History, ICT and values; a case study of Northern Ireland

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The central proposition in this paper is that the use of ICT is not value-free, and that we need to promote a vigorous debate about the relationship between the values embedded in the ways that we use ICT and the values we are seeking to promote through the teaching of history. Where there is a clear alignment between ICT and values, ICT is far more likely to have a transformative effect on learning rather than simply enhancing learning. A number of examples of the use of ICT in history teaching from Northern Ireland and the republic of Ireland will be considered.

1. What are the values embedded in the teaching of history?

Answers to this question in the late nineteenth century are clear, at least in Great Britain and France; history teaching was used to promote a sense of national identity through a celebration of great historical figures and through the achievements of empire. Fisher has described this recently as history developing what he calls 'civic responsibilities'.1 In Great Britain, compulsory schooling was also designed to promote Christian morality and to encourage attributes like punctuality and the ethic of hard work that would support industry and provide administrators for overseas colonies. In France national schooling was introduced at least in part to promote a secular sense of Frenchness and national cohesion to those whose first language was Breton, Picard or Occitan.2

In Great Britain, this consensus about the moral and political purpose of teaching history probably lasted up to the second world war; the seismic events of 1939-1945, the emergence of a more secular society with greater stress on personal rather than societal values and the period of decolonisation that followed led to a period of uncertainty and in the 1960’s to an entirely new set of ideas about why history should be taught in schools. In the absence of any clear moral or political purpose, history teaching was justified in terms of its contribution to the development of academic skills and concepts. This new focus and the ensuing debate about what the balance should be between the development of skills and the acquisition of historical knowledge, has meant that until very recently there has been a vacuum about the values teachers should be inculcating through the teaching of history. It might be argued that there was an implicit set of values in the move to study social rather than political and military history but these changes and those ushered in through the Schools Council were not accompanied by any clear statement about what school

2 Eugene Weber, Peasants into Frenchmen; the modernization of rural France, 1870-1914, 1977
history was for. Fisher’s 2003 analysis of the state of history teaching in Great Britain as a whole offers no clear blueprint for what its purpose should be.

This process has been particularly striking in Northern Ireland where contested political views about national identity (are we Irish, British or Northern Irish?) and the frequent invocation of the past to justify current political views has meant that policy about teaching history has taken place in a highly charged atmosphere. Paramilitary murals painted on the gables of terrace houses in Belfast and elsewhere depicting scenes from the past are a very sharp reminder that history is often used as the touchstone for sectarian attitudes. So what is the purpose of teaching history in this part of the United Kingdom as it emerges painfully from years of inter-communal violence?

Teaching history in Northern Ireland.

The School Context

95% of pupils in Northern Ireland attend schools that are predominantly ‘maintained’ (ie Catholic) or ‘controlled’ (ie Protestant). Only 5% attend ‘integrated’ schools where children of different religious backgrounds are taught together, though this sector is growing slowly. Until 1989, schools were free to choose the type of history they taught to children between the ages of 5-14; from 14-18, when history is an optional subject, students were entered for external examinations first at 16 (the General Certificate of Education or GCSE) and then for a small minority at 18 (Advanced level General Certificate of Education). It is generally accepted that the type of history a child studied depended to a marked degree on the type of school they attended; for those in controlled schools, emphasis was placed on British history while for those in maintained schools, there was a much stronger focus on Irish history. From 1989, a ‘common curriculum’ was introduced to all schools with a prescribed core of historical knowledge based on European, British and Irish history and with a common set of skills and learning objectives. At the same time, schools were encouraged to develop programmes of cross-curricular work around the themes of ‘education for mutual understanding’ and ‘cultural heritage’. Funding was also provided to support cross-community contact between teachers and pupils though only 50% of schools took up this option.

The Impact of history teaching.

Although there was an implicit intention that history might play a role in improving community relations, this was left to the discretion of the teacher; recent evidence from Barton and McCully (2004) however, indicates that even when students study the same content, they often draw selectively from their study of history to reinforce existing cultural and political views.

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3 Una O’Connor, Brendan Hartop and Alan McCully, ‘A Research Study of Pupil Perceptions of the Schools Community Relations Programme,’ 2003 (Department of Education, Northern Ireland.)
4 KC Barton and AW McCully, ‘History and National Identity’, International Journal of History Learning, Teaching and Research, Vol. 3 no. 2
‘Students do not necessarily begin their study of national history with rigid and stereotypical views, and this indicates that schools may be able to play an important role in helping them develop perspectives that are grounded in inquiry, evidence and multiple perspectives-the explicit goals of the curriculum. And yet this study also suggests that schools may not always succeed in this task, because as students move through the required curriculum, their identification with Nationalist or unionist history actually intensifies, and they appear to draw selectively from the school curriculum in order to bolster their developing understanding of partisan historical narratives’.

**New Proposals around Values and Skills**

The reference to the development of ‘perspectives grounded in inquiry, evidence and multiple perspectives’ as ‘the explicit goal of the curriculum’ deserves further comment. This goal, we might say ‘purpose’, has been included as part of the latest government advice to teachers on the history curriculum for those aged 11-14. Curriculum guidance in Northern Ireland is provided through the Curriculum Council for Education and Assessment (CCEA). Its 2003 publication gives teachers a framework for developing pupils’ knowledge, understanding and skills and claims that there are 3 key objectives in teaching history. It makes a distinction between the role of history in ‘developing pupils as individuals’, ‘developing pupils as contributors to Society’ and ‘developing pupils as contributors to the economy and environment’. Under each of these headings, CCEA offer further guidance; for example, under the first heading it suggests that this includes the investigation of ‘how history has been used by individuals and groups to create stereotypical perceptions and to justify views and actions’. It goes on to say that this extends to ‘a willingness to challenge stereotypical, biased or distorted viewpoints with appropriately sensitive, informed and balanced responses and take responsibility for choices and actions’. This is part of a wider commitment to the development of what the document calls ‘moral character’ which is described as the capacity to ‘show fairness and integrity in dealing with others’, being ‘reliable and committed to tasks’ and taking ‘responsibility for choices and actions’. One reading of this is that students should have a far stronger sense of how history has affected their own lives and how it has affected their ‘personal identity’.

The role of history in contributing to society draws on the concepts of citizenship, cultural understanding, media awareness and ethical awareness; in a bold departure from previous practice, this is now to include the investigation of ‘some ethical issues in history or historical figures who have behaved ethically or unethically in relation to, for example, persecution, slavery, the use of the atom bomb,

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5 CCEA, ‘Proposals for Curriculum and Assessment at Key Stage 3’, 2003.
6 Ibid, p.69
7 This is defined as ‘respecting the equal rights of others’, recognizing the interdependence of people, communities and the environment, negotiate and compromise, use democratic means to influence change and contribute to the welfare of the school, the community and the environment’. Ibid, p.29
the decision to declare war, the partition of countries’. The significance of this should not be underestimated; we have noted how 19th century justifications for teaching history included precisely this sort of moral dimension where pupils were encouraged to classify historical characters into ‘good guys’ and ‘bad guys’ (and they were ‘guys’ rather than ‘gals’). In the second half of the twentieth century this was not regarded as acceptable; instead, the focus was on understanding past action and behaviour in the context of the specific society and period under investigation. Moral judgment about the rightness or wrongness of people’s behaviour was the preserve of religious education, not history.

The role of history in contributing to the economy and environment refers to employability, economic awareness, sustainable development and environmental responsibility. In other words, what we have here is an explicit set of values even though that term is not used in this official document. While CCEA offers some suggestions on how these principles may be embedded through the teaching of particular historical content, it is a striking feature of this document that it leaves most of the selection of content to the teacher. The one place where content is clearly identified is in ‘the investigation of the causes and consequences of the partition of Ireland and how it has influenced notions of nationality, citizenship and democracy’. From the 1989 position where content was defined in detail, the 2003 proposals mark a decisive and radical departure; now, it is in effect a curriculum defined by skills and values at the centre, with content left to the judgment of the teacher. The cumulative effect of these proposals is to underline the connectedness of the past to the present; we could almost say that no history should be taught simply for the sake of understanding the past, unless the implications for the students’ own lives are made clear.

While there is still substantial debate about these proposals, we can already see how citizenship has made a contribution to the development of the value base of history; for the first time since the mid twentieth century we have a clear but challenging set of values attached to teaching history in Northern Ireland. Much work remains to be done, however at the level of clarifying how this will translate into classroom practice; will teachers put the emphasis on social justice or reconciliation when they select content?

Information Communication Technology. (ICT)

When academics and teachers refer to ICT in the teaching of history, there has been a tendency to focus on the acquisition of knowledge or skills or on the development of teacher networks. Callan for example (2003) describes the very considerable benefits of teachers working together in small groups to develop learning resources on the internet. Walsh, however, has recently published work (2003) which explores how ICT can help children in multicultural Britain understand the British Empire; his research explores the sometimes painful issues of exploitation

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8 Pat Callan, ‘There’s such an Air of Spring about IT’, Developing a Curriculum and LifeLong Learning Asynchronous Network for History Teachers in Ireland’, MSc thesis, Trinity College, Dublin., 2003
and the central importance of identity in contemporary Britain. His project was based on the proposition that those involved in the empire ‘should not be labelled in a blanket fashion as villains or victims—they should come across as people with problems, ambitions, good points and faults’. We might note in passing here the emphasis placed on understanding these historical characters rather than judging them. It is also worth making the point that there is as yet no consensus in England or anywhere else in the United Kingdom, apart from Northern Ireland about an agreed set of values that should inform the teaching of history.

Tardif (1999) summarising the challenges of the information and communication technologies facing history teaching, notes how ICT can change the nature and purpose of history teaching. He cites, for example, the wider range of sources from the internet available to the teacher and the opportunities this offers for a wider understanding of the past. We need to enter a note of caution here on two counts; first, an evidence based approach to the study of history has been around for some time in many textbooks and second, research by Austin showed that pupils, and boys in particular, are quite likely to ignore the evidence if they are presented with a controversial topic about which they feel strongly.

Summarising the discussion of the participants at the Council of Europe’s Andorra symposium in 1999, he notes, however, that ‘history learning and teaching frequently fail to increase mutual understanding and trust or tolerance and flexibility in intra and extra-national relations’. He argues that ‘this is the most spectacular failure of history teaching and learning’. In his conclusion, he suggests that ‘one of the objectives of learning and teaching about Europe in the twentieth century is to ensure that tomorrow’s Europe is constructed in a spirit of mutual understanding and trust, using a tolerant and pluralist approach with an eye to democratic citizenship’.

This is one of the few references that make a connection between ICT and values and even here, the relationship between specific uses of ICT and the development of values is not made explicit. Is there any acceptance at an official level or in the daily practice of teachers in Europe that the purpose of teaching history is really about promoting mutual understanding?

**ICT in Northern Ireland.**

Northern Ireland’s peripheral position on the north west corner of Europe has had an influence on the way that ICT has developed both in schools and more widely in society and employment. The additional costs of transporting manufactured goods for export and the previous troubled history of the last 30 years have been factors in restricting the size of the private sector and partially explain why some 80% of the adult population are employed in the public sector. This has had two principal effects on ICT; first, it has placed a premium on the service sector where information

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11 Roger Austin, ‘Children’s Evaluation of evidence on neutral and sensitive topics’, Teaching History, Number 49, October 1987,
handling and data processing industries can compete with the rest of the world and second, in consequence, ICT has been a very high priority for education. It is significant that Northern Ireland’s schools now have a completely integrated ICT infrastructure originally called Classroom 2000\(^\text{12}\) and now reborn as ‘Learning NI’, a complete managed learning environment.

**Learning NI.**

This programme, funded by a public-private partnership, is providing every school in Northern Ireland with a common hardware platform, software and access to the internet; by the end of 2005, this connectivity will be through broadband. Every teacher has been given ICT training and ICT has a central role in all areas of the curriculum. Students undergoing initial teacher training are now assessed on their competence in ICT. It is not yet clear what the overall impact of this investment will be in terms of pupil learning and there will certainly be a vigorous debate about whether ICT is simply helping pupils to improve the presentation of their work or if, in some measurable way it is either enhancing or indeed transforming learning.

This part of the paper seeks to analyse three ICT activities in Northern Ireland from a different perspective, namely the often hidden values that are implicit in this work and second, to connect this analysis to the emerging values around the teaching of history.

**Computer mediated conferencing (CMC) in history.**

Research and development work carried out by Austin\(^\text{13}\) (1994, 1995) reported on the use of ICT to enable 16-18 year old students of history to contribute to on-line debate on a range of historical topics. Students from both communities in Northern Ireland, from Ireland, France, England and Germany responded to questions that a moderator had proposed. This asynchronous interaction also drew in academic historians who shared some of their more recent insights with the pupils. Evaluation of this work showed that students prepared thoroughly, wrote more incisively and were far more ready to look at the quality of the argument that was being made rather than the person making the comment. Students had to learn how to disagree on-line in ways that were respectful and diplomatic. Since this was not an anonymous arena, students knew the identity of other students and, in Northern Ireland would have known whether they attended mainly Protestant or Catholic schools. In some cases they were clearly learning new social as well as academic skills. In other words, there was some evidence of democratic, participatory discourse. In one example related to the Anglo-Irish war of 1919-1921, the historical expert introduced the views of another historian who questioned the level of support for the IRA (Irish Republican Army). This opening and controversial comment provoked students training to be history teachers to respond as well as pupils studying history at school in Northern Ireland.

\(^{12}\) [http://www.c2kni.org.uk/]

\(^{13}\) Roger Austin, Computer mediated Conferencing. Discussing the past with the technology of the future, 1995
After a very full summary of the views of a number of writers, the pupils in this school concluded:

'It could therefore be said that Foster’s book sways in favour of the actions of the Crown forces compared to the accounts given by other historians'.

This in turn prompted a further comment from the resident historical expert, asking additional questions of the pupils. In short, this is an impressive example of older pupils at school being able to join in what we might call a ‘community of practice’ to use the term introduced by Etienne Wenger14. They were at the very centre of historiographical debate about meaning and interpretation in history.

We can see that work of this sort, now much more common place than in 1993, has the power to promote a range of historical and social skills; but does it have anything to do with values? The answer is an emphatic yes. Karl Popper’s writing on ‘The Open Society’15 was an impressive assault on the kind of totalitarian societies that tried to close down debate by restricting access to information. Computer moderated conferencing is the antithesis of such societies; it depends for its effectiveness on discourse that transcends boundaries within countries and between them. It is important to underline however, that this is not like those on-line bulletin boards where opinion is valued more than reasoned argument. The textual nature of on-line conferencing places a premium on providing evidence to support statement. The value of this application of ICT therefore is in its development of pupils as ‘contributors to society’ to borrow the phrase from the Northern Ireland 2003 curriculum proposals. But this type of conferencing has a further value; since it is asynchronous, students have time to think before they contribute so debate is not dominated by the talkative and confident. Everyone, including those who are shy or under-confident verbally, have time to write what they think; in other words, the value here is in the principle of developing an inclusive classroom, where due respect is accorded to all.

We might conclude this section by saying that CMC does not just enhance learning in the sense of improving upon existing practice; this is a good example of ICT transforming learning.16 Students of history are able to be part of a community of learners in which distance and status are overridden by the collective desire to communicate ideas. Before the internet, this was unthinkable.

The Dissolving Boundaries Project

Northern Ireland is the place where Ireland and Great Britain meet; its citizens are pulled in different political directions and on the island of Ireland itself there are barriers, not least of which is the boundary that separates the ‘North’ from the ‘South’. There is still a substantial amount of suspicion by people and in some cases a reluctance to cross the border; although there are very few police checks since the

14 Etienne Wenger, Communities of Practice. Learning, meaning and identity, 1998
16 For further discussion on this see John Davitt, ‘I learn by eye, you learn by ear’ the Guardian, 9 March 2003. This work considers the ways that ICT can transform learning by making better links between individual learning styles and different applications of ICT.
Good Friday Peace Agreement of 1997, the border is still present both psychologically and politically.

In 1998, the two departments of Education in Belfast and Dublin agreed to support a project that would link student teachers across the border using ICT; after their time studying at the University of Ulster and Maynooth, the students carried their new ICT skills into the schools where they were doing teacher practice so that their pupils could work together to create a joint web site based on curricular collaboration. This project, called ‘This Island we Live on’\(^\text{17}\), evolved into a more ambitious scheme called ‘Dissolving Boundaries through Technology and Education’\(^\text{18}\).

There are now 121 schools in total, half in Northern Ireland and half in the republic of Ireland working as partners on a range of educational topics, including some in history. Pupils and teachers are using both real time video-conferencing and asynchronous computer conferencing to work together and the results of their collaborative activity are often presented through powerpoint slides or the construction of a web site. The project team have evaluated the work of this project since 2001\(^\text{19}\) and for the purposes of this presentation, three key conclusions should be underlined.

The first is the role of video-conferencing; all schools have been provided with isdn lines and video-phones so that teachers and pupils can communicate synchronously. As the schools move towards broadband, connectivity is likely to be secured through IP based video-conferencing which will bring costs down significantly. The impact of video-conferencing has been very strong in both primary schools with children aged 8-12 and in special schools. Part of this effect is certainly related to the attractiveness of the visual dimension for this type of pupil and it has made the link across the border ‘more real’ for them. It is useful here to return to the work of Wenger who argues that learning is ‘a fundamentally social phenomenon’\(^\text{20}\) and that ‘the primary focus of this theory is on learning as social participation’. In other words, when teachers from two schools on different sides of the border in Ireland agree to help their children to work collaboratively together on some aspect of history or any other topic in the curriculum, they are engaged in learning that is authentic and meaningful. The presence of a distant audience of peers gives the pupils the chance to express their understanding through both real time links in video-conferencing and through computer conferencing. How utterly different this is compared to the normal practice of asking pupils to write individually something which will only be read by the teacher.

The second conclusion relates to the organisation of work between the linked schools; it has become clear that the optimal conditions for effective interaction and learning occur when the children in each school are formed into groups of 4-6 children. Each group is linked to a group in the other school for the purposes of planning their work, sharing information and working towards an end product. This

\(^{17}\) http://www.ulst.ac.uk/thisisland/
\(^{18}\) http://www.dissolvingboundaries.org/
\(^{20}\) Wenger, ibid. p.3
arrangement means that children are not overwhelmed by having too many superficial contacts but neither are they limited to a one-to-one link. The focus of learning is on collaboration within each group and between the two distant groups working together. As we have said communication takes place through video-conferencing and asynchronous computer conferencing. Within the computer conference, each linked group has their own folder with two discussion areas, one called ‘pupil café’ and the other ‘work in progress’. It is striking, though not surprising, that the majority of messages exchanged are in the pupil café rather than the more serious ‘work in progress’ discussion area. The project team sometimes worry that outsiders may regard these messages as trivial and unrelated to the real business of studying history or whatever subject is being studied. However, taking Wenger’s point about learning being centrally concerned with social participation, we might rather celebrate the willingness of these young people to ignore the border between them and simply get on with chat about everyday life.

The third conclusion that can be drawn from the work of the Dissolving Boundaries programme, is the way that ICT has enabled links to be made between young people in special schools and those in mainstream education. In one link, pupils in deaf schools on two sides of the border are using video-conferencing to communicate through sign language. In another link, pupils from a deaf school in the Republic of Ireland are linked to pupils in a mainstream school in Northern Ireland where they are using computer conferencing to investigate imperialism.

**Reasons for Imperialism**

- Italy wanted colonies because then other countries would look on them with respect and then they would be at the same level economically.
- Italy wanted to sort out the problem of Italian Irredenta - which meant that they wanted to take back the places which spoke Italian but was not under their rule.
- If Italy had more economy then it would boost their economy, because within Italy itself there was not much raw materials.
- Many wanted more living space because Italy was becoming more and more over populated and many wanted moving out so they could have better lives.
- In a sense you could say that Italy was jealous of its neighbouring countries and that they looked up to them.

well hope you can understand all of that and if you have any questions then give me a shout!!

see ya soon jess x
Hi Kim, Linda here. As you know we have to do a history project. Our teachers have decided that we do our project about Imperialism. Our first topic is the reasons for Imperialism. I did research on this and here is some of the economic reasons: 1. Investment: Business people want to invest surplus capital from the Industrial Revolution. They need to invest it but the rates in Europe were falling. It was decided that their money would be best be invested in colonies. 2. Colonies provided a cheap source of raw materials e.g.. cotton 3. Colonies were also a market e.g. manufactured products e.g. clothes.

What do you think? Can you give me other reasons?

If we reconsider the question about whether ICT can transform learning, can do something that is radically different from previous practice, what we observe is that ICT in this case is sustaining working and personal links between young people who would not otherwise be brought together. ICT is the catalyst here for encouraging social inclusion.

In what sense does the work of this project relate to the values of history? We referred earlier to the work of Barton and McCully who argued that young people in Northern Ireland, even when given a fair and balanced account of past events, were inclined to draw conclusions selectively based on their own experience. Research by Stringer however, suggests that it is contact between young people which is far more effective in promoting attitudinal change. While Stringer’s work was concerned with face-to-face contact, the evidence from the Dissolving Boundaries project suggests that when collaborative work is successfully planned and implemented using ICT, this ‘virtual’ contact also has an effect on attitudes. In this sense it contributes to what the Northern Ireland’s CCEA call ‘mutual understanding’ which seeks to get young people to ‘respect and cooperate with others’, and to ‘manage and resolve conflict’.

Creative Learning in the Digital Age.

The third case study selected for analysis in this paper is a project that seeks to develop media awareness by providing teachers and pupils the opportunity not only to analyse digitised archival film on events in Northern Ireland but to edit this material and add pupil directed commentary and interpretation. The history teachers and their

pupils have access to a digital film archive, a digital video camera and hardware for editing which enables the pupils to add music and select whatever film clips they want. What this offers then, is the chance for pupils to create a short film or present their work in powerpoint rather than communicating their understanding in written form. This project, called Creative Learning in the Digital Age, is designed to stop pupils from passively observing moving image evidence in history and instead to be able to select those clips they want to give their own interpretation.

One boys’ school in Belfast, St Malachy’s College, a predominantly Catholic school, have made 4 DVD’s of their work which covers the Easter Rising of 1916, American Civil Rights and what is called the Home Rule Crisis. This relates to the events of 1912-1914 when the whole of Ireland was still part of Great Britain but Irish nationalists were seeking a form of self-government, called ‘Home Rule’. This was fiercely opposed by the protestant population which wanted to maintain their links with Britain. The DVD that the 13 year old pupils created on this topic has a number of interesting features; first, this is a highly controversial topic in Anglo-Irish history and was to lead after the 1914-1918 was to the partition of Ireland in 1921. This separation, as we noted earlier, is still seen as a seminal point in the history of Ireland and Great Britain to the extent that it is a required period of study for all pupils in Northern Ireland. We could almost say that the partition of Ireland has shaped the entire face of politics both in Northern Ireland and the Republic of Ireland and been the cause of continuing political and violent dispute to the present day. In other words, interpretation of this period of history is extremely challenging, particularly for younger pupils.

The second feature of the DVD is the manipulation by the pupils of visual data from a very wide range of sources; we see still photographs taken from the internet, cartoons and posters from the time and hitherto unseen film footage of popular demonstrations against Home Rule. What holds this interpretation together is the pupils’ audio commentary skilfully recorded to match the visual images. And what can we say about the interpretation with Catholic pupils seeking to understand the Protestant forces that resisted Home rule? It is impressively neutral, neither applauding nor condemning their actions but pointing to the long-term impact these events have had.

The third characteristic of this DVD is what it tells us about creativity. This is not a term usually associated with history, except in the often regrettable instances when pupils were asked to ‘imagine you were’ and found it impossible to know where the boundaries were between historical imagination and the imagination used in literature or creative writing. It is a truism to say that we live in a world where multi-media is omnipresent but this is especially true for young people whose lives are deeply touched by the combined effects of interactive television and visually animated games. When we give pupils the chance to study a variety of historical media resources and construct meaning through narrative, we are engaging them in something which is profoundly creative. The juxtaposition of image, music and commentary involves fine judgment about the effect this will have on the audience; so communication of historical understanding using this approach is intrinsically richer in potential than writing an essay, not least because, as we have seen, a key feature of this type of work is that it nearly always involves team work. In other
words, here again, we are moving away from individual pupils writing their own account of the past, to a context where meaning has to be negotiated between members of the group. Part of this involves oral presentation to other class members; while some of us might complain about the deteriorating standards of written work which we see in Higher Education, we should remember that most communication in adult life is not based on the written word but on the spoken, and increasingly through multi-media images.

Although we are at an early stage in the evaluation of this project, it is clear that historical work of this sort can make a significant contribution to the third of CCEA’s objectives, namely ‘developing pupils as contributors to the economy and environment’. This combination of team-work and creativity is providing pupils not only ways of understanding the media, but of learning life skills for employability. We can also say that this is a further example of ICT transforming learning; these pupils are finding new and original ways to express their understanding of the past in ways that nurture creativity. The use of powerpoint in this work is extremely important because of its quasi-universal presence in schools, its relatively low cost and because of the ease with which young children can put together multi-media presentations.

**Conclusion.**

All three of the ICT activities discussed in this paper present considerable technical and financial challenges to teachers and policy makers; it would be misleading to say that any of them can be achieved without commitment, risk taking and sheer perseverance when things do not go smoothly. While finance is important in terms of providing hardware, software and connectivity, there are two other equally large challenges. The first is the hard thinking that has to go into justifying the ICT choices we make and trying to ensure that there is an alignment between ICT and the broader values that schools are trying to develop through history. The second is how work of the kind we have described is made possible through a far more flexible approach to assessing learning and managing pupils’ work in the classroom. Does it really make sense to split the day up into 30-40 minute periods of time for subject specific study and how long will we continue to put all the computers into computer labs where they are cut off from the normal range of learning in the classroom. Wireless technology is now making connectivity in every classroom a much more realistic policy option.  

The emphasis in this paper has been on the relationship between ICT and learning rather than ICT and teaching; there are certainly instances of ICT transforming teaching, where for example ICT is being used as a delivery vehicle to offer teachers totally new insights into historical interpretation. But the focus on transforming learning seems to be entirely justified; a recent report from the Department of Education in England showed that a significant number of lessons involving ICT were either only satisfactory or poor.

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22 Roger Austin, ‘Getting Results’; a report on laptops and wireless technology, *Educational Computing and Technology*, March 2003
23 [http://learningcurve.pro.gov.uk/](http://learningcurve.pro.gov.uk/)
The experiences drawn upon in this paper have come mainly from Northern Ireland and to a lesser extent from the Republic of Ireland and Europe; do they have any relevance for other countries? I think the answer to this is yes. Given the worldwide levels of spending on ICT in the education sector and the widespread view that this is a key part of developing the information society, there is a need for clear analysis about the values embedded in ICT if it is to deliver the transformative role in learning that it can. This debate affects all of us and requires that we use the facilities of computer and video-conferencing to reflect critically on our practice and provide evidence of our findings. I look forward to being part of this discourse.