



**Submission to the Oireachtas Committee on Education and
Social Protection**

The use of ICT in Primary Schools

On behalf of the INTO

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It makes little sense to speak about the use of technology in primary education in isolation from the wider issues that affect the primary system as a whole. While it is true to say that the vast majority of principals and teachers are positively disposed towards the increased integration of modern technologies and are aware of the benefits that accrue in terms of teaching and learning, it must be stated that in reality the use of such resources is uneven, haphazard, unstructured and down the list of priorities for many schools.

This situation in schools directly reflects the approach taken by a succession of governments over the last twenty years, an approach that has been uneven, haphazard, unstructured and well down the list of priorities.

As a consequence, there exists a range of significant obstacles that currently directly impede the more widespread adoption and development of digital approaches. Further progress will continue to be curtailed until these issues have been addressed in a focused and strategic manner.

These obstacles include:

1. Primary education is grossly underfunded. Capitation grants to schools cover approximately 66% of the operational costs of schools such as utilities, insurance, maintenance, cleaning, telephone etc. In practice, the balance is directly or indirectly, provided by the parent body. For many schools that serve communities of disadvantaged status, bridging this gap between essential expenditure and income is particularly difficult.
2. School boards and principals cannot plan effectively towards the provision, expansion and maintenance of digital resources. Even though the Department of Education & Skills continuously emphasises the centrality of planning as a fundamental tenet of sound educational practice, the absence of strategic funding for schools in relation to technology makes this process impossible.
3. The moratorium on promotion currently in operation means that middle management structures in many schools have been largely dismantled, leaving many schools with no ICT coordinator to lead the integration of modern technologies in teaching and learning at school.
4. Currently, for the vast majority of primary schools broadband capacity is grossly inadequate. When compared to the broadband infrastructure at second level, and indeed, to primary schools in EU countries generally, Irish primary schools are significantly disadvantaged in terms of harnessing the power of internet technologies to enhance teaching and learning. Fast, reliable broadband is essential if schools are to access learning resources on line yet the sad reality is that most schools have significantly less than typical domestic broadband capability.
5. Class sizes in Ireland are a barrier to the effective integration of ICTs at primary level. Three quarters of Irish pupils are in classes above the EU average, a fifth in class groups of more than 30, which makes modern teaching methods and the provision of individual attention almost impossible to sustain.

Significant improvements are required in all of the above areas if a successful policy is to be implemented.

The potential of ICT in Primary Education

ICT can enhance, enrich and extend the children's learning in primary schools. It can transform teaching and learning when deployed appropriately, substantially changing the traditional classroom where the teacher in general has control of pupils' learning to one where students learn collaboratively and construct/discover knowledge for themselves. Learning is facilitated by ICT in ways that was not possible in the past.

ICT should subserve the three general aims of the Revised Curriculum:

- to enable the child to live a full life as a child and to realise his or her potential as a unique individual;
- to enable the child to develop as social being through living and cooperating with others and so contribute to good of society;
- to prepare the child for further education and life long learning.

ICT in primary education must also serve the pedagogical principles of the curriculum such as activity and discovery learning, child centred authentic learning, integrated and environment based learning, developing a child's sense of wonder and curiosity, developing existing knowledge and experience, language being central to the learning process, the development of higher order thinking and problem solving skills, collaborative learning, catering for individual difference and supporting assessment.

ICT must be integrated around and in all aspects of the Primary School Curriculum. It should not be viewed as a stand-alone subject or topic requiring the development of separate skills needing distinct curriculum time but as a tool and a means for accessing the curriculum and supporting, enriching and extending teaching and learning. ICT in schools must emphasize teaching and learning, not technology skills.

All pupils in primary schools should be able to benefit from the integration of ICT in every area of the curriculum. ICT must become an integral part of the teaching and learning process in every school and in every classroom and in every area of the curriculum.

The reality of ICT in Primary Education

The use of ICT in Irish primary schools can be seen to directly reflect the uneven, haphazard and unstructured approach adopted by successive governments. Reasonable expectations among teachers in relation to the use of ICT in primary schools have been built up and dashed again and again by:

- sustained under investment at school based level;
- the lack of a coherent, implementable, developmental national strategy;
- a failure to invest sufficiently in and provide recognition for teacher professional development;
- implementation in many schools that in the main relied on the goodwill and expertise of a small number of dedicated teachers;
- insufficient capacity to allow teachers to develop their professional practice; and
- a lack of investment in the Colleges of Education

Many issues including planning for ICT, the use of ICT in supporting the curriculum, the professional development of teachers and ICT infrastructure in schools ranges along a continuum from basic to innovative and creative.

It is essential therefore, that the scale of the challenge be fully recognized which will include reigniting teacher enthusiasm, recreating a place for ICT in every primary classroom, re-educating the teaching force, re-equipping classrooms and reconfiguring schools for ICT. This will require engaging in discussion with teachers to learn what supports they require. This will demand much more research on how teachers are using technology today.

Equally we must ensure that the different needs of diverse groups of pupils are envisioned within the plan. One size will not fit all and particular attention must be paid not only to the pupils in mainstream classes but also to the needs of pupils with special needs, children in learning support, reluctant learners, Traveller children and children for whom English is a second language. There will be a need for particular investment to support the language needs of children in Gaelscoileanna and scoileanna lan-Ghaeilge.

Digital Schools of Distinction

The programme for government asserts that all of us should all be ambitious for education and to fully develop a knowledge society. Apart from being an engine of sustainable economic growth, education is at the heart of a more cohesive, more equal and more successful society. Investment in ICT in primary education will pay significant economic and societal dividends.

An exciting and innovative method against which the future development of ICTs in the primary school can be assessed can be found in the **Digital Schools of Distinction** (DSoD) programme. The DSoD is a flagship programme which aims to promote, recognise and encourage excellence in the use of technology in primary schools.

Irish schools that successfully complete a structured 3 step programme receive a nationally recognised Digital School of Distinction Award, accredited by the Department of Education and Skills. Digital Schools of Distinction also receive free hardware and software and ongoing practical support and resources as part of the community of digital schools in Ireland.

This nationally accredited DSoD Award (supported by DES, INTO, IPPN, CESI and private commercial companies Hewlett Packard and Microsoft) is unique in Europe. Consisting of Registration, Self-Evaluation and Validation processes, it enables, supports and helps schools in developing into Digital Schools. It recognises and validates the knowledge, skills and competences of the teachers. It supports and encourages the exchange of innovative practices between all schools.

The scheme was launched by former Minister for Education & Skills, Ruairi Quinn TD in September 2013, and in that short space of time:

- 1,374 primary schools have registered on the programme
- 173 schools have been awarded DSoD status
- Approximately 80 schools are in the final stages of arranging validation

The five criteria used to evaluate schools are:

1. Leadership and Vision

DSoD will have an ICT strategy, and a positive attitude towards ICT.

2. ICT integration in the curriculum

Schools will integrate ICT across the curriculum. Staff will demonstrate a clear understanding of how ICT can be used to improve learning.

3. School ICT culture

Schools will demonstrate an awareness that ICT affects the quality of learning and teaching, pupil attitudes and behaviour, and the school community.

4. Continuing Professional Development

Schools will demonstrate a commitment to ongoing professional development in ICT, informing teachers of courses in professional development, as well as offering general support.

5. Resources and infrastructure

Schools will have appropriate ICT resources, including hardware, software and infrastructure to support particular learning environments, and reflect plans for ICT development as outlined in the school's policy.

The DSoD model provides for ICT in teaching and a blueprint against which learning can be developed.

Investment in ICT education is an economic imperative

If primary priority for investment in ICT in the immediate term is to be ICT in teaching and learning across the curriculum then investing in broadband development to ensure schools have access to high speed broadband is essential.

On average ICT specialist employment has grown over 4% a year since 2000, seven times higher than total employment growth over the same period. The EU has a growing deficit of ICT professional skills, forecast to reach 900,000 by 2020. Ireland needs an ICT literate workforce.

To achieve this Ireland needs to work with employers and with business to ensure we do not fall short in providing the right skills for employability. Literacy, mathematics and science are and will remain key foundations for further learning. These skills are nonetheless being redefined by the ongoing digital revolution, as new forms of reading and writing and the diversity of information sources are changing their very nature.

Technology offers unprecedented opportunities to improve quality, access and equity in education and training. It is a key lever for more effective learning and to reducing barriers to education, in particular social barriers. Individuals can learn anywhere, at any time, following flexible and individualised pathways. This must begin in the primary school classroom.

There is a strong case for further increasing efforts at school level to develop strategies concerning the use of ICT in teaching and learning. Initiatives to support increased teacher collaboration need to be encouraged and systemised. This must encompass existing pedagogical practices and new teaching and learning methods made possible by the use of ICT.

Recommendations:

1. Provide primary schools with sufficient financial resources to invest in up-to-date technology infrastructure ensuring that all learning areas have access to a range of ICT equipment as well as provision for the incorporation of students' mobile devices.
2. Support schools to develop plans for the phased integration of digital resources at the earliest possible opportunity.
3. Adopt an integrated approach to procurement that takes full account of the operating costs of ICT equipment and technical support provision.

Prioritise the provision of high speed broadband to primary schools. All schools need a high speed and reliable network that extends to all areas of the school. All computers should be networked facilitating access to online and locally based server resources.

5. As an immediate measure, provide schools that have achieved DSoD status with high speed broadband immediately to allow them continue to develop and act as "beacon schools" in their localities from which other schools can learn.
6. Prioritise the re-establishment of middle management posts in primary schools to facilitate a coordinated approach to the integrated development of technology usage across the curriculum, in all classrooms, in every school.
7. Develop digital content to support the Irish primary school curriculum that meets the diverse needs of pupils in Irish primary schools.
8. Prioritise and develop a wide range of formal ICT CPD opportunities for teachers. Recognise and support informal structures that facilitate teachers to collaborate in their professional learning.
9. Prioritise and encourage schools in the use of ICT resources and assistive technologies to facilitate the inclusion of students with SEN.
10. Support teachers to enable them to provide learning opportunities that support cross-curricular learning approaches, student directed learning, collaborative, discovery-based learning activities.