

Expanding Information and Communications Technology: 5–14 National Guidelines

Contents

Introduction	Page 3
Long-term objectives	Page 4
Integrating ICT into the curriculum	Page 4
Phasing of support	Page 5
Staff in-service training	Page 6
Assessment, recording and reporting	Page 6
Assessing progress made in 5–14 ICT	Page 7
Assessing development of higher-order skills	Page 7
Assessing the impact of ICT on other areas of the curriculum	Page 8
Recording and reporting	Page 8
Equipment and technical support	Page 9
Support for classroom assistants	Page 9
Parents and the wider community	Page 9
Summary of long-term objectives	Page 10
Short-term objectives	Page 11
Identifying opportunities for using ICT within the existing curriculum	Page 11
Producing project planners	Page 11
Producing assessment tools	Page 11
Support for pre-Level A	Page 12
Planning in-service courses	Page 12
Overview of time-scale for short-term objectives	Page 12
Summary of short-term objectives	Page 13

Introduction

This strategy sets out Midlothian Council's approach to implementing the Information and Communications Technology (ICT) 5–14 National Guidelines. The continuing progress made towards meeting Government targets for the National Grid for Learning (NGfL) and the uptake of New Opportunities Fund (NOF) Training for teachers has led to significant increase in the awareness of the potential of ICT in Learning and Teaching. This will have a major effect on existing classroom practice as ICT permeates other 5–14 curriculum areas.

The strategy will set out the short-term (18 months) and long-term objectives (5 years).

The aims of the strategy are:

- to assist schools in the purposeful and phased introduction of the recommendations outlined in the ICT 5–14 national guidelines to assist schools in integrating ICT into other curriculum areas and subjects
- to assist schools in developing planning and assessment tools for ICT
- to provide support for teachers in delivering ICT across the curriculum
- to enhance the learning experiences for pupils through the use of ICT
- to encourage greater use of ICT in the classroom by both teachers and pupils
- to improve pupils' knowledge, understanding and skills through the use of ICT in a range of curriculum areas and subjects
- to raise standards in ICT and overall pupil attainment as a consequence of increased motivation and enhanced learning experiences.

Long-Term Objectives

The contribution ICT can make to Learning and Teaching cannot be overestimated. It is a powerful learning tool that will support, enhance and extend all areas of the 5–14 curriculum. It encourages independent learning, facilitates collaborative learning with others and encourages and develops communication skills. ICT will continue to have a significant impact across the curriculum and offers the potential for new approaches to teaching.

Integrating ICT into the curriculum

A long-term objective is to swing the balance from Learning *in* ICT towards Learning *through* ICT.

The national guidelines for ICT 5–14 clearly indicate that the main approach to ICT development should lie in working towards a permeation strategy where technology is used to support all aspects of learning and teaching and educational management.

The focus for schools should be geared towards the:

- use of ICT to improve pupils' knowledge, understanding and skills in a range of curriculum areas and subjects – learning through ICT
- development of pupils' general skills in ICT – learning in ICT.

These objectives will be delivered best in the context of an approach characterised by learning about ICT through the use of ICT.

Guide for Teachers and Managers: Information and Communications Technology 5–14

Currently the priority for many schools is Learning *in* ICT. Skills and capability are developed in isolation and not within the context of other curricular subjects. Whilst some of these skills may continue to require more discrete forms of teaching (for example, basic word processing), identifying opportunities to develop ICT skills and capability within the existing curriculum should be encouraged. This will, in part, be achieved through the aligning of ICT strands and targets to strands and targets of other areas of the curriculum, particularly in environmental studies, mathematics and English language. This mapping exercise has been completed and examples of the documents can be found via the NGfL portal. It may also be possible to utilise existing support material which many schools and departments have produced.

Consideration must be given to the position of discrete ICT teaching in S1 and S2 courses. The skills developed throughout the primary school years will have a significant impact on the content of these courses and the procurement of materials for S1 and S2 courses must reflect this.

Phasing of support

A long-term objective is to develop support mechanisms and procure materials to help cement 5–14 ICT into the curriculum.

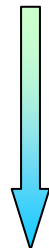
It is unlikely that pupils will experience ICT or develop ICT capability strand by strand and level by level as set out in the *National Guidelines*. Many activities in ICT will involve pupils moving in and around strands and specific targets. However, systematic approaches to developing support materials need to be adopted. During each session resources will be concentrated at the stages shown below. The emphasis will be on providing support and developing materials at levels appropriate to these stages. There will be a short review at the end of each session, with a major review taking place in session 2005/2006.

Support for classroom teachers and pupils will continue on the model currently used by the ICT development team.

The following table shows the phasing of support for the integration of 5–14 ICT.

	2002/2003	2003/2004	2004/2005	2005/2006
Primary 1	Pre-Level A & Level A			Review and Next Steps
Primary 2		Level B		
Primary 3			Level C	
Primary 4	Level C			
Primary 5		Level C/D		
Primary 6			Level D/E	
Primary 7	Level D			
S1		Level E/F		
S2			Level F	

In addition to the phasing of ICT support, the support for individual strands will be prioritised as set out in the table below.

Strand	Priority
Creating and presenting Collecting and analysing Searching and researching Communicating and collaborating Controlling and modelling	Using the technology Developing informed attitudes 

This will have an impact on the focus of support given.

Staff in-service training

A long-term objective is to provide a range of in-service courses specifically aimed at giving staff practical support in the implementation of the 5–14 ICT Guidelines.

The development of ICT capability will be improved if all teachers have some skills in each aspect of ICT capability. The NOF training for teachers is now well underway in the authority with all primary schools and large numbers in secondary schools engaged in the programme. The focus of NOF training is on the use of ICT rather than improving teachers' skills in ICT. The ICT Development Team will continue to provide courses during in-service days, twilight sessions and both within and outwith schools hours. These courses will cover a range of ICT skills and levels.

In-service courses will reflect the phasing of support described above. The focus for session 2002/2003 will be on implementing 5–14 ICT at Level A, C and D. During subsequent years the focus will be on other stages and levels described in the table above.

Assessment, recording and reporting

With the introduction of the ICT national guidelines it is important to consider approaches to the assessment of pupil attainment in ICT. Teachers should bear in mind that the same principles apply to ICT as to other areas of the 5–14 curriculum. Schools will have an agreed policy for assessment, approaches and procedures already in place.

There are 3 areas of assessment which need to be considered:

- progress made in the attainment outcome, strands and targets of 5–14 ICT
- development of higher-order skills
- impact of ICT on other areas of the curriculum.

In successful schools, there are a variety of formal and informal assessment strategies. The common factor in these strategies is an understanding of what is being assessed.

Assessing progress made in 5–14 ICT

A long-term objective is to assist schools in developing tools to assess pupils' progress in ICT whilst Learning *through* ICT.

So far, for many schools the focus in 5–14 has been on recording pupils' experience of ICT at class level. This has largely taken the form of checklists of activity and represents a measured way of starting the assessment process. Teachers will take time to assimilate the ICT skills and concepts outlined in the national guidelines before more comprehensive assessment/recording systems are developed.

Most teachers will approach assessment and monitoring of ICT through observation and professional comment. In setting ICT targets for pupils, care has to be taken that teachers are fully aware of the attainment levels that are being sought. The assembling of pupil portfolios and observations by teachers will provide an initial basis for the discussion of the various issues involved.

Assessing the development of higher-order skills

A long-term objective is to assist schools in developing tools and techniques to assess the development of higher order skills.

Whilst it is important to teach skills and monitor progress, the greater challenge is to monitor the development of higher-order skills, which show that pupils can:

- plan how or whether ICT should be used for a task
- decide which ICT resources and techniques are appropriate to a task
- consider the data and strategies that might be used
- evaluate the outcomes of using ICT
- explain and justify the use of ICT in devising solutions
- learn new techniques through exploration of on-screen prompts.

Assessing the impact of ICT on other areas of the curriculum

A long-term objective is to monitor improvements in general attainment where ICT is used to support the wider curriculum.

ICT can be used to support broader educational aims such as positive attitudes towards learning, enhanced presentation of work, problem solving and investigative approaches, the potential for communicating and researching locally and globally and the ability to share ideas and work. The HMI report, *The Use of ICT in Learning and Teaching* (SEED, 2000), indicates that while it is not always easy to quantify the extent to which improvement in pupils' attainment results solely from the effective use of ICT, it is making a key contribution. There is increasing evidence to support that the use of ICT is improving pupil's general attainment or attainment in particular subjects.

Recording and reporting

A long-term objective is to formalise the reporting of progress and attainment in Learning *in* ICT and Learning *through* ICT in relation to the ICT attainment outcome, strands and targets.

Many schools already record and report on the use of ICT. However, this may not be in relation to the 5–14 ICT attainment outcome, strands and targets nor in the way other curricular areas are reported.

Equipment and technical support

In line with the Hardware Strategy disseminated to schools in 1998, the rollout programme will be completed by November 2002 and the NGfL targets for provision of multimedia computers in primary and secondary schools, as recommended by the Government, will be met by the end of this year. Equipment will then be replaced on a rolling programme of a 3- to 4-year cycle.

As new technology arrives in schools (whiteboards, projectors, etc.) and there will be a need to provide both technical and curricular support. The ICT development team will continue to provide advice on both equipment and software to support the 5–14 curriculum.

Support for classroom assistants

A long-term objective is to provide adequate in-service training for classroom assistants and other support staff in schools.

As the use of ICT permeates the whole curriculum, there will be a need for all staff to be competent and confident in its use.

Parents and the wider community

A long-term objective is to engage parents as partners in the development of ICT development.

Many children use home computers for games, but increasing numbers are also using facilities such as word-processing and the internet. Often the learning is by example and demonstration. In the home many children very quickly adopt the collaborative mode of working, and a significant amount of learning is undertaken through peer exchanges.

Home computers are an important resource for schools to exploit in helping pupils to develop their ICT capability. Schools should share with parents their strategy with regard to the development of ICT. Parents need to be assured of a balanced school approach that uses ICT to support the curriculum as well as the strategies to develop the necessary ICT skills and concepts.

The authority is committed to an inclusive approach aimed at diminishing disadvantage for pupils currently without access at home. By refurbishing and recycling computers as they become due for replacement at the end of 3 or 4 years they can be offered to families in the local community.

Summary of long-term objectives

It is worth reinforcing that ICT development is underway in all schools. Teachers should feel confident that, with appropriate support, those aspects of ICT new to them can be assimilated into normal teaching over a period of time. Schools have the flexibility to use ICT in conventional and innovative ways to meet their aims and objectives.

This process will be measured in years rather than months or a single school session.

The long-term objectives are:

- to swing the balance from Learning *in* ICT towards Learning *through* ICT
- to develop support mechanisms and procure materials to help cement 5–14 ICT into the curriculum
- to provide a range of in-service courses specifically aimed at giving staff practical support in the implementation of the 5–14 ICT guidelines
- to assist schools in developing tools to assess pupils' progress in ICT whilst Learning *through* ICT
- to assist schools in developing tools and techniques to assess the development of higher-order skills
- to monitor improvements in general attainment where ICT is used to support the wider curriculum
- to formalise the reporting of progress and attainment in Learning *in* ICT and Learning *through* ICT in relation to the ICT attainment outcome, strands and targets
- to provide adequate in-service training for classroom assistants and other support staff in schools
- to engage parents as partners in the development of ICT development.

Short-Term Objectives

There are a number of short-term objectives, which will be started immediately:

Identifying opportunities for using ICT in the existing curriculum

A short-term objective is to verify that opportunities for ICT, as described in the Midlothian 5–14 ICT planning tool, are realistic and achievable.

The matching of ICT strands and targets to strands and targets of other areas of the curriculum in environmental studies, mathematics and English language has been completed and the information needs to be checked. Once checked, this material will form the basis of a Midlothian 5–14 ICT planning tool which will assist schools in identifying opportunities to use ICT within the existing curricular areas of maths, language and environmental studies.

Producing project planners

A short-term objective is to produce support materials based on the most common environmental studies topics.

In order to encourage Learning *through* ICT, one of the main short-term objectives will be to begin production of classroom support materials based on the most common environmental studies topics as well as investigating the possibility of similar materials for maths and language. During session 2002/2003 the focus will be on producing support materials at levels A, C and D.

Producing assessment tools

A short-term objective is to assist schools in developing tools to assess and record pupils' progress in ICT whilst Learning *in* ICT.

One of the main short-term aims will be to produce assessment and recording tools to monitor pupils' progress made in the attainment outcome, strands and targets of 5–14 ICT.

Support for pre-Level A

A short-term objective is to provide a range of support for staff in nursery classes.

Many pre-school age children have regular access to computers at home and in nursery classes. The skills learned at this early stage form an important foundation to be built upon. One of the short-term objectives is to provide a range of in-service training and support for staff in nursery classes.

Planning in-service courses

A short-term objective is to provide a range of in-service courses specifically aimed at giving teaching staff and classroom assistants practical support in the implementation of the 5–14 ICT guidelines at levels A, C and D.

In-service courses will reflect the phasing of support described in the long-term objectives above. There will be an immediate need to plan and prepare in-service courses and materials for staff teaching children at 5–14 ICT at levels A, C and D.

Overview of time-scale for short-term objectives

	Apr 2002	Jun 2002	Oct 2003	Feb 2003	Jun 2003
Verify Materials					
Produce Project Planners					
Produce Assessment Tools	Levels A,C and D				
Plan In-service Training					
In-service Courses			Staff at Levels A, C and D		
Consult Schools					
In-service Courses		Classroom Assistants			

Summary of short-term objectives

- To verify that opportunities for ICT, as described in the Midlothian 5–14 ICT planning tool, are realistic and achievable.
- To produce support materials based on the most common environmental studies topics.
- To assist schools in developing tools to assess and record pupils' progress in ICT whilst Learning *in* ICT.
- To provide a range of in-service courses specifically aimed at giving teaching staff and classroom assistants practical support in the implementation of the 5–14 ICT guidelines at levels A, C and D.
- To provide a range of support for staff in nursery classes.