

Dissolving Boundaries

Building Communities of Practice

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Contents

Acknowledgements	2	
Executive Summary	3	
1	Introduction	10
1.1	Context	10
1.2	Dissolving Boundaries Overview	11
1.3	Programme Outline	13
2	Communities of Practice	15
2.1	Introduction and Description	15
2.2	Relevance and Application	16
3	Learning	18
3.1	Shared Histories of Learning	18
3.2	Pupil Learning	18
3.3	Teacher Development	20
4	Participation	23
4.1	Collaborative Participation Overview	23
4.2	Pupil Participation	23
4.3	Teacher Participation	26
5	Community	28
5.1	Influence of Dissolving Boundaries within the school	28
5.2	Community Knowledge	29
5.3	Working across the community	30
5.4	External Relationships	31
6	Conclusions	32
6.1	Conclusions	32
6.2	Building Communities of Practice	32
6.3	Future Developments	33
References	36	
Appendices		
1	Questionnaire	38
2	List of participating schools	47

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Executive Summary

1.0 Context

Dr. Roger Austin and Dr. Aidan Mulkeen in 1999 identified the opportunity that the growth of Information and Communications Technologies (ICT) presented to schools and founded the Dissolving Boundaries programme from an initial successful project entitled “This Island we live on” (<http://www.ulst.ac.uk/thisisland/>).

The Dissolving Boundaries programme was designed to promote: the integration of technology in a meaningful way in curricular work, educationally valuable collaborative work in schools and cross-national links promoting cultural awareness.

The Dissolving Boundaries programme was developed as a cross-border initiative involving schools in Northern Ireland and the Republic of Ireland. The Department of Education in Northern Ireland and the Department of Education and Science in the Republic of Ireland jointly fund the programme.

The programme is now in its fifth year and since its inception has attracted over 170 schools in both the north and south of Ireland. This year (2004-2005) 154 schools were involved, which created 42 partnerships at primary level, 22 between post-primary schools and 13 involving special schools.

2.0 Aims of the Programme

The aims of the Dissolving Boundaries programme are to engage schools in collaborative, curricular projects using ICT. This involves promoting quality learning in schools, and encouraging cultural awareness and mutual understanding amongst children and young people across national boundaries. The focus of the programme centers on three key areas:

- 1 Cultural – the development of cross-border links that promote cultural awareness;
- 2 Educational – promoting valuable collaborative learning experiences for pupils;
- 3 Technological – integrating ICT into the curriculum in a meaningful way.

3.0 Partnerships

Participating schools are linked with a compatible school on the other side of the border to form a partnership. These partnerships are formed through a process of mutual negotiation, which is initiated at a planning conference held at the beginning of the year. Schools are linked according to their school sector, age of pupils, and in the post-primary sector, according to the subject specialism of the participating teacher.

During the planning conference the participating schools explore and strengthen their partnerships, whether newly created or continued from the previous year, by designing and planning in detail the area of work they will engage in during the coming year.

The partnerships are developed further during the year through regular communication between the participating teachers.

4.0 The Programme's use of ICT

The students involved in the Dissolving Boundaries programme are required to make extensive use of their school's computer facilities and video-conferencing capabilities. The programme provides the initial capital outlay for a video phone and the cost of ISDN installation where necessary.

Throughout the year, students and teachers engage in various forms of communication with their partner schools across the border. They use e-mail, telephone, computer conferencing through the Northern Ireland Network for Education (NINE) and video-conferencing.

Training and support for the teachers is very much a feature of the programme and is provided by the Dissolving Boundaries team. Training topics covered during the past year have included:

- Computer conferencing (using NINE);
- Video-conferencing, classroom practice and student use;
- Collaborative project work presentation;
- Collaborative Web page design.

5.0 Research Focus

In previous years the focus of research reports addressed: the potential of the programme to enhance and transform teaching and learning (*Dissolving Boundaries – supporting transformation in the classroom*, 2004); the impact of the programme on pupils and on learning of sustained, inter-school topic work using ICT (*The Global Classroom: collaboration and cultural awareness in the north and south of Ireland*, 2003); how and to what extent the programme facilitated cultural awareness, integrated ICT into the curriculum and contributed towards teachers' professional development (*Dissolving Boundaries in the North and south of Ireland: cross-national co-operation through ICT in Education*, 2002). These published research reports can be viewed on the Dissolving Boundaries web site (<http://dissolvingboundaries.org>).

This year the focus of the research was to investigate the learning histories, project work practices and methods of communication that are used by the teachers and pupils and explore how the participants learned from the programme. We also investigated the influence of the Dissolving Boundaries programme within the school and explored the concepts of community knowledge and communities of practice.

6.0 Research Methodology

The research methodology involved both quantitative and qualitative methods. A questionnaire was sent to all the teachers who were currently involved with the Dissolving Boundaries programme (see Appendix I). The response rate was 51% (76 in total); of these 58% were from primary schools, 32% from post-primary and 10% from special schools. The questionnaire contained both open and closed questions. Questions focused on the following key areas: teacher information; use of information and communication technology; communication with partner school; programme support; pupil participation; professional development and the effects on the school curriculum.

Focus group interviews carried out during the end of year evaluation conference provided further data and allowed for further discussion with teachers on the issues covered in the questionnaire. These discussions lasted approximately 45 minutes and were audio-recorded. The focus groups consisted of between 8-12 members and were facilitated by the ICT advisors from the Education Centres in the Republic who have been a supportive presence within the Dissolving Boundaries programme over the years, but are external to the programme as such. The six focus groups included three primary and special school groups and three post-primary groups. These groups were asked to consider the impact of the Dissolving Boundaries programme on teachers and pupils in terms of:

- Relationships and contact,
- Attitudes and values,

- ICT skills and teaching methods.

A further focus group discussion was conducted on the practical issues in using video-conferencing, facilitated by one of the ICT Advisors. Data was collected from three separate discussion groups from primary, post-primary and special schools.

In addition the programme team frequently visited participating schools. Such visits occur mostly in response to technical difficulties but include also calls to support classroom and school activities and to discuss the progress of the project. Discussions with teachers and pupils arising from these visits were recorded informally.

Three schools were visited to formally observe the operation of classroom video-conferencing; video and audio recordings of these classes were made.

7.0 Summary of Findings

The pupils' learning outcomes included stronger and more competent ICT skills, heightened and improved social and communication skills and the transfer of skills from the Dissolving Boundaries programme to other areas of the curriculum.

64% of teachers noted a development in their pupils' problem solving skills and noticed improvements in their ability to tackle a wide variety of tasks whilst working as part of an effective and focused team.

The pupils' general knowledge improved through interacting with pupils in another school. 55% reported that this interaction encouraged them to work harder on the project, with the added motivation of the increased audience for their work in their partner school. The pupils enjoyed the extra responsibility they had by being involved in discovery-based learning.

89% of pupils developed positive relationships with their partner schools. Friendships were formed through the written activities of computer conferencing and collaborative project-work and through the oral interactions facilitated by video-conferencing and face-to-face meetings. Many schools reported that they had made good friends as a result of the programme, with some describing the strong bonds that were now in evidence.

The Dissolving Boundaries programme was found to be a great leveller in the classroom. Because many of the activities were new to the pupils, especially those at the primary level, it gave them a great chance to perform on an equal footing with peers. The use of ICT and collaborative project-work meant that pupils of all abilities found they had a valuable contribution to make.

67% of teachers described how the collaborative nature of the Dissolving Boundaries programme encouraged them to adopt new teaching methods and 91% of teachers felt that the Dissolving Boundaries programme had provided them with a valuable experience of professional development.

64% of teachers described how the programme highlighted the potential of integrating ICT into the curriculum rather than using it separately as a standalone subject. A further 75% mentioned that Dissolving Boundaries had increased their usage of ICT in school.

Teachers found it necessary to carefully manage equipment and resources required for their project work. This frequently involved the teachers spending increased time on lesson planning. The increased effort that the programme required was rewarded by the enthusiasm of the pupils and the benefits experienced by the pupils. The teachers repeatedly reported in the focus group discussions that they felt they were involved in an important and worthwhile programme.

Communities of practice are described by Wenger (1998) as a process for learning in groups and an important function of these communities is the provision of opportunities for the participants to communicate, discuss and exchange ideas. The Dissolving Boundaries community of

practice straddles the boundaries of the two partnered schools and so creates a new boundary of practice. This boundary of practice is constantly moving, defining much more fluid and varied forms of participation (Wenger, 1998).

78% of teachers felt that there were other areas within their school's curriculum that could benefit from adopting the technology and teaching methods of the Dissolving Boundaries programme.

The Dissolving Boundaries programme helped to create schools as important centers of community life - with teachers, pupils, parents and local communities working together to promote educationally enriching experiences and positive community relations (OECD, 2001).

The Dissolving Boundaries programme models the possibilities that are available to schools to provide a broader learning environment for the pupils. By using technology, schools are able to access rich and varied opportunities for learning and to broaden the scope of and audience for the work they produce, providing them and their teachers and schools with the invaluable experience of building a community of practice in which all partners share the responsibility of learning.

Section 1 – Introduction

1.1 Context

Europe has been pro-active in recognizing the opportunities and challenges presented by ICT, and has produced strong recommendations for the education sector. *eEurope – An information society for all* (1999) described the importance of bringing people, schools, organizations and commerce into the digital age and creating a digitally literate Europe. In the Lisbon Summit (2000) the European Council endorsed the importance of ICT and a knowledge based economy. The eEurope 2002 and 2005 Action Plans requested that schools provide high-speed Internet access, multimedia resources and that school pupils be given the opportunity and encouragement to become digitally literate and be equipped to live and work within an information society. Recognition was given to providing teachers with appropriate training to become skilled in the use of ICT and in helping them to meet the demands of this society.

The Departments of Education in Northern Ireland and the Republic of Ireland have continuously stressed the importance of integrating ICT into their respective schools' curricula. The National Council for Curriculum and Assessment (NCCA) in the Republic of Ireland published a *Framework for ICT in Curriculum and Assessment* (2004), which describes a vision of ICT literacy for students in the primary and post-primary sectors. The Department of Education, Northern Ireland has also outlined its priorities in developing ICT knowledge and skills in young people in *The Planning Structure for the Strategic Framework* (2004) (http://insight.eun.org/ww/en/pub/insight/policy/policies/archive/northern_ireland.htm).

The technology available to schools and colleges has developed considerably over recent years. As this technology becomes more widespread in classrooms and schools, attention is focusing on how ICT can be used to make teaching and learning in the classroom more effective.

This growth in ICT has presented a significant opportunity for the development of a range of inter-school collaborative activities. E-mail, computer conferencing and the Internet represent tools that enable schools to link with one another. While teachers recognise the educational value of using ICT obstacles in terms of teacher preparation, technical support can sometimes preclude effective use. However, with improved connectivity and faster access to the Internet many teachers are fostering new relationships to access information and collaborate with communities beyond their own school.

1.2 Dissolving Boundaries Overview

The Dissolving Boundaries programme is managed by staff in the School of Education, University of Ulster in Northern Ireland, and in the Department of Education, National University of Ireland at Maynooth in the Republic of Ireland. Participating schools are nominated by their ICT Advisors and are supported by the regional network of Education Centres and Education and Library Boards.

Participating schools are linked with a compatible school on the other side of the border to form a partnership. The partnered schools work collaboratively together, throughout the school year, on joint classroom projects. The projects, which are determined and designed by the partnered schools, are used to promote quality learning in schools and foster cultural awareness amongst the pupils across national boundaries. The pupils and teachers regularly communicate with their partners, building mutual understanding and friendship within shared learning communities - sharing ideas, opinions and knowledge using and developing their Information and Communications Technology (ICT) skills through the programme's discovery-based practical activities.

Technology is integrated into project work in a number of ways. Pupils communicate regularly using asynchronous computer conferencing provided by NINE, the Northern Ireland Network for Education (<http://www.nine.org.uk>), which is the Northern Ireland node of the UK National Grid for Learning. This text-based method of

communication allows participants to 'post' messages and to contribute to both group and one-to-one conversations. Communication also takes place in live and interactive video-conferences, using equipment supplied by the Dissolving Boundaries programme.

The collaborative work produced by the partnered schools has been wide-ranging, innovative and ambitious. Some of the project titles included: 'Your Place and Mine', 'The Reformation', 'Plantation of Ulster', 'Down to Cork – via Cyberspace', 'The Great Famine', 'Collaborative Stories', 'The Ideal Island', 'From Granite to Greywackes' to mention but a few. The themes of these projects were wide ranging and included Identity, Human Rights, Peace Activism, Citizenship, Famine and Emigration, and involved the pupils working on a broad range of curricular topics.

The projects are presented in a variety of formats and can include joint PowerPoint presentations, the development of collaborative web sites, the production of desktop publishing booklets and magazines or the presentation and display of project work in libraries, schools or local exhibitions, or indeed a combination of some or all of these.

1.3 Programme Outline

After the initial nomination and selection process and information is given, the participating schools in Northern Ireland and the Republic of Ireland are invited to attend a residential planning conference in September. During the conference the overall programme is explained, training and advice are provided and partnerships between compatible schools are formed. As part of this process, teachers in primary and special schools plan the topic work they will develop together during the year in one or more curricular areas. The post-primary teachers plan their project work within their relevant subject specialisms.

Following this initial conference, the participating teachers return to their schools to implement their projects in collaboration with their partnered school. The guiding concern underpinning this collaborative work is that the pupils should create and experience educationally valuable work that is rooted in the curriculum, develop their ICT skills and become culturally aware.

During the year, teachers participate in professional development sessions, which are provided in various educational centres around the country, and this year have included the use of NINE computer conferencing, video-conferencing, PowerPoint and simple web site design. The Dissolving Boundaries programme team takes an active role in visiting schools to deliver on-site support and assistance. The Dissolving Boundaries web site (<http://www.dissolvingboundaries.org>) also includes support and provides additional selected training materials to further support the teachers.

The programme financially supports a face-to-face meeting between pupils and teachers of paired schools, which is arranged by the partnered schools at a time to suit their needs. This helps to reinforce and consolidate the relationship that has been developing as a result of the collaborative nature of the programme and the on-going interaction via the NINE conferences and video-conferencing sessions.

Towards the end of the year another residential conference for teachers is held. This conference allows participating schools to showcase their

work, evaluate their projects, reflect on their involvement and listen to the experiences of other schools and receive further professional development in the form of training, support and advice.

Section 2 – Communities of Practice

2.1 Introduction and Description

The founding concerns of the Dissolving Boundaries programme are to foster cultural awareness and mutual understanding amongst children and young people across the island of Ireland and to promote quality learning in school through the use of ICT. Schools within this programme engage in collaborative, curricular projects using ICT applications such as PowerPoint, web page design, computer conferencing and video-conferencing. Technology is integrated in a meaningful way into the curriculum, promoting educationally valuable collaborative work in schools and setting-up cross-national links (Austin *et. al.*, 2000). The innovative nature of this programme encourages schools to adopt different modes of learning to facilitate knowledge creation amongst the pupils. One particular approach that has been much in evidence within the Dissolving Boundaries programme is collaborative constructivism (Slavin, 1990).

Constructivism focuses on learning as a process of constructing knowledge by an individual, where the learning style is not the traditional instruction focused approach but a learner-centered learning and teaching style (Piaget, 1928). In constructivism, the learners gain knowledge as they construct their own cognitive structures or mental models. Constructivism draws upon the elements of open-ended questions, learning-by-doing, teamwork, negotiated learning goals, cognitive tools and learning facilitators (Johnson, 2001).

Situated cognition as identified by Lave (1988) is a constructivist approach that acknowledges learning is most effective when it occurs in the context in which the knowledge is created and used. Wenger (1998) describes how this learning takes place at the time and place in which the actual tasks are performed. Learning is participatory and important elements are both the activity and the social arrangements in which the activity takes place.

Knowledge within this context is viewed as a relation between an individual and a social or physical situation (Orey and Nelson, 1997). In order to gain knowledge an individual must actively participate within such a community. This community is often referred to as a *community of practice* (Wenger, 1998).

Wenger (1998) describes a community of practice as a process for learning in groups, one that arises out of necessity to accomplish tasks and provide paths for learning. Communities of practice develop over time and evolve and disband according to the needs of the group (Squire and Johnson, 2000); they promote learning via the communication of their members and individuals learn by participating in activities.

A key concept of communities of practice is community knowledge. Participants of a community of practice bring their own individual knowledge which when shared becomes part of the community's knowledge, the sum of the community knowledge being greater than the sum of the individual participants' knowledge (Gheradi and Nicolini, 2000). An important function, therefore, of a community of practice is to provide the participants with opportunities for discussion.

The discussions that occur within communities of practice need to be organized by the teacher who acts as a guide, facilitator moderator and mentor (Rogers, 2000). The teacher should set the goals of the discussion and encourage evaluation by the participants to see whether these goals have been met. Encouragement should also be given to self-evaluation and peer evaluation. The teacher must also ensure that the learning environment is developed within a framework of safety and mutual trust (Palloff and Pratt, 1999).

2.2 Relevance and Application

The Dissolving Boundaries programme operates largely, though not entirely, within a virtual community. Schools from the north and south of Ireland are partnered together to work on collaborative projects using online communication and video-conferencing as a primary means of communication. Virtual communities are significantly

different from more traditional place-based communities. Traditional communities have clearly defined parameters and borders, with group dynamics often overriding individual expression (Palloff and Pratt, 1999). In contrast, virtual communities are organized around an activity, often without formal boundaries, and group dynamics are not so pre-eminent allowing greater individual participation (Johnson, 2001).

An important question for the Dissolving Boundaries programme is, whether the communication components of virtual communities (scaffolding, facilitation, lack of group norms, time and place independence, etc.) can overcome the obstacles in dissolving boundaries between the north and south of Ireland and cause communities of practice to develop (Johnson, 2001) and if so, to what extent.

The success of a community of practice can be measured on different levels. Huberman and Hogg (1994) believe a key component in gauging the performance of a community of practice is the extent to which its members make effective use of each other. Rogers (2000) describes how successful communities of practice set achievable goals allowing participants to draw on the knowledge and expertise of others and encouraging the participation, reflection, development of its members.

Two desirable outcomes of communities of practice are participation and learning. The following two sections of this report (3. Learning and 4. Participation) investigate the experience of the participants on the Dissolving Boundaries programme, from which an assessment of the success of this community of practice can then be evaluated.

Section 3 – Learning

3.1 Shared Histories of Learning

Wenger (1998) describes a community of practice as “a group of people who share an interest in a domain of human endeavour and engage in a process of collective learning that creates bonds between them”. Communities of practice are a type of learning community that have three important characteristics. Firstly, they focus on a domain of shared interest. Secondly, the participants interact and learn together by engaging in joint activities building relationships and creating a community around the central shared interest or domain. Thirdly, they develop a shared collection of experiences, best practices, solutions and histories. This shared knowledge becomes a source of solutions and expertise that can be utilized when facing new situations. A community of practice consists of people with a shared domain of expertise, who learn and develop together practices that they consider to be important.

The Dissolving Boundaries programme builds an online community of practice, where all participants through sharing stories, collaboration and joint problem solving can learn together and continue to shape not only their own development but the development and identity of the community itself. This method of learning, through on-going practice that draws upon the social energy that is generated through interaction in joint enterprises, is referred to as *situated learning* and occurs through participation and interaction with the communities’ shared histories of learning (Wenger, 1998).

3.2 Pupil Learning

The teachers who contributed to the data collection for this report frequently commented on the pupil learning outcomes from participation in the Dissolving Boundaries programme. These learning outcomes included heightened and improved social and communication skills, stronger and more competent ICT skills and the transference of lessons learnt to other areas of the curriculum. The

teachers valued how the pupils learnt to work in a different way. They watched the pupils' problem solving skills develop and noticed improvements in their ability to tackle a wide variety of tasks whilst working as part of an effective and focused team.

The pupils developed their communication skills through the NINE computer conferences, video-conferencing and the face-to-face meetings. They learnt to initiate communication as well as to listen to the pupils in their partner school and to respond in an appropriate manner. They learnt how to learn from each other and how to reap the benefits from listening to the views and opinions of others. This was particularly noticeable in the Post-primary sector. For example, a school in Sligo, using a video-conference link, debated the Ulster Plantation with a school from Belfast. The teachers noted the development of the pupils' ability to listen to views and opinions that contrasted with their own, which enabled them to reach a wider understanding of the topic.

Many teachers reported on how the pupils were excited and eager to use the technology, which created a positive attitude towards learning.

The pupils' general knowledge improved through interacting with another school and this interaction often motivated them to work harder on the project, as they knew their partner school would view their efforts. One of the teachers, commenting on the impact of the project said

... self-esteem to me was a big plus, regarding their behaviour I don't know if there was any difference that way, but I think, certainly our children are more aware of the world...

The project work provided a clear purpose in using ICT and introduced the pupils to using the Internet as a means of researching and finding answers to problems.

The pupils found they had more responsibility and were frequently involved in discovery-based learning.

... they had to learn commitment as well, because they had to learn that they had to come and e-mail on certain days...

... it gave them a sense of and built up their sense of responsibility that they had this commitment...

...the group work brought a new level of responsibility both towards the group and the teacher ...

... the pupils felt they were representing the school and this increased their level of commitment and they felt the responsibility of this commitment ...

The results from the questionnaire showed that the pupils learnt a wide variety of skills and benefited from a broad range of experiences. The specific skills most frequently reported by their teachers included: sending and receiving e-mails, use of PowerPoint, using the Internet, working as a part of a team, communication, computer competency, social skills, research and report writing, video-conferencing.

Huberman and Hogg (1994) and Rogers (2000) both describe how successful communities of practice encourage members to make effective use of each other, and support the participation and learning of their members. The development of the pupils' skills and the broadening of their experiences as a result of their work on the Dissolving Boundaries programme and in particular their participation and interaction with their partners suggest that the pupils are working within a dynamic and successful community of practice.

3.3 Teacher Development

Significantly 90% of the teachers who responded to the questionnaire felt that the Dissolving Boundaries programme had provided them with effective professional development.

Some teachers commented on how the Dissolving Boundaries programme gave them access to another culture outside their own school. They said that education was not just what went on within their

own school walls and explained the importance for schools to become part of the wider world.

A number of southern teachers commented on how their partner school had better facilities than they had and this frequently made them envious and made them more demanding when trying to secure resources and facilities in their own school.

...it's very interesting from a professional point of view talking to colleagues in the North and seeing what their circumstances are like ...

Teachers were quick to appreciate the value of using ICT and how they could use it in other areas of their work in schools.

... I think it opened my eyes to the potential of using ICT rather than seeing ICT as a standalone area, that it can be integrated into so many aspects of the curriculum...

Some teachers expressed an interest in widening the scope of the programme.

... we should be using this technology to communicate with other schools in Spain and France ...

... I think what Dissolving Boundaries does is that it pushes you to the limits and then allows you to go beyond this...

The Dissolving Boundaries programme requires teachers to work differently. The collaborative nature of the project encouraged the teachers to adopt a wide variety of different teaching methods and approaches.

... the variety of teaching methodologies that we use is far, far greater ...

... the nature of the programme commits us to using different methods and teaching strategies ...

Teachers frequently reported on how they needed to carefully manage equipment and resources required for their project work. This frequently involved the teachers spending large amounts of time planning their lessons carefully. The increased effort that the programme required was rewarded by the enthusiasm of the pupils and the realization of the benefits that were being experienced by the pupils. The programme also increased teachers' confidence; they repeatedly reported in the focus group discussions that they felt they were involved in an important and worthwhile programme.

... it took a fair bit of management, but the kids were great and they were very enthusiastic ...

The teachers found they needed to work closely with the teachers in their partnered school. They needed to communicate regularly, plan, develop and learn together as they built a partnership between the two schools. The teachers were responsible for creating communities of practice that accomplished tasks, provided paths for learning and promoted the participation of the pupils in activities that involved collaboration, mutual understanding and communication.

Section 4 – Participation

4.1 Collaborative Participation Overview

In a community of practice, individuals learn by participating in collaborative work. The central theme of collaborative learning focuses upon consensus building through the cooperation of group members, in contrast to the often competitive and individualistic styles of learning that are more prevalent in modern classrooms.

Collaborative project work is very much a feature of Dissolving Boundaries. This approach supports and promotes the aims of the programme in developing cultural awareness amongst the pupils across national boundaries and in helping to build shared learning communities by engaging in educational work of value. The Dissolving Boundaries programme provides the ICT infrastructure to support communication across borders, which provides myriad collaborative possibilities for the teachers. This is very evident in the diversity of projects that participating schools have undertaken.

This chapter looks at the collected data to see how both pupils and teachers participate in the Dissolving Boundaries programme.

4.2 Pupil Participation

The general reactions of the participating pupils when they were initially told about the Dissolving Boundaries programme was: 54.2% were either ‘very positive’ or ‘enthusiastic’ about participating. This low figure could be attributed to the fact that the pupils were unaware exactly what was involved with links to a school across the border. However, after the initial stages of the programme, the teachers noted how 88.9% of the pupils were either ‘easy’ or ‘very easy’ to motivate.

The pupils’ participation in the project led to the development of positive relationships with their partner schools. Friendships

developed through the written activities of computer conferencing and collaborative project-work to the oral interactions facilitated by video-conferencing and face-to-face meetings. Many schools reported that they had made good friends as a result of the programme, with some describing the strong bonds that were now in evidence.

The enthusiasm of the pupils was occasionally frustrated when technical problems arose. The computer conference NINE had caused problems early in the year, although these problems were later resolved. Many described how eagerly they awaited for responses from their partner schools or how they were sometimes frustrated when the other school didn't seem to respond quickly enough.

Video-conferencing gave rise to technical difficulties associated with linking schools across national borders. However, a bigger challenge was the organizational problems such as synchronizing convenient times to video-conference and gaining access to the school's computer room.

The Dissolving Boundaries programme encouraged a good level of participation from the pupils, sometimes from unexpected areas. One primary teacher explained how he had a pupil whose writing and classroom skills were limited, but found out that the pupil had a talent in conversing with the pupils in the partnered school. The pupil was able to talk naturally on a range of different subjects with a depth of general knowledge that the teacher had hitherto been unaware of. The teachers repeatedly reported how the Dissolving Boundaries programme was found to be a great leveller in the classroom. Because many of the activities were new to the pupils, especially those at the primary level, it gave pupils with literacy problems a great chance to perform on an equal footing with their more literate peers. The use of ICT and collaborative project-work meant that pupils of all abilities found they had a valuable contribution to make. The evidence that the less academically capable student benefited from the programme was particularly strong in the focus group discussions

... sometimes the weaker students took the lead...

... they didn't have the same hang-ups that the better students had...

...they had the attitude that I'm just talking here, it is nothing to do with education...

Teachers generally reported a positive reaction from the pupils, who enjoyed participating on the project, which was seen to be different from normal school work. The pupils enjoyed participating in the programme and were excited about using the technology which gave them a positive attitude towards the school and to learning.

... the kids were coming in first thing in the morning to try to get into the computer room before the class so that they could log on and check their e-mails...

... children have the opportunities to learn in a way that they probably never experienced before and learning in this new sort of way they'll never forget it, I think it will have a huge impact on them...

Many pupils enjoyed project work and the teamwork that the collaborative practices fostered. Some schools reported that the pupils felt they had been specially selected to participate and enjoyed the attention and focus they received from other pupils in their school.

Some teachers noted how the pupils had discussed what sort of things they could ask their partner school and began to consider their own reasons for asking such questions. Were they genuinely interested in what their partners would say or were they just trying to score points over the other school? The pupils began to reflect on and evaluate their own feelings and opinions towards their partners across the border. Some of the teachers noticed how the pupils began to consider their own image and personality and many experienced a growth in self-confidence as they began to appreciate their own qualities coupled with improvements in their communications and ICT skills.

When asked if the pupils' attitudes changed as their work on the programme progressed 70% of teachers agreed. Video-conferencing was the most instrumental in changes of attitudes with 80% of teachers reporting increased interest and enthusiasm after video-conferencing

lessons. Many teachers also noticed that video-conferencing participation particularly improved pupil confidence and helped to reinforce bonds with the other school.

As a result of the pupils' participation, many teachers commented on how the pupils' attitudes had changed.

...I think that sometimes the kids were surprised that their partner school did the same things as they did...

...they expected them to be different and they were a bit surprised that they were very much the same...

The pupils responded positively to the increased responsibility they experienced as a result of working on a collaborative project. 54% of the teachers thought the pupils improved their work-rate whilst working on the Dissolving Boundaries programme.

4.3 Teacher Participation

Teachers' most frequently given explanation for joining the programme, was their interest in ICT and their desire to develop a link with another school. A number also mentioned they would like to give breadth to their curriculum and provide a new medium for learning.

Many primary teachers felt that participating in the Dissolving Boundaries programme gave them a focus for their use of ICT.

Most teachers expressed surprise at the amount of preparation that was needed and many reported that before the pupils were able to participate in the collaborative tasks they needed to prepare them for the activity. This preparation took many forms and ranged from brief instructions, as might be used to prepare a class for a video-conferencing lesson, to longer explanations or activities, for example, to introduce a series of instructional lessons on how to use PowerPoint.

Most teachers commented on how important it was to develop a good relationship between the two class teachers, with both teachers committed to the ideas that they produced from the joint planning conference at the start of the year. The teachers needed to be suitably matched, with similar interests and equal levels of enthusiasm. Most teachers mentioned that planning was very important, as was sticking to agreed schedules and timetables with the partner school.

Some teachers described how their involvement in the programme opened their eyes to the potential of integrating ICT into the curriculum rather than using it separately as a standalone subject.

A number of teachers described how their views had changed as they built up a relationship with their partner school.

... I expected that there would be a greater psychological divide than in fact there has been...

...they're just like us, they're no different to us...

As a result of their participation on this programme, many teachers mentioned that they had become more open to using different teaching methods, such as adopting constructivist techniques, and 63.9% of teachers said that their involvement with the programme had changed how they used ICT, with some Post-Primary teachers mentioning that they were now more inclined to integrate ICT into their teaching approach. A large number of teachers also mentioned how the programme had improved their own self-confidence and self-esteem.

Section 5 – Community

5.1 Influence of Dissolving Boundaries within the school

As we have noted, the Departments of Education in Northern Ireland and the Republic of Ireland have stressed the importance of integrating ICT into classroom programmes. ICT integration builds digital and information literacy and encourages pupils to become confident and competent users of the new educational technologies. Many schools are struggling to implement ICT programmes that fit into the curriculum in an educationally valid way. The Dissolving Boundaries programme is showing schools one way of bringing new approaches to learning and the development of social and cultural awareness through the integration of ICT in the classroom.

The Dissolving Boundaries programme uses a constructivist approach to learning and teaching. The teachers act as facilitators and moderators and frequently adopt the role of co-learner. The teachers surveyed and interviewed found they acquired content knowledge, developed their own ICT skills and improved their own pedagogical approaches. The benefits of these experiences were then applied to other areas within the school that the Dissolving Boundaries teachers were involved in.

The teachers described a range of effects of Dissolving Boundaries within their school. Many reported that other teachers had seen how the programme uses ICT and were keen to adopt some of these technologies in their own classes; video-conferencing was singled out particularly as this had raised considerable interest amongst pupils.

Some teachers reported that their computer rooms were becoming much busier as a result of the programme, not only because of Dissolving Boundaries, but because other teachers were beginning to appreciate the benefits of using ICT in their teaching. In post-primary schools, computer rooms were often made available to pupils outside of normal classroom hours. Interestingly, 10% of respondents from

the questionnaire mentioned that they had used the success of the Dissolving Boundaries programme in their school to argue for increases in computer resources.

The Dissolving Boundaries programme had a significant impact on the pupils within many of the schools involved. The pupils became more proficient in their use of ICT, became more effective communicators and learned to work as part of a team, all of which influenced their schools in a variety of ways. For instance, one school reported that pupils, who were involved in the Dissolving Boundaries programme, had requested that they be able to use ICT when working on a separate project in Personal and Social Education (PSE), which the school agreed to. Another school reported that the English teacher had noted improvements in the communication skills of the Dissolving Boundaries pupils, which resulted in a number of them gaining leading roles in the school play. A further school described how their Dissolving Boundaries pupils, as a result of the hands-on experience of technology from the programme, were given the responsibility of recording school events using the school's digital camera and video recorder.

5.2 Community Knowledge

A key assumption in the concept of communities of practice is that knowledge is integrated in the way of doing things. Learning is promoted through the communication and social relations of members and the knowledge and expertise within these communities is encouraged through the participation in activities.

When examining the dimensions of community knowledge there are three key areas to consider:

- how this knowledge will be shared within the community;
- how the reach of ICT in sharing this knowledge can be identified;
- how this knowledge will be captured, organized and disseminated.

In the Dissolving Boundaries projects knowledge is socially constructed and supported through collaborations, where the pupils share knowledge and tackle projects using varied information sources and teamwork. Knowledge-building within the Dissolving Boundaries community involves the production and continual improvement of ideas that are valuable to the community. The accomplishments of the community are greater than the sum of individual contributions and form part of broader cultural efforts.

Dissolving Boundaries, now in its fifth year has gained momentum in terms of the number of schools and teachers involved. Knowledge is gained each year and this is shared and encouraged through the many conferences, reports, evaluations and training sessions that have emerged from the programme since its inception. An extension to this has been the development of the programme's web site. The web site now includes a knowledge resource base, which includes papers and training materials providing a collection of support materials for the teacher. The effectiveness of the website will be evaluated along with other developments and aspects of the programme in next year's report.

5.3 Working across the community

A community has been defined as a form of social relationship of solidarity with shared goals and mutual needs (Walls, 1994). A community consists of many layers of smaller communities, with each of these smaller communities maintaining a balance between dependence and independence. Teachers are continually interacting with various communities during their work, moving from one community to another and crossing boundaries that exist within their institution. The Dissolving Boundaries community of practice straddles the boundaries of the two partnered schools and so creates a new boundary of practice. This boundary of practice is constantly moving, defining much more fluid and varied forms of participation (Wenger, 1998).

Teachers involved in Dissolving Boundaries experience and access other cultures outside their own school, which heightens their awareness that education is not just what goes on within their own school walls. Some Dissolving Boundaries teachers are often also involved in other programmes. For example, a number of Dissolving Boundaries schools are involved with the European Studies programme (<http://www.european-studies.org>) and the eTwinning school partnerships in Europe (<http://www.etwinning.net/ww/en/pub/etwinning/index2005.htm>). While priorities may vary from project to project the basic outcomes for pupils are very similar – gains in terms of self-confidence and in the widening of pupils’ perspectives on the communities they are part of.

5.4 External Relationships

Schools can be described as dynamic centers of community life (Kretzman and McKnight, 1993) that develop strong relationships between teachers, pupils, parents and local communities, helping the pupil to understand the connection between the experience of school and life in general. The external relationships created through involvement in the Dissolving Boundaries programme render schools as vital centers of community life - with teachers pupils, parents and local communities working together to promote educationally enriching experiences and positive community relations. The extent and effects of these experiences and communities will be determined in subsequent research investigations.

Section 6 – Conclusions

6.1 Conclusions

The research shows that the Dissolving Boundaries programme has increased teachers' confidence and they frequently reported that they felt involved in an important and worthwhile programme.

The research suggests Dissolving Boundaries provides the pupils with a valuable learning experience that heightens and improves their social and communication skills, strengthens their ICT skills, improves their understanding of their partners across the border and transfers knowledge from the lessons where Dissolving Boundaries projects were carried out, to other areas of the curriculum. The pupils learn a variety of new skills, develop problem-solving capabilities and become more effective team workers.

The pupils enjoyed the responsibility that the collaborative project work provided and all abilities felt they had made a valuable contribution to their project. The pupils were found to be highly motivated and their enthusiasm led to the development of positive relationships with their partner schools.

6.2 Building Communities of Practice

The term 'community of practice' has become popular, as a means of describing new approaches to teaching and learning, since Lave and Wenger first introduced it in the early 1990's. The learning that takes place within such communities is referred to as 'situated learning'. Situated learning is context-dependent and moves beyond the boundaries of the individual to include the environment, technology, social interactions and culture.

Situated learning has grown from constructivist beliefs that learning results from the experience of participants and the context and culture in which this experience occurs. This presents a notable contrast to the

learning that takes place in traditional classroom environments, where knowledge is more frequently presented in an abstract and/or de-contextualized form.

Dissolving Boundaries highlights the possibilities that are available to schools to provide a broader learning environment for pupils. By using technology, schools are able to access rich and varied resources of knowledge and learning that can be used to enhance the work pupils are involved in within their classrooms. This provides the pupils, teachers and schools with the invaluable experience of building a community of practice in which all partners share the responsibility of learning.

6.3 Future Developments

The European Commission outlined an e-learning initiative in May 2000 as part of the eEurope Action Plan, with the objective

...to support the evolution of school curricula with the aim of integrating new learning methods based on information and communication technologies by the end of 2002.

Developments in ICT in European schools have followed a pattern of three stages of implementation. The first stage develops the ICT infrastructure in schools; the second stage mainstreams the role of ICT in education; the third uses ICT to transform teaching and learning practices (November, 2006, www.anovember.com).

Schools in Northern Ireland and the Republic of Ireland have been actively improving and developing their ICT capabilities in recent years. Schools have largely integrated ICT into the curriculum and have well developed ICT infrastructures. Schools in both jurisdictions are ready to move into a third stage, where they investigate how they can use ICT to transform teaching and learning.

Dissolving Boundaries is very much part of this development and has continually evaluated and evolved its use of technology in an effort to enhance the learning experiences of the participating schools, teachers and pupils.

Some exciting developments are currently being investigated with a view to introducing them into the Dissolving Boundaries programme in the future. For example, a Virtual Learning Environment (VLE), linked to the Dissolving Boundaries website, will be used from September 2005. This VLE will provide a number of forums specifically for teachers, encouraging communication between teachers and between teachers and the support team (Milligan, 1999). It is hoped that the VLE will also support and simplify the operational aspects of producing collaborative web pages and collaborative PowerPoint presentations.

VLEs are now able to include sound, video and animation files and the programme team is investigating various possibilities in utilizing these features within the Dissolving Boundaries programme.

The Department of Education and Science in Dublin approached the Dissolving Boundaries team to set up a project to link together thirteen schools in eleven countries. This project, which started in September 2005, aims to provide Asian and European students (aged between 12 and 18 years) with opportunities to discover traditions and ceremonies in their countries that are significant for the people for one reason or another. These could range from simple popular traditions, practices or ceremonies that people do to have fun, to what they do for more formal, solemn occasions (<http://local-traditions.org>).

An existing link between the School of Education in the University of Ulster Coleraine and the Irish Institute of Pittsburgh, USA created the opportunity for schools to link across the Atlantic to explore the theme of good citizenship. During 2003/2004 three Dissolving Boundaries schools became involved in a link with a school in the United States of America. This link has been maintained since then and has recently

been strengthened following a visit during 2006 from the Irish Institute.

An international conference on the role of ICT in bridge-building and social inclusion is taking place from 10-13 September 2006 at the University of Ulster. This international conference will bring together academics, practitioners and policy makers to examine the theory, practice and policy implications of using ICT to bring students together for joint work. It will include contributions from Dissolving Boundaries and work being carried out in the Middle East. Presentations are expected from other parts of Europe, Africa, America and Asia.

http://www.socsci.ulster.ac.uk/education/ict_conf/index.html

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Appendix 1

The Questionnaire

Dissolving Boundaries through Technology in Education

This questionnaire is designed to allow you to communicate your experience, opinions and feelings on particular aspects of your work on the Dissolving Boundaries programme. It is also designed to encourage a reflective practice and to help us identify where improvements can be made for the future.

Please select your answers or write your response in the spaces provided as appropriate. We guarantee that your replies will be treated as highly confidential.

If you feel that you would like to comment further on any of the questions, please enclose additional sheets.

Teacher information

1. What is your gender?

2. Give a brief description of your school in terms of the following, please tick one option from each area.

Gender	girls <input type="checkbox"/>	boys <input type="checkbox"/>	mixed <input type="checkbox"/>	
Type	primary <input type="checkbox"/>	post-primary <input type="checkbox"/>	special <input type="checkbox"/>	
Location	rural <input type="checkbox"/>	urban <input type="checkbox"/>	inner-city <input type="checkbox"/>	
Selective	grammar <input type="checkbox"/>	secondary <input type="checkbox"/>	selective <input type="checkbox"/>	non-selective <input type="checkbox"/>
NI classification	maintained <input type="checkbox"/>	controlled <input type="checkbox"/>	integrated <input type="checkbox"/>	N/A <input type="checkbox"/>
ROI classification	community school <input type="checkbox"/>	secondary voluntary <input type="checkbox"/>	vocational <input type="checkbox"/>	comprehensive <input type="checkbox"/>
	community college <input type="checkbox"/>	secondary fee paying <input type="checkbox"/>	educate together/project <input type="checkbox"/>	N/A <input type="checkbox"/>

3. Approximately how many pupils are currently on your school roll? _____

4. Are your pupils using the medium of Irish in the Dissolving Boundaries programme?

5. What curriculum area(s) does your work on the Dissolving Boundaries programme cover? _____

6. If you work in a post-primary school, what is your main subject? _____

7. If you work in a primary school, what is the age of the children you teach? _____

8. How many years' experience have you in teaching _____

9. How many years have you been involved with the Dissolving Boundaries programme? _____

10. Have you been involved with other inter-school projects / programmes? Yes No
 If yes, please specify. _____

Information and Communication Technology

1. How many hours would you spend using a computer during a typical working week (not counting your involvement with the Dissolving Boundaries programme)? _____

2. How many hours would you spend using a computer, during a typical working week, in connection with the Dissolving Boundaries programme? _____

3. Where did you gain your knowledge of the Information and Communication Technology (ICT) that you use on the Dissolving Boundaries programme? (Tick as many as apply.)

Formal training courses self taught Dissolving Boundaries

Other (please specify) _____

4. How would you rate your general level of competency in using ICT? Please tick one option.

Highly competent competent not always competent not at all competent

5. How would you rate your competency-level with the ICT that is used on the Dissolving Boundaries programme? Please tick one option.

Highly competent competent not always competent not at all competent

6. How would you rate your competency in using videoconferencing on the Dissolving Boundaries programme? Please tick one option.

Highly competent competent not always competent not at all competent

Communication with partner school

1. Did you attend the planning conference in Athlone? Yes No

2. Did you meet your partner teacher at the planning conference in Athlone? Yes No

3. How many times did you contact your partner teacher during the year? _____

4. If you needed to contact your partner school, to discuss administrative issues, which method did you use? Please tick as many options as apply.

Letter school telephone home telephone mobile telephone
 Fax NINE conference e-mail videoconference

5. When discussing administrative issues with your partner school, which of the following methods of contact was the most effective for you? Please tick one option.

Letter school telephone home telephone mobile telephone
Fax NINE conference e-mail videoconferencing

6. Did you experience problems when communicating with your partner school? Please tick one option.

Frequently occasionally rarely never

7. What were the main causes of communication problems with your partner school?

8. How did you handle communication problems with your partner school?

9. What kind of success did you experience when resolving problems? Please tick one option.

Complete success satisfactory success little success no success

10. How could communication with your partner school have been made easier?

11. How has your relationship with your partner school developed over the past year?

Programme Support

1. How supportive did you find the programme team? Please tick one option.

Extremely supportive supportive not always supportive not supportive at all

2. If you asked for help or support, how quickly did the programme team respond? Please tick one option.

Instantly in good time slowly no response never asked for help

3. How helpful have you found the programme team throughout the project? Please tick one option.

Very helpful helpful not helpful never asked for help

4. What is your preferred method of contact with the programme team when/if asking for support? Please tick one option.

Letter telephone e-mail NINE conference fax none

5. If you telephone the programme team and are put through to voice mail, would you normally leave a message?

If no, why would you not leave a message?

Yes No

6. Do you think the programme team should provide more support? Please tick one option.

Yes definitely yes sometimes no don't know

7. How do you think the project team could provide more effective support?

8. How supportive did you find your own school? Please tick one option.

Extremely supportive supportive not always supportive not supportive at all

9. Whilst working on the programme, what type of support did you get from your school?

10. What might your school have done to provide more effective support?

11. Did your school inform the parents about the Dissolving Boundaries programme?

Yes No

If yes, how did your school inform the parents?

Pupil Participation

1. What was the general reaction of the pupils when they were initially told about the Dissolving Boundaries programme? Put an approximate percentage value next to each of the following headings.

Very positive _____ enthusiastic _____ non-committal _____ negative _____

2. How easy or difficult was it to motivate the pupils during the project?

Very easy easy not always easy difficult

3. Did the pupils' attitudes change as their work on the programme progressed? Yes No

If yes, please specify how the pupils' attitudes changed.

4. Which part(s) of the programme generated the most interest amongst the pupils?

5. Please rank the following methods of communication into which was the most effective for pupil interaction during the programme? (Rate each one on a scale of 3, number 1 being the most effective, number 3 the least effective.)

e-mail videoconference NINE conference N/A

6. How could communication between pupils in your partner school have been made easier?

7. How has the relationship between your pupils and the pupils in your partner school developed?

8. Was the overall work-rate of your pupils, whilst they worked on the Dissolving Boundaries programme, different to their normal work-rate? Yes No

If yes, please specify how the pupils' work-rate was different.

9. Which aspect(s) of the Dissolving Boundaries programme do you feel benefited the pupils the most?

10. What do you think have been the learning outcomes for your pupils, as a result of their work on the Dissolving Boundaries programme?

11. What different roles did the pupils adopt whilst using the NINE conference and the videoconference (e.g. learner, evaluator, expert etc.)?

NINE conference
videoconference

_____	_____
_____	_____

12. What other outcomes have you noticed as a result of your pupils participation in the programme?

Professional development

1. What was the main reason you became involved with the Dissolving Boundaries project at the outset?

2. How important were the following factors when you first decided to participate in the Dissolving Boundaries programme?

(Give each factor a rating of 1 to 5, with 1 being very important and 5 being the least.)

interest in ICT	<input type="checkbox"/>	professional development	<input type="checkbox"/>	interest in cross-border theme	<input type="checkbox"/>
enjoy project work	<input type="checkbox"/>	step towards promotion	<input type="checkbox"/>		

other (please specify) _____

3. Did you find that your goals / aims changed as the year progressed? Yes No

If yes, please specify how your goals / aims changed.

4. Has your involvement in the Dissolving Boundaries programme changed how you use ICT in your teaching? Yes No

If yes, please specify how your use of ICT has changed in your teaching.

5. Do you think that the Dissolving Boundaries programme has provided you with professional development? Yes

If yes, in what way (e.g. ICT training, reflecting on pupil learning, examining the values of the school etc)?

6. In what way has your involvement in the programme impacted on your work?

7. During your work on the Dissolving Boundaries programme did you feel you needed to supplement the Dissolving Boundaries training with further training? Please tick one.

Frequently occasionally rarely never

8. How interested would you be in pursuing a course of professional development, leading towards a formal postgraduate qualification, that is connected with your work on the Dissolving Boundaries programme? Please tick one.

Very interested interested slightly interested no interest at all

9. As a result of your involvement on the Dissolving Boundaries programme, would you be interested in using ICT as a **medium** in which to avail of a professional development course? Please tick one.

Very interested interested slightly interested no interest at all

Curriculum

1. Has the Dissolving Boundaries programme encouraged a greater use of ICT in your school? Yes No

If yes, please specify where the increase in the use of ICT has occurred.

2. In your school has the Dissolving Boundaries programme influenced the development of other curriculum initiatives? Yes No

If yes, please describe briefly the new initiatives.

3. Can you see other areas within your school's curriculum that might benefit from adopting the technology used on the Dissolving Boundaries programme? Yes No

If yes, please describe briefly the areas that might benefit from adopting such technology.

Thank you for taking the time to complete this questionnaire, your response is important to us.

Appendix 2

List of participating schools

Northern Ireland

Name of School	Town	County
Beechlawn Special School	Hillsborough	Co Down
Belvoir Park Primary School	Belfast	
Bloomfield Collegiate	Belfast	
Churchill Primary School	Caledon	Co Tyrone
Cranmore Integrated Primary School	Belfast	
Dunfane Special School	Ballymena	Co Antrim
Edendork Primary School	Dungannon	Co Tyrone
Erne Special School	Enniskillen	Co Fermanagh
Garryduff Primary School	Ballymoney	Co Antrim
Glenside Special School	Strabane	Co Tyrone
Legamaddy Primary School	Downpatrick	Co Down
Lisanally Special School	Armagh	
Newbuildings Primary School	Newbuildings	Londonderry
Regent House	Newtownards	Co Down
Slemish Integrated College	Ballymena	Co Antrim
Sperrin Integrated College	Magherafelt	
St Aloysius Primary School	Lisburn	Co Antrim
St Brigids Primary School	Maghera	Co L'Derry
St Colman's College	Newry	Co Down
St Francis Primary School	Lurgan	Co Armagh
St John's High School (1)	Dromore	Omagh, Co Tyrone
St John's High School (2)	Dromore	Omagh, Co Tyrone
St John's Primary School	Coleraine	Co Londonderry
St Joseph's Primary School	Belfast	
St Mary's CBGS	Belfast	
St Mary's Primary School	Annalong, Newry	Co Down
St Mary's Primary School (1)	Altinure, Park Village	Co Londonderry
St Mary's Primary School (2)	Altinure, Park Village	Co Londonderry
St Vincent's Centre	Belfast	
Acorn Integrated Primary School	Carrickfergus	Co Antrim
Aughnacloy Primary School	Aughnacloy	Co Tyrone
Ballydown Primary School	Banbridge	Co Down
Ballywalter Primary School	Newtownards	Co Down
Brookfield Special School	Moir, Craigavon	Co Armagh
Cedar Lodge Special School	Belfast	Co Antrim
Erne Integrated College	Enniskillen	Co Fermanagh
Gaelscoil Ui Dhochartaigh	Strabane	Co Tyrone

Holy Child Primary School	Andersonstown, Belfast	Co Antrim
Jordanstown Schools	Newtownabbey	Co Antrim
Oakwood Integrated Primary School	Derriaghy	Belfast
Seaview Primary School	Belfast	Co Antrim
Shimna Integrated College	Newcastle	Co Down
St Anne's Primary School	Strabane	Co Tyrone
St John's Primary School	Swatragh, Maghera	Co Derry
St Malachy's High School	Castlewellan	Co Down
St Malachy's Primary School	Castlewellan	Co Down
St Mary's Primary School	Cabra	Dungannon, Co Tyrone
St Michael's Grammar School	12 Cornakinegar Road, Lurgan	Craigavon, Co Armagh
Strabane Primary School	Strabane	Co Tyrone
Harberton Special School	Belfast	Co Antrim
Hazelwood Integrated PS	Newtownabbey	Co Antrim
Hillhall Primary School	Lisburn	Co Antrim
Holy Trinity Primary School	Enniskillen	Co Fermanagh
Kilronan Special School	Magherafelt	Co Londonderry
Lisnasharragh Primary School	Belfast	Co Antrim
Oakgrove Integrated PS	Derry	Co Londonderry
Our Lady's Grammar School	Newry	Co Down
Parkview Special School	Lisburn	Co Antrim
Rainey Endowed School	Magherafelt	Co Londonderry
St Brigid's Primary School	Ballymoney	Co Antrim
St Columbanus College	Bangor	Co Down
St Gabriel's Boys' College	Belfast	Co Antrim
St Joseph's Primary School	Newry	Co Down
Wellington College	Belfast	Co Antrim
Wheatfield Primary School	Belfast	Co Antrim
Bushmills Primary School		Bushmills
Dromore High School	Dromore	Co Down
Gilnahirk Primary School		Belfast
Holy Child Primary School	Creggan	Derry
Limavady Grammar School	Limavady	Co Londonderry
Loretto Grammar School		
Portstewart Primary School	Portstewart	Co Londonderry
St Ciaran's Primary School	Cushendun	Ballymena
St Louis Grammar School	Kilkeel	Co Down
St Mark's Primary School	Twinbrook	Belfast
St Teresa's Primary School		Omagh

Republic of Ireland

Name of School	Town	County
Killavil National School	Killavil	Co. Sligo
St Mary's NS	Kilrusheighter	Co. Sligo
Gaelscoil Chnoc Na Ré	Baile Uí Dhúgáin	Sligeach
Sligo Grammar School	The Mall	Sligo
Mercy College	Chapel Hill	Co. Sligo
St. Kevin's Boys NS,	Barry Avenue,	Dublin 11.
Scoil Mhuire,	Howth,	Co. Dublin
Belvedere College,	6 Great Denmark Street,	Dublin 1.
St. Joseph's Secondary School,	Convent Lane,	Co. Dublin.
Scoil Chiaráin,	St. Canice's Road, .	Dublin 11
Scoil Eoin	Innishannon	Co. Cork
Gaelscoil Dr. Uí Shúilleabháin	Gort na Cloiche	Co, Corcaí
Klimeen N.S.	Rossmore	Co. Cork
Rossa College	Skibbereen	Co. Cork
Kinsale Community School	Kinsale	Co. Cork
St Goban's College	Sheskin	Co Cork
Coolfancy NS	Tinahely	Co Wicklow
Scoil Mhuire	Coolcotts	Co.Wexford
Presentation College	Askea	Co Carlow
Presentation Secondary	Grogan's Road	Co. Wexford
St Munchins Girls NS,	Ballynanty,	Limerick
Scoil Ide Naofa	Raheenagh	Co. Limerick
Castletroy College,	Newtown,	Limerick
Villiers Secondary School, .	North Circular Road,	Limerick
The Mid West School of Hearing Impaired,	Rosbrien	Limerick
Gaelscoil O Doghair	Caisleán Nua Thiar	Contae Luimnigh
Lucan Community College	Esker	Co. Dublin
St Brigid's National School	Beechpark Lawn	Dublin 15
St Patrick's National School	Drumcondra	Dublin 9
N. Dublin National School Project	Ballymun Road	Dublin 9
Corpus Christi National School	Moyross	Co. Limerick
St Patrick's BNS	Dublin Road	Co. Limerick
Galvone NS	Galvone	Co. Limerick
Scoil an Athair Maitiú (Cailini)	Togher	Co. Cork
Scoil Mhuire	Killcrutten	Co. Offaly
Scoil Ide	Corbally	Co. Limerick
Heywood Community School	Ballinakill	Co. Offaly,
Scoil Na Mainistreach De La Salle	Bride Street,	Co. Kildare

Castledermot CC	Castledermot	Co. Kildare
St Raphaels SNS	Celbridge	Co.Kildare
Scoil Naomh Eirc	Cill Mhaoile,	Co. Chirrai
Sacred Heart NS (Presentation primary)	Castle Street,	Co. Chirrai
Freastogail Muire Mxd NS	Killahan	Tralee
Mercy Secondary School	Mounthawk	Co. Kerry
Presentation Secondary School	Tralee,	Co. Kerry
St Ita's & St. Joseph's School	Ballonagh,	Co. Kerry.
St Clare's Primary School	Harold's Cross Road	Dublin 6
Our Lady of the Wayside NS	Kiltiernan,	Dublin 18
St. Kieran's NS for Traveller Children	Old Connaught Avenue	Co. Wicklow
St. Tiernan's CS	Park Vale,	Dublin 16
St. Augustine's Special School	Carysfort Avenue,	Co. Dublin
Scoil Bhríde	Ballyboy.	Co. Offaly
St Colmcille's NS	Ballinahown	Co. Westmeath
Ferbane Community College	Ferbane	Co. Offaly,
Mercy Secondary	Kilbeggan,	Co. Offaly,
St. Hilda's School	Grace Park Road,	Co. Westmeath
Scoil Raifteiri	Castlebar	Co. Mayo
St Peter's NS	Snugboro,	Co. Mayo
Ballintubber NS	Claremorris	Co. Mayo
St. Louis Community School	Kiltimagh,	Co. Mayo
St Brendan's NS	Newmarket	Co Kilkenny
St. Mary's N.S.	Killenaule	Co Tipperary
St Mary's Academy CBS	Station Road	Co. Carlow
Colaiste Mhuire	Johnstown	
Ursuline Secondary School	Templemore Road	Co. Tipperary
School of the Holy Spirit	Gaol Road,	Co Kilkenny
St Paul's Senior Primary School	Greenhills	Dublin 13
Inchicore National School	Sarsfield Road	Dublin 10
Scoil Cnoc Mhuire Senior	Killinarden	Dublin 24
St Mary's School for Deaf Girls	Rosary School	Cabra
Stewart's School	Waterstown Avenue	Dublin 20
Knockconan NS.	Knockconan,	County Monaghan
Killeevan NS.	Newbliss,	County Monaghan
St Michael's Senior NS.	Cootehill,	County Cavan.
Castleblayney College	Castleblayney,	County Monaghan.
Patrician High School,	Carrickmacross	County Monaghan.
Holy Family School	Cootehill,	County Cavan.
St. Patrick's NS	Ardcath,	Co. Dublin.

Knockcommon NS	Knockcommon,	Navan,
Kilbride NS	Kilbride,	Co. Meath.
Scoil Mhuire Post-Primary School	Trim,	Co. Meath
St. Ultan's School	Flowerhill,	Co. Meath
St Vincent's Convent NS	St Mary's Road	Cork
Gaelscoil Mhacan	Mahon	Cork
Scoil Bernadette	COPE Foundation	Cork