Providing access to online information about regional work experience and Modern Apprenticeship placements	Using joint access to a learning platform and email/practitioner discussion forums to liaise on the provision of additional materials and support
Staff support	Provision of time and support to develop practitioner skills in the use of ICT	Providing and monitoring staff development	Provision of online forum for the sharing of good practice and training needs

With the knowledge of the key issues which underpin successful partnerships, we are able to look at the structures and systems within the individual institution and forces at the regional level which influence these issues. These institutional and regional structures will provide the context in which appropriate **cross-sector** systems need to develop and operate in order to offer a broad-based and flexible curriculum. The following section will look at how such systems can help to support this, with reference to the key themes identified in the table opposite.

ICT in the internal institution

Internal systems in educational institutions predate the 14–19 agenda, set constraints and provide only partial solutions to new problems.

	Existing internal systems include:
Management and leadership	<ul style="list-style-type: none"> the development of single institution ICT/ILT strategies
Administration systems	<ul style="list-style-type: none"> an MIS specific to the school or college local timetabling and registration (perhaps even paper based)
Teaching and learning	<ul style="list-style-type: none"> content and planning shared within departments (possibly). Much is paper based in schools (and some in colleges). A learning platform specific to the college may be in use, but few schools are using these. Many staff in schools and colleges have yet to gain confidence and familiarity in the use of online learning resources and technologies.
Student tracking	<ul style="list-style-type: none"> Some student tracking is in evidence in most institutions, but not always in a form to be shared between departments enabling the development of a holistic picture of student performance.
Student support	<ul style="list-style-type: none"> Usually face-to-face student support, which is more efficient in those institutions with timely institution-wide (electronically based) student tracking. Many staff do not have access to out-of-hours equipment, or have to share with many. The laptops for teachers, headteachers and lecturers schemes are helping to address this. Support is unlikely to be available online.
Staff support	<ul style="list-style-type: none"> varied support systems and training for staff on e-learning.

Collaboration at the institutional level is critically dependent on collaboration and support at the regional level. Strategy, funding, infrastructure and monitoring are all regional roles which impact heavily in the individual institution.

A Cambridge school is successfully building partnerships with local primary and secondary schools as well as working closely with parents and students working from home and in hospitals. The Head of ICT has put in place a VLE, which local primary schools use to access a collection of suitable websites.

ICT in the regional management of education

Existing regional systems are managed by key partners including the Local Education Authorities, local Learning and Skills Councils, Regional Broadband Consortia and JISC-managed Regional Support Centres. These organisations manage ICT infrastructure and content development and have a technical support role, but also evaluate roles and outcomes.

Local Learning and Skills Councils have responsibility for the funding of post-16 education in schools, sixth-form colleges, FE colleges and work-based education and training, while LEAs have responsibility for the funding and appropriate provision of pre-16 education in schools.

Regional Broadband Consortia are consortia of LEAs set up to procure cost-effective broadband connectivity for schools in England. They are key players in the procurement of Internet services, broadband infrastructure and content for LEAs and schools in their regions.

The JISC Regional Support Centres (RSCs) promote and support the use of network learning technologies and resources in the UK further education sector.

	Regional systems
Management and leadership	Current practice dictates regional involvement in strategy development, administration and evaluation. However, the 14–19 agenda (and a raft of other government reforms, notably the Education Act's Power to Innovate clause) are steering schools and colleges towards increased devolution of funding and strategic leadership. As national strategies take greater account of regional issues, so there is a place for regional bodies to work with institutions to develop regional ICT strategies to support common access to learning materials and systems.
Administration	Local Learning and Skills Councils and LEAs are responsible for data collection and LLSCs are responsible for monitoring activity through evaluation and tracking of multiple funding streams using institutional MIS data.
Teaching and learning	Regional Broadband Consortia work with partner LEAs to establish appropriate connectivity and provide some e-learning content for schools. Colleges source their own e-learning content and have a baseline level of connectivity provided through the Joint Academic Network (JANET).
Student tracking	Local Learning and Skills Councils have targets at level 2 and level 3 and implement Strategic Area Reviews. Local Education Authorities monitor schools against benchmark data and intervene where standards slip below. Both have an interest in accurate and timely student tracking data. The strategic Area Review Process has the potential to be a powerful integrating force.
Student support	Access to systems that are wider than the institution such as the Connexions service or employers' forums can be more usefully managed on a regional basis. Few are currently in place.
Staff support	LEAs and RSCs have a role to play in providing staff development and support in the use of ICT.

Over 1000 teachers had accessed training through the Hull City Learning Centre in its first 6 months of operation (through NOF and ICT teacher training). In addition to offering on-site training, learning and teaching resources, the CLC is also looking to extend access to its resources through distance learning. Teachers were initially reluctant to use the centre, but persuasion is starting to have an effect. The teacher training sessions were fully booked until the end of 2002.

It is the use of ICT across sectors and institutions that will influence the success of 14–19 education.

	Internal	Cross-sector	Regional
Management and leadership		Moving the learner or the learning	
Administration systems			
Teaching and learning			
Student tracking			
Student support			
Staff support			

14–19 reforms imply that cross-sector systems will need to be developed and in practice will involve partnership working at all levels. These partnerships will not function without technology and may not work well with existing structures. There is additional pressure on the schools sector for closer working or common governance across schools.

Currently, the existing cross-sector systems comprise:

- joint strategy working through Increased Flexibility, Excellence challenge and similar programmes
- cross-school management programmes, provided by NCSL
- some content available across schools (through RBC's and LEAs, the Teacher Resource Exchange and Virtual Teacher Centre) OR across colleges (through national repositories such as Ferl)
- partnerships between specialist and Beacon schools and other local schools, rarely supported by technology
- staff support training across colleges (through ILT Champions/Regional Support Centre work and the new, UK-wide Ferl Practitioners Programme) and schools (NOF training)
- slow data transfer between schools and colleges; for students transferring to college at age 16, this can take up to 6 months.

- Some holistic evaluation of provision through Area Wide Reviews and Strategic Area Reviews

At a local level, cross-sector systems could be required, including:

- compatible MIS systems – and the timely development of a unique learner ID
- compatible, interoperable and remotely accessible learning platforms, assessment and student tracking systems

Colchester Institute (an FE college) has developed a web community for student tracking in response to the introduction of programmes of vocational study for 14–16-year-olds in catering, construction and hairdressing. The community links learners, college lecturers, teachers from the nine local feeder schools and parents. This is a new direction for the college which received its first intake of 14-year-olds in September 2002. The web community has been fully operational since October 2002 and has been enthusiastically used by parents and teachers.

- joint timetabling software and an awareness of all available courses
- a means of transferring and updating individual learning plans within involved schools/colleges/work based providers
- access for all teachers to support and training in the use of new technologies
- access to teaching of specialist subjects (through specialist schools or Centres of Vocational Excellence). This will be especially important in rural areas, where travel to a local specialist school to access and entitlement subject not taught by the student's own school is impracticable.

The Videoconferencing Initiative, one of several Learning Technologies initiatives set up by the Department of Education and Training in Victoria, Australia, is an excellent example of partnership working to deliver the school curriculum to rural areas of Australia. The partnership assists schools in remote areas of Victoria to deliver a broader curriculum for all students regardless of their geographical location using desktop videoconferencing, telematics and shared mobile technology resources and has won national and international awards for innovative use of technology in educational settings.

At a regional level the following cross-sector systems needed could include:

- joint strategy working between LEA/LLSC heads
- holistic evaluation of provision – through Area Wide Reviews and Strategic Area Review
- regional database of course provision with details of time slots and locations

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- regional database of work placement and Modern Apprenticeship opportunities
- the development of regional timetabling software, which could provide a solution to logistical problems, although this would require robust and truly collaborative partnerships.

It is in these cross-sector partnerships that the goal of interoperability becomes truly essential. Interoperability of learning platforms, or elements of learning platforms, content and content repositories (for example Curriculum and College Online), registration and tracking systems, assessment systems and information management systems is assumed by the 14-19 agenda. It is not yet a reality.

A note on the use of new technologies

The move towards 'anytime, anyplace' learning has implications for the ways in which technology is used. Remote access to learning materials (from home or the workplace) is already happening in some colleges through the use of learning platforms. The need for full partnership between schools, colleges and employers will extend the accessibility of content. Webcasting, video conferencing and the increasing use of mobile devices to access and assess learning materials will increase in importance as the teacher or lecturer (particularly of specialist or

entitlement subjects) teaches students spread over a wide geographical area.

As use of these technologies grows, so the importance of making learning content and devices accessible to all students increases. Developing accessible content will be an essential, practice.

International comparisons

Comparison with international education systems highlights the focus of other developed countries on the need for dedicated vocational education, particularly for the post-16 sector, and significant attempts to provide online learning opportunities in this field.

In Australia and New Zealand, unit-based assessment systems incorporate both general and vocational education and build towards national certificates of achievement; however, the 14-19 curriculum is decided on at a local level in the separate states or territories. Certain states or territories in Australia and New Zealand are also offering online distance-learning opportunities to the post-16 sector. For example, the state of Victoria in New Zealand provides online learning opportunities through the Technical and Further Education (TAFE) Virtual Campus. There are over 1000 modules offered by 90 registered training providers in Victoria.

France and Germany both offer targeted vocational qualifications in dedicated vocational education institutions for 16-19-year-olds. In Germany the complex system of vocational education also includes apprenticeships, where the vocational institutions provide one- or two-day release programmes for work-based training. In Denmark 40 per cent of young people take the apprenticeship route, starting with a year in college in a relatively broad occupational grouping, and the opportunity to sample a range of occupations before finally determining which one of 200 trades to specialise in. Employers are not identified until after the apprenticeships start their programme, so in 10 per cent of cases the college provides simulated practical work.

For further information

Becta provides advice and guidance on the use of technology within 14-19 education through its existing work and will be developing support for those new uses of ICT required by the 14-19 agenda.

We are always interested in how schools and colleges are addressing their local 14-19 issues. For further information, or to contact the 14-19 team, email: 14-19@becta.org.uk.

For Becta information on 14-19 strategies:

<http://www.ferl.becta.org.uk/14-19>

For further information on the 14-19 Pathfinders:

<http://www.dfes.gov.uk/14-19pathfinders>

For information on the use of learning platforms:

<http://ferl.becta.org.uk/display.cfm?page=76>

<http://www.becta.org.uk/research/reports/vle.cfm>

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