



**Transforming learning, teaching and leadership through education and technology change**

## **Milestones grouped and assigned**

produced by the Education Technology Strategy Management Group for the Department of Education

**NB:**

- **This is a working document and is subject to change at any time. The current version will always be on [www.empoweringschools.com](http://www.empoweringschools.com)**
- **Please contact [john.anderson.deni@nics.gov.uk](mailto:john.anderson.deni@nics.gov.uk) with any requests to amend the document, or to comment.**
- **The purpose of grouping the milestones in the document is to help schools and other stakeholders identify where the main responsibility for making progress lies, and to undertake action planning.**
- **The assignment of responsibility for the milestones indicates that progress on most will require active collaboration across a range of stakeholders.**
- **Drawing up the necessary action projects, based on these milestones, will require detailed discussions with, and reporting to, a wide variety of partners.**
- **A Strategy Executive, operating through partnership approach, will take the lead in to stimulate action planning, challenging schools and other stakeholders to incorporate the milestones in their corporate and development planning.**
- **The Strategy Executive will initiate partnership-based programmes, manage operational boards – such as those for the eLearning Partnership, the Editorial Board and the Virtual School, and will provide evaluation and quality assurance services for those initiatives which need to be taken forward on a regional basis.**
- **C2k is currently developing a business plan to address the technology innovation and development implications of the emPowering Schools Strategy.**
- **The Strategy Executive will provide a channel for accountability about progress on the Strategy as a whole which will not remove the responsibility for accountability where it lies with individual stakeholders.**

**Embedding ICT in the Curriculum: planning**

<p><b>Embed ICT in the curriculum 1.1</b></p> <p>Schools should embed the use of ICT into all subjects, and plan for the progressive development, across the whole curriculum, of those skills and competences which are supported by using ICT</p>	Schools
<p><b>ICT in an individualised, personalised curriculum 4.1</b></p> <p>Learners should study a curriculum, into which technology is fully implemented, which is determined partly by setting individual targets and personalised testing, and completed at their own pace</p>	Schools
<p><b>Redefine literacy and numeracy in respect of ICT 2.1</b></p> <p>Current definitions of literacy and numeracy should be modified and extended; their relationship with each other, and with information and visual literacies, should be clarified and a broader understanding of literacy promoted</p>	CASS CCEA Schools
<p><b>Monitor the integration of ICT 4.2</b></p> <p>KS2 and KS3: Each school should monitor the integration of ICT in their teaching programmes and the development of ICT competence across the curriculum</p>	Schools

**Enhancing learning through ICT**

<p><b>Going beyond NIC ICT requirements 3.1</b></p> <p>Learners, in addition to meeting the Northern Ireland Curriculum requirements for ICT, should:</p> <ul style="list-style-type: none"> <li>• have a wide variety of safe opportunities across the curriculum to access and use digital resources</li> <li>• experience safe ICT-enabled research/project-based learning and teaching activities</li> <li>• benefit from enhanced links between formal and non-formal education</li> <li>• engage in creative uses of multimedia technology and have opportunities work with IT professionals</li> </ul>	Schools CASS NIel
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<p><b>ICT in early learning 3.2</b></p> <p>Through the foundation stage and early years children should choose and use software titles and programmable devices as part of structured play and <b>early learning activities</b></p>	<p>Schools CASS DE</p>
<p><b>Online in KS1 5.1</b></p> <p>By the end of KS1, children should experience using online, video conferencing and email services in a protected and controlled environment (on their own school network)</p>	<p>Schools</p>
<p><b>Online in KS2 5.2</b></p> <p>By the end of <b>KS2</b> children should have the experience of working <b>online</b> with other children in their own location, and at a distance, on a common educational project</p>	<p>School</p>
<p><b>Internet ‘grammar’ in KS2 6.1</b></p> <p>Children should develop their basic information literacy and <b>internet “grammar”</b> skills, throughout the primary phase, and those skills should be consolidated by the end of KS2</p>	<p>Schools School Library Service (SLS)</p>
<p><b>Consolidation beyond KS2 3.4</b></p> <p>Through KS3 and beyond, pupils should be consolidating and extending the foundation of digital and visual literacies they have developed by the end of KS2</p>	<p>School CASS SLS CCEA</p>
<p><b>Online in KS3 6.2</b></p> <p>During the post-primary phase, and especially in KS3, pupils should engage as online members of an international learning community, working online in assessed, authentic collaborative tasks – in more than one language – with young people and teachers and experts whom they have never met</p>	<p>Schools</p>
<p><b>Online in KS4 5.3</b></p> <p>By the end of <b>KS4</b>, <b>pupils</b> should complete at least one course containing online tests and an accredited <b>online</b> component</p>	<p>Schools CCEA C2k</p>

**Assessing and examining ICT competence**

<p><b>ICT accreditation in KS3 3.3</b></p> <p>By the end of KS2, measured (currently) by the <b>KS2 ICT accreditation</b> scheme, or as part of the new assessment and reporting requirements on ICT in the revised curriculum which will replace it, children should be able to research, access and use information safely and use multimedia and online publication tools creatively and purposely, as part of their topic work and engage in modelling</p>	Schools CCEA
<p><b>Rationalise ICT accreditation in KS4 4.4</b></p> <p><b>KS4:</b> The mixed approach to testing and accrediting pupil <b>competence</b> (skills, systems-based and cross-curricular awards) should be reviewed and, where necessary, rationalised</p>	CCEA
<p><b>Increase ICT-based exam work 4.5</b></p> <p><b>Examination requirements</b> in all subjects should be revised to increase the amount of ICT-based work required from candidates</p>	CCEA

**Recording and Reporting about and through ICT**

<p><b>Record and report competence in ICT 4.3</b></p> <p>The KS2 and KS3 CCEA ICT accreditation schemes, and the new assessment and reporting requirements on ICT in the revised curriculum which will replace them, should record and report competence which is developed in the curriculum context, where ICT competence has been consolidated</p>	CCEA
<p><b>Reporting ICT literacy in PISA 2006 6.3</b></p> <p>Report the ICT literacy of all our pupils as part of the OECD Programme for International Student Assessment (<b>PISA</b>) in 2006</p>	DE CCEA CASS

<p><b>Eportfolios 4.6</b></p> <p><b>Eportfolios</b> should be used by all pupils to keep records and evidence of their achievement and to present and show-case their learning as part of the pupil profile</p>	<p>Schools CCEA C2k</p>
<p><b>Develop MIS 4.7</b></p> <p><b>Management Information System</b> should be developed and implemented to give learners and parents/guardians continuing personalised feedback on progress and attainment</p>	<p>Schools CCEA DE C2k</p>

### Quality-assurance in elearning

<p><b>Pilot R&amp;D for elearning 12.1</b></p> <p><b>Pilot research and development</b> work should be conducted to investigate and evaluate the impact of the use of online environments on the organisation of teaching and the provision of professional development</p>	<p>Strategy</p>
<p><b>Quality standards for elearning 16.1</b></p> <p><b>Quality standards</b> and online resource development standards, against which content and services can be evaluated and kite-marked, should be developed, agreed with the wider community and applied</p>	<p>Strategy</p>
<p><b>Editorial Board 16.2</b></p> <p>An <b>Editorial Board</b> should be established through the emPowering Schools Strategy</p>	<p>Strategy</p>
<p><b>AUP guidelines 16.3</b></p> <p>Revised <b>guidelines</b> for the safe, <b>acceptable</b> use of the Internet and Learning NI are needed</p>	<p>Strategy DE</p>

### Implementing elearning in schools

<p><b>Develop school intranets 7.1</b></p> <p>Schools should develop their <b>intranet</b> as a vehicle to host centrally provided and locally developed educational information, courses and resources and for providing access from home by staff, pupils and parents</p>	<p>Schools C2k NIel</p>
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<p><b>...for course information 7.6</b></p> <p>Schools should extend the intranet to publish detailed information on courses, assignments and projects provided by the schools and their requirements (e.g. homework tasks and due dates)</p>	<p>Schools C2k NIel</p>
<p><b>... for daily information 7.7</b></p> <p>Schools should publish <b>daily information</b> about the life and work of the school and provide an email information address at the school office for enquiries</p>	<p>Schools C2k</p>
<p><b>... on pupil achievement 7.8</b></p> <p>Schools should <b>publish information</b> on the academic, vocational and extra-curricular achievements of the pupils</p>	<p>Schools C2k CCEA</p>
<p><b>... to publish pupil projects 7.9</b></p> <p>Schools should enable <b>pupils</b> to publish their <b>projects</b> digitally on the school intranet within the guidelines laid down by a pupil protection policy</p>	<p>Schools C2k DE</p>
<p><b>.. to support parents 7.10</b></p> <p>Schools should provide advice and access to resources to enhance home study by pupils and to enable <b>parents to support</b> their child's learning</p>	<p>Schools C2k Parents</p>
<p><b>...for home study 7.11</b></p> <p>Schools should provide links and access to the study resources, projects, assignments content of school courses to support <b>home study</b>, including for pupils not attending school</p>	<p>Schools C2k Parents</p>
<p><b>... a homework folder 7.12</b></p> <p>Schools should introduce the use of the <b>homework folder</b> for prepared and marked homework and projects</p>	<p>Schools C2k</p>
<p><b>... for tutorial advice 7.13</b></p> <p>Schools should pilot and introduce a service of <b>online tutorial advice</b> to pupils for home-based or library-based study</p>	<p>Schools C2k</p>

**Benefit Evaluation**

<b>Benefit evaluation 1.2</b>  A programme of <b>evaluation</b> is required in Northern Ireland to identify the extent and nature of the benefits of the impact of ICT in learning	Strategy
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**Capacity Building: professional development for teachers**

<b>post-NOF agenda 8.1</b>  All schools should have a <b>post-NOF agenda</b> , prepared in the context of their school development planning, which coordinates their targets and action plans on: <ul style="list-style-type: none"> <li>• technology-enabled curriculum and professional development work to empower their teaching through the use of electronic and online multimedia</li> <li>• support at whole-school level, built upon individual department or key stage plans</li> <li>• making use of online support for school leaders at local, national and international levels</li> </ul>	Schools CASS RTU ETI
<b>SIMS training 4.8</b>  Now that the SIMS modules are available on all computers to all staff, there is a need for a major staff development programme to train all school staff in their use	Schools RTU C2k CASS
<b>MIS professional development 10.1</b>  Specific professional development is needed for school staff to help them to make effective use of assessment information from school <b>Management Information Systems</b> to support learning	Schools RTU C2k CASS
<b>change champions 14.1</b>  Create a programme to support <b>change champions</b> in schools to develop and disseminate case studies of classroom practice enhanced with ICT	CASS GTC ITE RTU
<b>online communities 14.2</b>  Create and support online communities by supporting teachers who wish to resort to a networked approach to CPD, providing mentorship through online environments	Schools CASS GTC

<p><b>Teacher Education Partnership 15.1</b></p> <p>The Northern Ireland <b>Teacher Education Partnership</b>, including all of the partners in initial, induction and early professional development and the GTC, should play specific roles:</p> <ul style="list-style-type: none"> <li>• pilot the application of tools to help classroom teachers involved in EPD and CPD to plan critical reflective evaluation of the use of ICT resources in teaching, and to publish and share their reviews of best practice through the NI elearning partnership</li> <li>• ensure that an introductory course is built into the Induction Year for Beginning Teachers with the aim of helping them embed digital resources into their teaching</li> <li>• develop a progression framework grid for professional development and accreditation which starts with post-NOF levels and progresses to high-level capacity building to create a cadre of highly qualified online educators.</li> <li>• develop, standardise, quality assure and seek support for a post-graduate programme of professional development to build capacity, through the development of skilled advisers and teachers as online educators, to carry out innovation in online education, and to provide support for teachers in the classroom</li> </ul>	<p>Strategy GTC ITE CASS Schools</p>
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### Capacity Building: leadership development

<p><b>Virtual Leadership College 8.2</b></p> <p>RTU should provide a <b>Virtual Leadership College</b> where membership is an entitlement for all headteachers, providing tracking of professional development through e-portfolios and creating a leadership forum with local, national and international levels</p>	<p>RTU GTC C2k</p>
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### Capacity building: development of the professional support community

<p><b>Virtual Staff College 13.1</b></p> <p>Regional Training Unit should provide a <b>Virtual Staff College</b> for the benefit of the whole professional community</p>	<p>RTU</p>
<p><b>Support online communities 14.2</b></p> <p>Create and support <b>online communities</b> by supporting teachers who wish to resort to a networked approach to CPD, providing mentorship through online environments</p>	<p>CASS RTU GTC</p>

**Reducing bureaucratic burden: improving efficiency: unified approaches**

<b>Information online 11.1</b> All educational <b>administrative and information functions</b> should be moved online to meet e-government targets	ELBs DE CCEA CASS
<b>Bureaucratic burdens 11.2</b> A coordinated plan, with reporting on progress, is needed to take forward computerisation of administrative tasks, including the production and dissemination of practices and case studies of the effective use of ICT to diminish <b>bureaucratic burdens</b>	ELBs DE CCEA CASS
<b>Cross-cutting projects 21.1</b> Create <b>cross-cutting projects</b> to agree online content development standards and to promote interoperability across the interfaces within the school service and between school and other sectors including: <ul style="list-style-type: none"> <li>• Home</li> <li>• Public Libraries and Heritage Services</li> <li>• Further and Higher Education</li> <li>• Adult Learning</li> <li>• Youth Service</li> <li>• Other relevant agencies</li> </ul>	Strategy Multiple DEL DE DCAL SLS C2k Ufi HFE

**Access to ICT: Digital Divide**

<b>Out-of-hours access 7.1</b> <b>Out-of-hours access</b> to the school's ICT resources should be promoted for those with no Internet access elsewhere	Schools ELBs DE C2k
<b>Lifelong learning centre 7.2</b> Action is needed to enable open community and family access to the school's ICT resources as a community information and lifelong learning centre	Schools ELBs DE C2k

<b>Schools for e-government 7.3</b> Schools can contribute to goals for <b>e-government</b> by ensuring that young people and their parents have sufficient digital literacy to make effective use of open government initiatives and by providing access to the infrastructure and connectivity needed to use e-government services	Schools ELBs DE C2k
<b>Digital divide 7.4</b> Social action programmes are required to address the <b>digital divide</b> through, for example, eLearning Foundations and/or Anytime Anywhere schemes	ELBs DE

### Technology Innovation and School Building

<b>Broadband 17.1</b> Improve <b>broadband</b> connectivity to schools	C2k
<b>Wireless 18.1</b> Extend coverage within schools through <b>wireless</b> technology	C2k
<b>Ratios 20.1</b> Improve teacher computer <b>ratios</b>	DE C2k
<b>Mobile devices 19.1</b> Enable school networks to provide access to personally owned <b>mobile devices</b>	C2k
<b>Video conferencing 17.1</b> Extend video conferencing to a greater proportion of C2k systems	C2k
<b>Schools of the future 22.1</b> Review the criteria for school designs in the building handbook to support developments in the curriculum and learning, using innovative approaches to school layouts	DE ELBs PPP