SUPPORTING TEACHER TRAINING: ICT, THE SPÉIS PROJECT AND IRELAND

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Background

The education system of the Republic of Ireland has undergone fundamental and significant changes over the past 25 years. There have been major alterations to the curriculum at both primary and post-primary levels. At a strategic and policy level several other issues have begun to make a deep impact. These issues include social inclusion, early identification of children with learning difficulties, multiculturalism, partnership with parents, rights, language learning and identity and, significantly, ICT all becoming central to the planning of quality educational provision. A formal, denominational and divided (academic-vocational) system has been forced to re-evaluate its most basic assumptions and structures in recent years. Despite this, fragmentation of the system remains a marked feature. A continuing and noteworthy challenge has been identified as the need to develop the links between the early years sector and the infant classes of primary school and between the child-centred primary sector and the more rigid subject-based and exam-driven post-primary sector.

This latter point is critical in looking at the scale and impact of ICT deployment. Assessment, quality, progression and achievement at secondary level rest almost entirely in final exit-stage examinations, which are the sole vehicle for ascertaining attainment and determining entry to third level (Junior Certificate and Leaving Certificate). These examinations rely on clearly defined curricula, memorization and intensive academic recall. Competence is barely addressed nor are other attainments during the six years of the secondary cycle taken into account. While these examinations are being reviewed and a move to more holistic assessment systems is being developed, there is evidence of strong resistance and uncertainty.

A rapidly changing society has meant that teachers in Ireland have found themselves facing a range of new challenges in the classroom in recent years. The inclusion of children with special educational needs into mainstream schools and the unprecedented increase in the numbers of students from different ethnic and cultural backgrounds have been identified as among the most significant challenges in recent years. New technologies have emerged which play a central role in the way young people communicate and learn and teachers have been required to adapt their teaching to reflect the new reality. An increasingly diverse society, changing family structures and the emergence of new social problems have added to the complexity of teachers' role.

Contexts and fragmentation

The training and development of teachers in Ireland has been historically differentiated between secondary and primary. Only primary teachers have specialized teacher-training colleges. These have been operated along traditional lines and are operated exclusively by the religious denominations, which control almost all primary education in Ireland. An interesting element in the role and function of teacher training was the specific role assigned to language teaching in the Irish language. National policy, following the achievement of independence for the Irish Free State in 1922, focused strongly on the teaching of Irish in an effort to preserve and promote its use after almost two centuries of decline, neglect and oppression.

In this paper, there is an examination of a recent innovative initiative by the Church of Ireland College of Education (CICE) in Rathmines in Dublin. This project emerges out of a new emphasis on ICT and its role in the formation of teachers in their training and development. CICE has implemented an e-supported portfolio system of learning scaffolding for its teacher-training program. This project – Spéis (*School Placement e-Integrated Scaffolding*) – was designed by a consortium of Finnish and Irish educationalists and e-learning experts to provide the first teacher placement e-support and portfolio system in Ireland. The project deployed advanced technologies to enable creation of a platform where academic staff in the College, student teachers and administrative personnel could plan, design, implement and review an ICT supported learning architecture.

The Spéis project supplements and complements recent developments in Irish curriculum reform and is seen as a template for future e-learning supported initiatives in the wider field of teacher training and support. This paper also investigates the kinds of teacher-training support implemented and cross-references these to the changed primary curriculum, the Irish government's *E-learning Road Map* and the move towards competence based learning and the utilization of e-portfolios in the wider Irish educational and learning contexts.

The specifics of the Spéis project can be viewed against the changing and evolving context of teacher training provision in Ireland with specific reference to the central role of a number of considerations – ethnic and cultural diversity, massive inward migration, the role and promotion of the Irish language and the need to instil flexibility and creativity in the teaching role at a time of real social and economic crisis with the impact of the financial and banking collapse in 2008. Developing a professional portfolio at undergraduate level has been seen by CICE as a first step in a process of advanced teacher training that looks to a future of changing demographics, expectations and technologies. It enables student teachers to begin the process of critical reflection which is necessary for them to develop as reflective practitioners. Spéis is an innovative e-supported project and program, among the first in Ireland.

Evolution of the Irish Schooling System

Throughout the nineteenth century, education policy in Ireland and the operation of a standardized schooling system remained highly contested areas. Issues around religious influence, national identity, political struggle and denominational control dominated discourse. The neglect of the Irish language (Gaelic) and of Irish culture in general was an important charge made against the national school system. With independence from Britain in 1922 for the majority of the island, education policy became central to the creation and maintenance of identity. The Department of Education was established in 1924. The Constitution of 1937 set forth fundamental rights and principles relating to education, but education and strategic policy/planning remained totally subservient to a centralized system of rules and regulations in which compulsory language teaching, denominational control and a rigid focus on memorization in an examination dominated system remained the norm. The influence of the Department of Education pervades the entire Irish educational system, especially at primary and secondary levels, where it controls regulations, standards, operational criteria, curricula and examinations. Only vocational (technical) schools had oversight from local authorities and elected public representatives.

Training and development of teachers in Ireland has been historically differentiated between secondary and primary. Only primary teachers have specialized teacher-training colleges. These have also operated along traditional lines and are under the exclusive authority of the religious denominations, which control almost all primary education in Ireland. An interesting element in the role and function of teacher training was the specific role assigned to language teaching in the Irish language. National policy focused strongly on the teaching of Irish in an effort to preserve and promote its use after almost two centuries of decline, neglect and oppression. After independence, the priority was to recruit and train as many teachers as possible to be proficient in Irish and teaching through the language. Secondary teacher training follows a very different pattern where graduates merely go through specialized postgraduate training. This paper focuses on the adaptation of advanced technologies to support teacher training at primary level.

In terms of official policy, Ireland has a number of national strategies covering training measures in all areas as well as research in ICT in schools and in e-learning. There are central steering documents for most ICT learning objectives in both primary and secondary education, except for knowledge of computer hardware and electronics, developing programming skills and using social media and using mobile devices which are only at secondary level. In primary and secondary schools ICT is taught as a general tool for other subjects or as a tool for specific tasks in other subjects. At primary and secondary education level recommendations, suggestions and support are provided in the hardware areas of computers, projectors, DVDs, videos, TV, cameras and mobile devices. Support is only for smartboards and virtual learning environments, but not for e-book readers. At primary and secondary education level recommendations or suggestions and support are provided in the software categories, multimedia applications, digital learning games and digital resources, but support only for office applications. According to official policy documents, teachers at

primary and secondary levels are expected to use ICT in all subjects and students are expected to use ICT in class, and also for complementary activities in language of instruction, natural sciences, and social sciences at secondary level, and for complementary activities only in the arts. There are no central recommendations on the use of ICT in student assessment. Public-private partnerships for promoting the use of ICT are encouraged.

Change, adaptability and CICE

In 1992 Irish primary teacher training was addressed in the context of a major government policy paper, *Education for a Changing World*. This proposed a restructuring of teacher training and integrated structures of academic and professional training for trainee teachers. The Church of Ireland College of Education (CICE) was established specifically to meet the needs of the minority protestant population in Ireland and operated under the patronage of the Church of Ireland. Founded originally in 1811, the College has played a significant role in Irish education through periods of significant change. By the 1990s, it linked its teacher training efforts to the Bachelor of Education degree program offered by Trinity College Dublin. The increasing professionalization and the growth in graduate entry to teacher training produced a dramatic new emphasis on innovation, multidisciplinary linkage and the need to address quality in competence-based learning. At national level, the *Education Act* (1998) addressed governance and policy and ushered in an era of sustained innovation in the modernization of Irish structures.

Specific challenges have remained however in teacher training with regard to innovation, use and adaptation of new technologies and advanced ICT support systems and the effective teaching and development of fluency in the Irish language. CICE has been ideally placed to draw on its own rich traditions of education and pedagogical development but also upon its strengths as a small college with a specific remit to safeguard minority perspectives and ethos in a rapidly changed and transformed external social and economic environment in modern Ireland. In 2011, CICE had identified a number of issues that were complicating the teaching mission of the College. These related to the scattered and remote nature of many Irish schools operating under Protestant patronage. They also related to the changes in the degree structure being proposed and developed in the B.Ed. program. All these factors (as well as the implications of the financial and banking crisis for public expenditure in Ireland after the crisis of 2008) meant that the College now required the development of a learning management system and remote supervision tool for the practical placement module of the B. Ed. degree program.

The Spéis initiative was designed to create and implement an e-supported portfolio system of learning scaffolding for the CICE teacher-training program. In recent years, all teacher education in Ireland has developed so that it is based on a primary degree. This degree is now standardized as a four-year program. In the final year students are expected to undergo a teaching placement in a school – which could be anywhere in the country. Given the remote and inaccessible nature of schools in many areas and the sparse numbers of the protestant

community in many areas, this means that schools can be quite geographically scattered. The teaching placement lasts three weeks and during this time, student teachers are expected to complete a series of activities, observations, interventions and supervised activities to a set standard. This has also proved very expensive for both the monitors and tutors who have to examine extensive written records, essays, journals and also physically travel to the various placement locations to undertake on-the-spot supervisory and monitoring activities.

In 2012, the teaching placement was extended to 10 weeks and was expected to require substantially more supervision, follow-up and monitoring. It is in this context that the College decided to move to a virtual learning, mentoring, supervision and communication system. This e-support system was designed to achieve a number of outcomes:

1. Method of supervision and contact for trainee teachers and supervisory tutors in CICE.
2. A means for on-line engagement with trainee teachers.
3. An e-forum and seminar framework for group learning and exchange.
4. A method to manage classroom practice and learning.
5. A means for trainee teachers to upload assignments, materials, essays and journals of reflective practice.
6. Integration of pedagogical processes and technology solutions to meet CICE requirements
7. A creative and dynamic mechanism to support placement processes over 10 weeks in various and remote locations.

There were 32 students on the initial program. The new system came into force in the 2012-13 academic year. The first placements will occur in the 2014-15 academic year. It was agreed to pilot the program in 2012-13 in the Church of Ireland College of Education.

Spéis – *School Placement e-Integrated Scaffolding* - was designed and developed by a consortium of Finnish and Irish educationalists and e-learning experts from Universal Learning Systems and Context Learning Finland. These specialists had extensive previous experience in the design of innovative learning architectures supported by advanced ICT systems, all of which created added value for educationalists, pedagogical policy experts and language design experts. These previous projects included collaboration, among others, with Haaga-Helia University of Applied Sciences (Context facilitated design and implementation of their new learning portal in Finland), the University of Helsinki (Context developed future learning spaces for the teacher-training department), National University of Ireland, Galway (ULS work on innovative distance and open learning support systems) and Open Discovery Space where ULS is National Coordinator for Ireland.

The aim of Spéis is to provide the first teacher placement e-support and portfolio system in Ireland. The project deploys advanced technologies to enable creation of a platform where academic staff in the College, student teachers and administrative personnel can plan, design, implement and review an ICT supported learning architecture. The Context Learning

Environment (CLE) concept was developed for efficient and smooth digitalization of learning processes and learner administration. The ultimate objective and outcome of this process was the successful and accurate implementation of e-learning technology solutions that enabled a smooth transition towards digital learning. CLE used tested and tailored open source technologies integrated with commercial applications. The first priority of CLE is user-friendliness and seamless operation between different functional modules. The system has built-in tutorials, to provide users with on-demand support when necessary.

The Spéis implementation process included the following stages:

1. Detailed identification of needs (1 workshop)
   – Review of existing resources and source material
   – Learning process mapping with main focus on placement periods
   – Identifying areas in which technology can be applied to foster learning and improve the effectiveness of learner management and follow-up

2. Development and implementation plan (based on workshop results)
   – Defining learner and teacher/mentor processes and tools
   – Integration of pedagogical processes and technology solutions
   – Implementation plan

3. Technical implementation
   – Tailoring and configuration of CLE solutions for CICE's ICT environment
   – Integration of communication, management and evaluation tools into CLE

4. Piloting
   – User training/induction
   – Testing CLE solutions and tools with a pilot group
   – Pilot follow-up, collecting feedback, evaluating the process
   – Identifying critical development needs
   – Making the necessary improvements into CLE solutions and tools
   – Quality management (ULS)

5. Launching the full B.Ed. on-line program

Spéis supplements and complements recent developments in Irish curriculum reform. It is seen as a template for future e-learning supported initiatives in the wider field of teacher training and support. The Spéis initiative addresses the kinds of teacher-training support implemented and cross-references these to the changed primary curriculum, the Irish government's *E-learning Road Map* and the move towards competence based learning and utilization of e-portfolios in the wider Irish educational and learning context.

In Ireland schools are encouraged to incorporate what is termed an eLearning plan into a Whole School Plan. The Whole School Plan sets out the school's educational philosophy. It sets out the school's aims and plans for implementing the curriculum and managing its resources. The eLearning Plan is a subset of the Whole School Plan and it takes into account

the ICT resources available to the school and the level and competence of staff to implement the plan. A clear definition of eLearning is needed at the outset to enhance the success of this strategy. The National Centre for Technology in Education (NCTE) describes eLearning in their handbook for schools:

> *eLearning is simply learning that takes place with the assistance of digital technology. The use of computers and other digital devices together with online learning tools and materials are the prerequisites for eLearning to take place.*

Now, and in the near future making good quality online resources, tools both interactive and static will enable anywhere anytime learning which can enhance personal and self directed learning. eLearning could be video recording or online interviews, collaborative blogs maximizing the Web 2.0 tools available. The required features and functions for the roll out of Spéis include:

- Learner (user) data management;
- Management of learning activities (on-line, classroom) and remote supervision;
- Management of assignments, essays, learning materials, journals of reflective practice, etc.;
- Synchronous communication and group collaboration tools;
- E-forum for sharing ideas and building knowledge;
- E-portfolio.

Conclusions

In the context of the European Union's Agenda for new skills and jobs, recent forecasts of future skills and needs anticipate an increase in jobs requiring high or medium-level qualifications. However, such qualifications need to be accompanied by key competences that equip teachers to work in intercultural, multilingual and rapidly changing circumstances and to contribute to creativity and innovation. The development of key competences should include both subject-based and transversal competences that will motivate and equip student teachers for further learning.

With Spéis there is an intention to contribute to enhancement of transversal key competences by student teachers through their ICT supported training. The methods are founded on a holistic view of student teacher learning, personal and social development. This goes beyond subject boundaries and finds application in a wide spectrum of curriculum subjects such as social sciences and history, arts and culture, environmental education and languages.

The specifics of the Spéis project have been outlined against the changing and evolving context of teacher training provision in Ireland with specific reference to the central role of the Irish language and its promotion. Teachers, like other professionals, need to gather and demonstrate evidence of their growth and achievement over time. Developing a professional portfolio at undergraduate level is the first step in this process. It enables teachers to begin the

process of reflection which is necessary for them to develop as effective practitioners. There are many kinds of portfolios. Some portfolios are showcase in nature and indicate samples of the best work. Spéis is an innovative e-supported one, unique in Ireland. E-learning best practice and its adoption in Irish schools using this project and other allied initiatives is designed to promote digital access and excellence as well as a relevant and more competent professional profile for teachers in a dramatically changed external environment.

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