The Effective Use of ICT in the History Classroom

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June 1999

Introduction

In this project I wish to initially discuss the theoretical issues relating to the use of computers in history education, commonly stated as the use of Information and Communications Technology (ICT). It is vital to examine what is actually meant by the term 'Information and Communications Technology'. Why is it needed and what benefit can it have for the teaching of history? Why is the use of ICT in the classroom now a statutory requirement? Does ICT really offer anything different? Is the future really likely to recognise two types of teachers – the ICT compliant and the retired?[1] By looking at these questions, I shall investigate and develop ideas how ICT can and should be integrated into the history curriculum. It is important to examine the limitations of ICT – what are the main problems? I wish to investigate ways around these difficulties, suggesting possible solutions.

The department in my main practice school requested I develop their own use of ICT – specifically with CD-Roms. I aim to utilise the theoretical ideas put forward in the first part of my project and put them into practice. I wish to create beneficial, useful and worthwhile activities to accompany the department CD-Roms. It is obviously vital to examine what constitutes 'beneficial, useful and worthwhile activities' both with CD-Roms and with the entire spectrum of ICT and History. The mere use of computers is obviously not an automatic answer for the teacher of History's prayers. Yet the attention and press coverage now given to developing ICT capability for all subjects clearly demonstrates that currently these issues are of major interest to education as a whole. In this project I wish to evaluate the genuine beneficial uses of ICT in history, and implement these successfully. Having done this, I expect be able to state how ICT may be effectively promoted in the history classroom.

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[1] *With reference to Peter Cochrane, "There will be two types of teachers, the IT literate and the retired" in* TES*, 23 June 1995*

'IT' (Information Technology) and 'ICT' (Information and Communications Technology) are relatively similar terms. 'IT' is "the technology involved in the recording, storage, and dissemination of information, esp. computers, telecommunications, etc".[2] The term 'ICT' has been used recently in educational literature to emphasise the connected element of modern computers – mainly with the implementation of the Internet. For the purposes of this study I shall use the term 'ICT' basically to represent computer technology in general. ICT in this sense covers a wide spectrum of ideas, and will require later analysis.

According to the National Curriculum for History, "Pupils should be given opportunities, where appropriate, to develop and apply their information technology (IT) capability in their study of history."[3] Thus, history teachers have a statutory obligation to provide ICT in their classrooms. Why is this? What does ICT have to offer the history teacher? Recently John Clare[4] asserted "You can't beat chalk and talk", and claimed there is no evidence that computers in the classroom raise educational standards. Haydn, Arthur and Hunt state[5] that "… there is a substantial amount of research evidence to suggest that the use of IT increases pupil motivation, can improve attitudes to school and pupil behaviour, and can be used to improve presentation and pride in work". However they do also point out that research into learning gains through the use of ICT in school history is "neither definitive or abundant".[6]

It is important to realise there is no standard ICT exercise, and thus to say ICT in history is effective is too much of a generalisation. Some programs or presentations will amaze pupils using clever multimedia effects, or present a valuable historical source accompanied by lights, sound and music. This may serve to temporarily increase pupils' enthusiasm for history, but such ICT activities are of limited use beyond their debut five minutes in front of a new class. Other ICT activities may initially appear uninspiring, but actually make a significant contribution to learning history. Any ICT in history would obviously appear to promote development in two subjects – IT and history. There are great differences between ICT applications, and

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[2] *The Oxford English Reference Dictionary (1996) p.723*
[3] *The History National Curriculum, (Dfee, 1995) [http://www.dfee.gov.uk/nc/hiscomon.html]*
[4] *Clare, John, "You can't beat chalk and talk", The Daily Telegraph (20th January 1999) p.20*
[5] *Haydn, Arthur & Hunt, Learning to Teach History in the Secondary School (Routledge, 1997) p.165*
[6] *Haydn, Arthur & Hunt, Learning to Teach History in the Secondary School (Routledge, 1997) p.165*

the extent to which historical skills, concepts and knowledge or indeed IT capabilities are developed depend upon the individual nature of each activity.

Computers are an integral part of life as we reach the millennium. Even though the National Curriculum demands IT is promoted in all subjects, there is a basic duty for the modern history teacher to develop the class use of IT. OFSTED claim "… the potential of IT is often not fully exploited by history departments".[7] Far from adding a professional gloss to lessons, or dressing up a potentially uninteresting topic, the effective implementation of ICT, in my opinion, will promote the development of historical knowledge and skills in pupils of all abilities. A computer may be seen as another useful resource for the history teacher, another tool to help promote effective learning. In this sense, ICT is beneficial as it provides greater variety in teaching. In my limited experience so far, a variety of useful resources is a means to both successful classroom control and effective learning and thus enhancing progression. However, ICT should be seen as more than another tool. Computers have the ability to offer a new dimension to learning. Terms such as 'multimedia' and 'interactive' are often used to explain why computers offer so much. I would prefer to say that a modern multimedia computer has the *potential* to offer a great deal.

Multimedia ICT programs present the pupil with video, sound clips, text and pictures. In theory this should mean a fantastic learning tool. For example a CD-Rom could present text relating to the outbreak of World War II. This text could be read out allowing those with special educational needs a greater opportunity to understand. There could be an interactive glossary or even dictionary allowing pupils to click on individual words and have them explained. This improves pupils' literacy, knowledge and understanding. Once the text has been read and listened to, a video of Germany invading Poland could then be presented – illustrating the events in a different perspective. The program can be seen as 'interactive' as pupils have the freedom to explore and investigate at their own speed. If they do not understand a term such as appeasement, a button could be clicked and an explanation appears. The potential opportunities are limitless. In theory, it would appear that ICT has a tremendous amount to offer.

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[7] *OFSTED. History: A Review of Inspection Findings (HMSO, 1994)*

However, there are a number of important limitations. Firstly, no such all-inclusive CD-Rom activity exists – though many make a considerable effort. The history teacher wishing to utilise ICT is limited by what software and products are available. In addition the cost of many products is extremely high, and without careful research and testing department money for resources could be wasted. The government has set up some organisations to assist department with this problem, such as TEEM (Teachers evaluating educational multimedia)[8] but such projects are still in their infancy.

The most important limitation however is the question whether such ICT activities really enhance pupil learning and progression. As previously mentioned, research into learning gains through the use of ICT in school history is "neither definitive or abundant".[9] This should be no surprise though. The "rapidly changing face of computing"[10] is a common phenomenon, and the pace of change is so great that once a classroom teacher becomes confident enough to effectively utilise an ICT activity in the history classroom it may be seen as outdated. John Hawson[11] writes that "five years ago only the most IT literate teacher knew what the Internet was." Yet even though applications may 'become outdated' (such as Microsoft® Word '97 being superceded by Microsoft ® Word 2000) many of the activities remain similar. John Hawson explains that the rise in both awareness and use of IT has been startling, and schools are not surprisingly struggling to come to terms with the implications. New activities are released daily and for definitive research to take place more time and long-term actual classroom use is required. In my opinion though there are clear benefits in the use of ICT in the history classroom.

When I have used ICT in the classroom, the enthusiasm was obvious. When I used a networked computer activity for year 7, most pupils came into the classroom saying, "Great! We're going on the computers today!" There is no point advocating the use of ICT merely to make pupils keen to enter the history classroom, but for learning potential to be maximised a basic interest and keenness in the activity is fundamental.

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[8] *http://www.teem.org.uk*
[9] *Haydn, Arthur & Hunt, Learning to Teach History in the Secondary School (Routledge, 1997) p.165*
[10] as *Harrow, Jeffrey, Senior Consulting Engineer, Technology & Corporate Development, Compaq Computer Corporation explains - http://www.compaq.com/rcfoc*
[11] *Hawson, John. TES (January 8 1999)*

ICT can help pupils to ask historical questions, to investigate change, cause and consequence, to assess and use a wide range of sources and to organise information and ideas and communicate effectively. As shown below, different aspects of ICT allow the development of different skills.

Identifying change	Databases
Setting up enquiries	Using a CD-Rom
Analysing causes	Using a drawing package (e.g. Paint)
Structuring extending writing	Using a word processor

The revised National Curriculum Orders for IT (1995) state that:

"Information Technology (IT) capability is characterised by an ability to use effectively IT tools and information sources to analyse, process and present information, and to model, measure and control external events

This involves:

- Using information sources and IT tools to solve problems
- Using IT tools and information sources, such as computer systems and software packages, to support learning in a variety of contexts
- Understanding the implications of IT for working life and society"[12].

BECTA (The British Educational Communications and Technology agency) link History to the IT National Curriculum, pointing out "the strands particularly relevant to History are:

> [1] Communicating information, which involves modifying and presenting information in a variety of ways incorporating words, pictures, numbers and sound.
>
> [2] Handling information, which involves storing, retrieving and presenting factual and fictional information."[13]

ICT can address all the Key Elements[14] stipulated in the History National Curriculum (1995). Cut & Paste exercises in Microsoft® Word along with the use of a glossary

[12] *National Curriculum for IT*
[13] *from the BECTA website at www.becta.gov.org*
[14] See Appendix I

in a CD-Rom will enhance the understanding of Key Element 1 – chronology. Here pupils are able to edit, select and sort information, allowing a greater understanding. A specific CD-Rom (such as one relating to the Industrial Revolution) will enhance the 'range and depth of historical knowledge and understanding' (Key Element 2). The vast amount of information stored on CD-Roms allows an analysis of the characteristic features of particular beliefs, attitudes and experiences. Reasons for and results of historical events may be analysed in detail. Similarly interpretations of history (Key Element 3) may be improved through the multimedia approach, presenting information and sources in a variety of ways. Historical enquiry (Key Element 4) may be enhanced no end using the Internet and CD-Roms to investigate, use and analyse a range of sources of information, including documents and printed sources, artefacts, pictures, photographs and films, music and oral accounts, buildings and sites. ICT can be used to back up an investigation of, for example, an artefact – demonstrating the context of use and related materials. The National Portrait Gallery has begun releasing educational CD-Roms that allow an investigation of paintings. In no way do I advocate omitting an actual visit, but as either a prior or follow up activity the CD-Rom can be used to investigate why certain objects are included in the painting – enhancing pupil interest and knowledge about the painting. ICT can thus enable the evaluation of sources in context. One of the strong points of ICT is obviously organisation and communication (Key Element 5). Pupils may select and organise information using a word processor, and communicate their knowledge and understanding more effectively using presentation and graphics packages.

ICT is not the answer to the history teacher's problems. Indeed adopting the use of ICT may actually add to such problems. It must of course be realised, as previously mentioned, the teacher is limited by the quality of the CD-Roms or design of the activity she or he is working with – but in theory, this use of ICT will enable an extremely effective coverage of the Key Elements.

It is important to examine what constitutes beneficial, useful and worthwhile activities for ICT. My definition of Information and Communications Technology, as mentioned, covers a wide spectrum of activities. Word processing is the most accessible form of ICT and can be used at all levels. The word processor provides a wide range of opportunities ranging from simple manipulation of text to supporting extended writing. Databases and spreadsheets are amongst the most commonly

used forms of ICT employed in a history classroom. Spreadsheets and databases enable analytical work to be carried out on data and encourage pupils to look for patterns and relationships as well as interpret and decipher historical evidence. CD-Roms are increasingly used in history as more and more titles appear which provide appropriate sources, information and archives. Desktop publishing software may be used for individual projects or for displays and presentations. Desktop publishing may also be employed as a popular way of writing news articles about historical events from opposing standpoints. In addition, some computer simulations may be employed, but due to their relative simplicity many fail to meet the requirements of Key Stage 3.

The word processor is an underused ICT commodity, and with careful thought and preparation, it can be utilised for many activities:

Accessing text	**Give pupils a section of unformatted text, and then asked:** • To highlight key words and phrases that require explanation, and then create a glossary using a dictionary. • To add headings or sub-headings • Change the layout to make text easier to understand • Add short questions to help the reader reflect upon and review the information given in the text
Selecting information (and discouraging copying)	**Give pupils some text to be studied, followed by a question they need to answer. Pupils should:** • Highlight any words or phrases they feel relevant to the question • Copy and paste their information under the question • Delete any duplicate extracts • Weave the statements into an answer – linking the words and sentences to make the selection into an answer.
Sorting and setting	**Give pupils a prepared list of reasons for an event or a development. Pupils should:** • Ask them to highlight the social, political, economic and religious reasons using a different font for each • Copy and paste these reasons into sets • Place the reasons in rank order, with justification.

Chronology	**Give the pupils a jumbled-up list of events. Pupils should**: • Cut and paste the series of events in chronological order. **Pupils could also be given a description of a sequence of events or event with the middle or end missing. Pupils should:** • Add own ideas for the missing section, using evidence from the rest of the text • Then compare different versions along with what actually happened, focusing on the ideas of causation and motivation as these arise.
Changing the form	**Give pupils a written source, and ask different groups to use word processing functions to change it into:** • A report or chronicle of the event • A play - especially if dialog is in the original source • A diary.
The newspaper report	**Give pupils a newspaper report of an event. Ask them to become Editor, and using cut & paste:** • Provide an appropriate headline • Alter it's style or length • Edit the report so it now presents a different point of view
Significance	**Give pupils the text of an event and:** • Create a soundbite – edit the information to create a 10 second bulletin highlighting the key facts. Different groups could be given different target audiences and asked to display different attitudes towards the event • Official censor – a sensitive text needs to be censored before being approved for the public. [Wartime letter or report of a battle]. Task is to 'edit' the letter removing any 'dangerous material'.
Promoting writing	**Give students a piece of writing. The aim is to alter and improve the piece:** • Students need to ask questions to correct any shortcomings in the text e.g. Does introduction say what the whole piece is going to be about? Are the paragraphs in logical order? Does it make sense when read aloud?
Interpreting sources	**Give pupils a contemporary account of an event or a speech. Pupils should be asked to highlight key phrases using a different font or italics to show:** • Key facts • Any words or phrases that need explaining • The attitude of the author to the subject • Any evidence of subjectivity or generalisation

Word processing exercises work best in a networked environment, with a suite of PCs. Here the class can be set the activity, and then in groups of 2-3 pupils can all attempt to complete the task simultaneously. A major benefit of utilising word processing activities is also the cost – if the teacher can think if the task themselves the financial cost upon the department will be negligible. The previously suggested tasks are not comprehensive, and serve to demonstrate the wide range of possibilities. My main practice school utilises a chronology exercise for Year 7, where the correct headings need to be given to an untitled paragraph, and then need to be arranged in the correct order. Similar exercises are used for Year 8 for a study of the Civil War and also for Year 9 where a source analysis exercise develops précis skills.

The other major area of ICT which is readily achievable by the history department is the use of CD-Roms. Currently it appears CD-Roms are used as an add-on element to lessons. For example the class may be creating a project on slavery using a wide variety of resources, and one such resource is the computer in the corner of the classroom. With a copy of Encarta®, pupils can enter a word and then find a large amount of information. The pupil then selects print, and prints out the entire article. If he or she has some ICT capability, the text can easily be copied into a word processor, the fonts and layout changed and handed in as their own work. Whilst it is usually obvious when a pupil has done this, it does present a significant problem.

This is also a problem for homework tasks. Many families now have a home computer, and most are provided with a research CD-Rom when the computer is purchased. If a pupil is asked to research a topic, they often ask if they may use their computer. The teacher, remembering the requirement to utilise ICT effectively, gives permission. The pupil will then go home, tell his or her parents that their history homework is to use the computer to research. Whilst there is nothing wrong with this, the work produced for the next lesson is almost always a

direct printed transcript direct from the CD-Rom – often accompanied by the American spellings. The use of the Internet for research highlights similar difficulties relating to plagiarism. It is a very difficult issue, and one surely to get more difficult as home Internet access continues to increase.

The problem of printing information direct from a CD-Rom can be solved though – but it does involve preparation work from the teacher beforehand. A word limit may be given - considerably less than the total number of words that the entire article contains. However, the pupils may just print off some of the information, leaving the later parts out. In my opinion the real solution is to encourage the use, analysis and scrutiny of the information while it is on the computer. This will prevent printing out entire articles of largely irrelevant information, reduce the history department printer consumables costs, and – most importantly – encourage the development of historical skills relating to the key elements already discussed.

The Virtual Teacher Centre on the new National Grid for Learning[15] states that "…most CD-Roms offer a multimedia approach in which the student navigates around pages of information by clicking on screen buttons between articles, chapters or sections in a very fluid way. Many discs have search mechanisms that allow index, key word or topic searches."[16] However, this 'fluid way' only works effectively if pupils are given enough guidance how to use the CD-Rom effectively. Haydn, Arthur and Hunt state the use of CD-Roms "…is not unproblematic in terms of classroom use – you still need to be able to devise a workable classroom activity which asks pupils to do something useful with the information on the disk".[17]

The most 'beneficial, useful and worthwhile' activities, acknowledging the limitations mentioned above, would be for a class to be split into groups of 3-4 pupils, each having 10-12 minutes on the computer. For networked activities, the arrangements are much easier, and the entire class may spend most of the lesson on individual computers. The department CD-Roms I wish to develop activities for are largely for stand-alone use i.e. not on the network. The initial difficulty is to make sure the tasks are indeed worthwhile. Secondly it is important to have activities for the rest of the class to be tackling while each group has their turn on the computer.

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[15] *which may be found at http://vtc.ngfl.government.uk*
[16] *http://vtc.ngfl.government.uk/resource/cits/history/cdintro.html*
[17] *Haydn, Arthur & Hunt, Learning to Teach History in the Secondary School (Routledge, 1997) p.187*

I earlier examined the potential of the use of ICT, and the connections to the Key Elements of the National Curriculum for History. I feel for the activities to be most worthwhile, close consideration needs to be undertaken as to these connections. Utilising the information on-screen rather than by printing out reams of paper is another priority.

Conclusion

In conclusion, ICT can benefit the teaching of history in a number of ways. It provides greater variety as another method of teaching history. It can improve pupil motivation and attitude. ICT in theory is a fantastic learning tool – offering the potential for a great deal. The use of ICT can promote effective and useful progression in every Key Element. CD-Roms may assist special educational needs pupils, promoting understanding and development for pupils of all abilities. The average CD-Rom has built in differentiation, allowing pupils to progress at their own pace and look at areas of interest or confusion in detail. The use of ICT can actively improve literacy, knowledge and understanding. However, all this depends on the ICT resource being used. Without doubt ICT has many things to offer the teacher of history. Probably one of the most fundamental is that most pupils enjoy using computers. When pupils are relaxed and enjoying a lesson the learning potential is maximised. Beneficial, useful and worthwhile activities to accompany the CD-Roms will thus:

- Prevent printing large amounts of unread material.
- Prevent widespread plagiarism from the CD-Rom.
- Focus pupils' attention into an area where progress can be made – providing pupils with useful direction.
- Give enough guidance so pupils know how the CD-Rom interface operates – but also allow independent development of ICT skills.
- Result in progression of both ICT confidence and capability along with historical knowledge and understanding.
- Promote the investigation and enquiry of information actively – using the information selectively and carefully whilst using the computer.
- Encourage the acceptance of the computer as another tool for use in the history classroom – not just an easy way of printing off information

An effective ICT exercise using CD-Roms is one that enhances the study of history, provides a challenging but achievable task, and results in the progression of IT skills and most importantly historical knowledge, understanding and development. I feel the best use of stand-alone CD-Roms in the classroom is with small groups (of 2-3

pupils) using the computer for limited periods of time (around 10 minutes). These exercises due to these constraints will clearly have to have a strong focus. Such exercises will involve:

- Developing search techniques and finding answers to specific questions.
- Interpreting and answering relevant questions using aural, visual and text sources.
- Using ICT as an assessment tool, enhancing understanding and progression after a topic has been studied.
- Using ICT as a discovery tool, finding out information and ideas before a topic has been studied.
- Using the CD-Rom as an active resource – demonstrating the links, connections and causes of events.
- Using ICT for differentiation, allowing lower ability pupils a resource to understand a topic from a different perspective, or higher ability pupils the opportunity to investigate a topic in greater detail.
- Enable easy and effective access to a vast quantity of source material.

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It is now safe to turn
off your computer