

History education and information communication technologies (ICT)

This section provides advice on the role of information and communication technologies in the teaching of history.

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ICT and history: An introduction

Since the early 1990s, schools have been on the frontline of the ICT revolution. The new technologies of the digital age have presented school systems and educators with a perplexing mix of promise and problem. ICT has been promoted as the great hope of new education, the great liberator, the common currency of the 'knowledge age'.

The reality has not quite matched up. As a teaching and learning tool-system, ICT has also created the greatest frustrations and the greatest disappointments. This is as true for the history classroom – real or virtual – as for any other. But it is also true to say that for history education ICT offers particular challenges and particular advantages.

A 1999 study on computer use in schools, *Real Time: Computers, Change and Schooling*, commissioned by the former Commonwealth Department of Education, Training and Youth Affairs, found that many students are competent and experienced computer users who do not depend on schools to access information or develop technological skills. In surveying the basic and advanced computer abilities of primary and secondary students, the research also showed that many computer skills are picked up at home and that girls and boys have different patterns of computer use. While there are areas of disadvantage among Indigenous students and students in rural and isolated areas, approximately 60% of Australian households now own a personal computer and 30% have a home connection to the Internet.ⁱ

At first glance, these figures support the prediction of Seymour Papert, pioneer of educational computing, who said back in 1980 that:

Increasingly, the computers of the very near future will be the private property of individuals, and this will gradually return to the individual the power to determine patterns of education. Education will become more of a private act ... There will be new opportunities for imagination and originality.ⁱⁱ

More than 20 years further on, while we celebrate that computers do offer new capacities to learn both inside and outside the classroom, we more readily ask about the 'digital divide', defined by the fact that 40% of Australian homes do not use computers and over two-thirds are not connected to the Web.

Schools are still the primary providers of experience and learning in ICT for a significant proportion of Australian students. Yet schools themselves are caught in the digital divide by the uncomfortable facts of inequitable resourcing; inequitable quality of access to the range of technologies, be it hardware, software or Internet service provision; and/or inequitable access to ICT professional development support.

In the light of such realities, teachers of history face great challenges in utilising ICT, but they also have great opportunities to join students' enthusiasm for computers with exciting and innovative teaching and learning in history.

This section of *Making History* provides some guidelines on how to maximise the teaching and learning opportunities offered by ICT and how to apply their unique capacities to exploring history and developing historical skills through the 'digital dialogue'.

ICT and inquiry learning

It is a common misconception that ICT necessarily involves using the Internet. Fascinating and valuable though the Internet is, computers provide a multitude of ways and means to assist teachers and students with other learning tasks.

A 1994/95 discussion paper of the Australian Computer Society and the Australian Council for Computers in Education, *Computers in Schools: A Framework for Development* identified five 'modes' of computer use in schools.

- Resource** – to access information from a range of sources.
- Tutorial** – to gain new knowledge and receive feedback.
- Exploration and control** – to examine and build situations.
- Support** – to communicate and present information to an audience.
- Link** – for interactive communication between individuals and groups.ⁱⁱⁱ

This model is broadly equivalent to the processes of inquiry learning outlined in the curriculum frameworks and syllabi for History, Studies of Society and the Environment (SOSE) or Human Society and its Environment (HSIE) in all Australian States and Territories. As such, it may be reconfigured in pedagogical terms familiar to teachers of those subjects. The following table suggests a way this can be done and gives examples of associated computer tasks. Some of these require connection to the World Wide Web but many can be undertaken offline.

Modes	Inquiry process	Task examples
Resource	Locating information	Use the Internet and CD-ROMs to access primary and secondary sources; locate bibliographies; interrogate databases; or search digital documents for information.
Tutorial	Identifying and analysing information	Undertake a WebQuest; use various interactive games and investigations; or construct a database.
Exploration and control	Organising ideas	Use a graphic organiser; apply charts; scaffold or plan in Microsoft® Word™ or PowerPoint™; or build a situation with Global Information Systems.
Support	Communicating and presenting information	Use word-processing, multimedia or other programs, such as Microsoft® PowerPoint™, for a presentation; design a Web page; or create graphs and charts.
Link	Action and participation	Annotate and comment in Microsoft® Word™; conduct discussions via email or bulletin boards; or communicate with other students in real time.

Computers in the history classroom

The arguments for educational computer use are compelling. Much research indicates the positive effects that student use of ICT can have on achievement, self-learning and learning attitudes across all subject areas.^{iv} There is also evidence that student motivation is significantly increased.

Teachers of history are finding that effective use of computers in the classroom enables them to build communities of learners, create student-centred learning environments and better cater for individual needs.

In facing the task of building communities of learners, there is cause for caution about the role of ICT. Australian educator Tara Brabazon warns that ‘there has been a confusion of technology with education, and tools with learning’. She advocates plural educational pathways where ICT is part of a whole strategy:

When teaching, there is nowhere to hide. It is a raw, sweaty, concentrated reality.

This work is so rewarding because of the diverse students attending our schools and universities. It is complex to teach students from these different backgrounds, because there are no singular narratives, truths and curricula that can encompass all their histories.

My strategy is to use highly integrated mixed media, encasing video, print and audio-based texts, alongside scents and textures. From this base, myriad literacies are hailed. ESL (English as a second language) students gain confidence through print-based triggers. Film and televisual knowledges assist visual learnings, and aural texts, such as recorded speeches and popular music, serve to slow the lecture forum and enlarge the affective experiences and public applicability of education.

The internet cannot stand alone as a single mode of delivery in teaching.^v

In equipping learners with powerful intellectual tools, teachers can provide students with opportunities to develop many of the cognitive skills outlined by Benjamin Bloom^{vi} and allow them to explore individual learning styles based on Howard Gardner’s [multiple intelligences](#).^{vii}

Here, for example, is a history research assignment about Australia’s experiences in World War I, based on Gardner’s multiple intelligences. With careful planning, computers could be used for many of the activities:

Multiple intelligences	Research task	Examples of possible computer use
Linguistic	Read stories, poems and primary source materials on the war and prepare a speech about Anzac Day.	Locate information on Internet. Use word processor to draft and write speech.
Logical-mathematical	Create statistics, graphs and timelines of Australia’s involvement in World War I.	Locate data on Internet. Construct graphs using software such as Microsoft® Graph™. Present to the audience using Microsoft® PowerPoint™ or similar.
Spatial	Look up information about the ideas, experiences and attitudes of soldiers in war and/or civilians at home. Draw or illustrate scenes, create recruitment posters, design a memorial or draw cartoons.	Locate examples (such as war memorials) on the Internet. Draw and colour posters, memorials and/or cartoons using AppleWorks™ or similar.
Musical	Find and/or sing existing songs from World War I, or create your own, that reflect the attitudes and ideas of the time.	Locate lyrics and/or sound files of World War I songs on the Internet. Use music notation software or word processor to compose song or write lyrics.

As Seymour Papert has pointed out, 'The computer is seen as an engine that can be harnessed to existing structures'.^{viii} Rather than displace familiar approaches, ICT offers teaching and learning tools to enhance current pedagogies, the implication being that ICT can and should link to sound educational practice.

Using the World Wide Web

Research for *Real Time: Computers, Change and Schooling* indicates that SOSE teachers are among the keenest users of ICT in their classrooms, particularly for informational purposes. They use the Internet enthusiastically for research tasks and are generally aware of the legal, ethical and pedagogical issues confronting teachers who use the World Wide Web (WWW).^{ix}

These issues fall into three main categories:

- the possibility that students access material that may be obscene, defamatory or pirated;
- the control of the distribution of such material over the school network, and specific academic interests in preventing plagiarism;
- the likelihood that governments, parents and the private and community sectors will not support the costs of providing and maintaining school networks unless anxieties over content are addressed.^x

Teachers of history can support their individual school's computer policies by reaffirming skills they have always attempted to teach. One useful approach is to provide students with an information analysis checklist. Although the analysis can be undertaken solely as a written task, it should be reinforced by formal class discussion before and after research. In the age of the Internet it is not more information students need, but more *assessment* of information and more *reflection* about its meaning.

A grid like the following can accompany any history research involving use of the WWW:

Interrogating the source: A checklist for Internet research

Task	Interrogation questions
Locating information	How did you search precisely for the information you needed?
Validation of sources	What is the URL? Where did this information come from? Who is the author?
Motivation	What is the purpose of this material? Why was it published? Does it attempt to persuade, inform, entertain or convince you? How has the author attempted to do this?
Primary or secondary	Is what you are reading/viewing a primary or secondary source or a mixture of both? Are the sources reliable and acknowledged?
Detection of bias	In what ways is the material biased? How is the bias evident? By omissions? By inaccuracies? By language style? Does it present opposing viewpoints or only one point of view? How can you compare it to other sources of information?
Assessment of relevance	Is all your material of equal value for your questions or task? What parts are most useful and least useful for your purpose? Is it too difficult/too easy/sufficient for your purposes? What will you use or discard?
Distinguishing fact from opinion	Is what you are reading fact or opinion? Are the facts reliable and documented? If there are opinions, upon what evidence are they based?

Locating historical information on the Internet

The Internet enables students to locate catalogues in international libraries, study the texts of famous historical documents, such as the Treaty of Versailles, the Magna Carta or Ned Kelly's 'Jerilderie Letter', and view the holdings of famous art galleries, museums and scientific institutions in Australia and around the world (see '[Some history Web links to explore](#)'). As such, it is an extraordinary repository of information about:

- text-based primary sources (such as diaries, letters and government documents)
- non-text-based primary sources (such as paintings, photographs and artefacts)
- secondary sources (such as individual opinions and academic writing).

Searching

Locating reliable and relevant information can be time-consuming and requires practice. Search engines like *Google* (<http://www.google.com/>), *Yahoo! Australia & NZ* (<http://au.yahoo.com/>) or *AltaVista Australia* (<http://au.altavista.com/>) have different ways of ordering information or may allow confined searches. For example, Yahoo! and AltaVista easily allow users to search only Australian websites.

Recent studies have 'found search engines were biased when searching a common subject using related terms'.^{xi} To reduce this problem, students should obtain a broad spectrum of information by using a number of different search engines.

The more familiar teachers become with methods of searching and the peculiarities of different search engines, the better advice they can offer to their students. They should also recommend appropriate search terms before students begin Internet research.

Another way for teachers to give students direction for research is to save addresses of appropriate sites as hyperlinks on floppy disks or on the school server. Disks can then be distributed to individuals or groups prior to visiting the computer room or school library, or the students can be directed to the list of hyperlinks on the school server. Disks might also be borrowed and taken home as references for homework tasks.

Comparatively few websites are designed for direct educational or school use, so it is recommended that teachers of history design structured research tasks for their students. Some teachers prefer to do this with a WebQuest, TrackStar or Filamentality software application (see '[Identifying and analysing information](#)').

Real evidence

Teachers should remind their students that [facts are not the same as evidence](#) and that the Internet cannot provide access to physical articles – only to *reproductions* of original documents and artefacts, the 'virtual archive'. Teachers of history should explain these limitations to students and lead discussion about the nature of evidence of the past.

Issues in using the Internet

As in all other studies, history students need to be clearly aware of the protocols, legalities and ethical issues associated with the use of materials available on the Internet.

Key issues are:

- Plagiarism** – The act of copying or taking other people's words and ideas and passing them off as your own is 'intellectual theft'. Not only is it dishonest and a breach of ethical standards, it is also educationally unproductive. Plagiarism is a deception, not a way of learning. Students need to clearly acknowledge the sources of any information, text and images they download or copy from Internet sources.

- **Copyright and permissions** – All material on the Internet is ‘published’ and owned by other parties. It is one of the great misconceptions that because the Internet is openly accessible and seen as ‘free’, material available on the Web is also free. Teachers need to assist students in the methods and habit of checking website copyright and the terms and conditions of use. If they choose to download and use material in their own work, especially for their own websites, they may need to seek permission from the original author or owner of the rights to use and may be required to pay rights fees.

This is a reciprocal right as well as a responsibility. Students also have copyright and intellectual property to protect. Teachers should assist students to value their own Web-published work and advise them on how to protect their copyright.

Suggestions for classroom practice

Preserving the past in the age of ICT: A case study – Ned Kelly’s ‘Jerilderie Letter’

Level

Middle secondary

Focus

Do we need to keep preserving documentary evidence of the past?

Create a context

Have the students connect to the Victorian State Library website, where Ned Kelly’s ‘Jerilderie Letter’ is on display: <http://www.slv.vic.gov.au/slv/exhibitions/treasures/jerilderie/>.

Discuss the Kelly story so that students have a context for the letter. Recount some of the history of the letter itself, including when it was written, by whom (Kelly dictated it to Dan Kelly) and under what circumstances; the fact that it was never published by the newspaper Kelly had written it to; and that it has only recently been acquired by the State Library.

Learning activity

Scan the local newspapers and develop an example of a letter that has been sent to a newspaper complaining about some aspect of government policy today.

Display the letter to the students as a printed, word-processed document. Display the same letter as an email on the computer, as it might have been received by the newspaper. Note the obvious point that neither the email nor the printed copy are handwritten or signed. This is a major point in the following discussion about the veracity of historical evidence.

Discuss the relative merits of preserving and keeping both letters (Kelly’s and the contemporary letter) as evidence of the past. Sample questions might include:

- Why are certain items from the past preserved and valued? Ask students to give some examples.
- Why are other items regarded of little value and not kept? Ask students to give some examples.
- Who determines what items from the past should be kept? What criteria might they use to make their decisions?
- What sort of information about Ned Kelly or the contemporary letter writer could you *not* find on the Internet? Why?
- Now that high-quality digital reproductions are available, should we destroy the original documents, paintings and artefacts? Does it matter that we have Kelly’s original letter in the State Library? Why/why not?
- What additional information or evidence might historians gain from examining the real thing rather than a reproduction?

- Is Kelly's letter more reliable and trustworthy as evidence of the past than the email or printed copy of the letter from the contemporary citizen?
- What problems do the new information technologies create for recording the history of our current time?

Some history Web links to explore

Australian Libraries Gateway (Australian libraries)

<http://www.nla.gov.au/apps/libraries/>

Australian Libraries Gateway – Overseas Libraries by Region

<http://www.nla.gov.au/libraries/resource/libxregion.html>

The Versailles Treaty

<http://history.acusd.edu/gen/text/versaillestreaty/vercontents.html>

The Text of Magna Carta

<http://www.bl.uk/diglib/magna-carta/magna-carta-text.html>

Treasures of the State Library of Victoria – Ned Kelly's 'Jerilderie Letter'

<http://www.slv.vic.gov.au/slv/exhibitions/treasures/jerilderie/>

Artcyclopedia – Art Museums Worldwide

<http://www.artcyclopedia.com/general/museums.html>

AMOL: Australian Museums and Galleries Online

<http://www.amol.org.au/>

Virtual Library Museum Pages

<http://icom.museum/vlmp/>

Locating historical information in databases

What is a database?

In its simplest form, a database is an application that allows data to be stored, sorted and manipulated in a variety of different ways. The easiest way for teachers of history to explain this concept to students is to show them the computerised catalogue of a school or municipal library. It will include a large number of individual *records* (books, journals and so on) containing a number of *fields* (author, title, subject, publisher, fiction, non-fiction and so on). Users locate information by typing in appropriate search terms – the author’s name for example. The library catalogue is an example of a closed database, as only authorised people (the librarians) are allowed to manipulate the data. The general user is permitted to find data but may not alter it in any way.

Interrogating a historical database

In the past, many historical records were stored on paper or on cards, but modern information systems generally store data in digital form. There are many advantages to this. Depending on the type of database, records can be retrieved rapidly, sorted in various ways or used to develop charts and graphs. History students need not confine themselves to using ready-made databases. Many will enjoy constructing their own.

Historical database example: Australian fatalities in the Vietnam War

Historical databases may also use fields to organise information. Here is part of an Excel™ spreadsheet/database of the 520 Australian fatalities in the Vietnam War (from T Hastings & R Imam 1993, *Australians in the Vietnam War*, [kit] History Teachers Association of Victoria, Melbourne). It has 13 fields, including the name, rank, place of birth, date of death and manner of death of all deceased.

	1	2	3	4	5	6	7
1	94	21	Abbott, Dal E	May 30, 1968	1RAR	Ashfield, NSW	Driver
2	233	22	Abraham, Dennis E	September 29, 1968	104 SIG SQN	Semaphore, S	Electrical fitt
3	234	22	Abraham, Richard J	July 6, 1969	9RAR	Whyalla, Sth.	Professional p
4	235	22	Adamczyk, Bruno A J	July 12, 1969	9RAR	Schwerte, Ger	Soldier
5	336	23	Adams, Lex W H	March 31, 1971	2RAR	Cooloongatta,	Optometrist
6	396	25	Ahearn, Alan W	May 14, 1970	8RAR	Sydney, NSW	Apprentice ca
7	49	20	Aldersea, Richard A	August 18, 1966	6RAR	Perth, W. Aus	Lube attendan
8	95	21	Allen, Norman G	November 10, 1967	7RAR	Sydney, NSW	Clerk

Screenshot from the *Australians in the Vietnam War* database.

The information can be sorted alphabetically, or users can retrieve an individual record by simply using the ‘Find’ command (Control+F) and scrolling across. Here is an example of an individual record:

Age	Name	Date of death	Regiment	Place of birth	Civilian occupation	Marital status
21	Van Valen, Arie	June 29, 1965	1RAR	Dordrecht, Holland#	Shop assistant	Single
Rank	Manner of death		Regular/national serviceman	Died	Buried	Commemorated
Private	Accidental grenade explosion in unit lines; died in 3 US Field Hospital		Regular	Saigon	Garden of Remembrance, W. Australia	Karrakatta Cemetery, W. Australia

History students have used the *Australians in the Vietnam War* database to locate information, test hypotheses and answer questions such as:

- How many soldiers died of illness or in accidents?
- What was the average age of the Australian fatalities?
- Did more national servicemen or regular soldiers die in Vietnam?
- How and where are the Australian soldiers commemorated?

Suggestions for classroom practice

Creating and using databases

Making History: Upper Primary Units – Investigating Our Land and Legends. Databases are an excellent means to developing student skills in gathering, recording and logically categorising and ordering. In the upper primary curriculum unit, [History at home – a local area study](#), Activity 4 in ‘Setting the scene’ provides a context for database interrogation and is a good example of database application in the teaching and learning of history.

Exploring other Australian historical databases

Other well-known Australian historical databases list convict records, explorers, members of the First Fleet, bushrangers or shipwrecks. Initially produced on floppy disk or CD-ROM, some of these historical records are now available on the Internet.

Some useful database links for teachers of Australian history include:

First Fleet – Searching

<http://cedir.uow.edu.au/programs/FirstFleet/search.html>

Register of the National Estate

<http://www.ahc.gov.au/register/>

Australian War Memorial – Collection Databases

<http://www.awm.gov.au/database/>

National Archives of Ireland Transportation Records Database

<http://www.nationalarchives.ie/search01.html>

Parliament at Work – Search

http://www.parliament.curriculum.edu.au/srch_browse.php3

Useful online references include:

Brown, T 2003, *Database*, <http://scs.une.edu.au/EDIT312/resources/Database/database.pdf> (PDF file).

Romeo, G I 1994, ‘Convicts, bushrangers and explorers: Databases in the primary classroom’, presented at The Information Superhighway: Implications for Education, CEGV Annual Conference, Deakin University, Geelong, Vic. Available: <http://www-personal.monash.edu.au/~gromeo/romeo/documents/Convicts Bushrangers and Explorers 1994.pdf> (PDF file).

Identifying and analysing information

Some Internet research tools

WebQuests

WebQuests are a popular way of providing structure to historical (or other) research on the Internet. Typically, WebQuests have an introduction, a process, guidance, a task (often expressed as a scenario), a list of resources, a conclusion and an evaluation.

In setting up research in this way, WebQuests assist students to identify and analyse information, but really do much more than that. Properly developed, they are models of inquiry involving group tasks and collaborative learning.

The *WebQuest Page* at the University of San Diego (<http://webquest.sdsu.edu/>) explains what WebQuests are, gives online guidance and links to software for WebQuest construction. Teachers can easily use the online templates to teach themselves the WebQuest process and develop their own topics.

The *Searching for China WebQuest* (<http://www.kn.pacbell.com/wired/China/ChinaQuest.html>) is a particularly good example of a fully developed WebQuest based on the scenario of a government fact-finding team visiting China to gain a better understanding of the country. It includes instructions for research, a format for the final group report and assessment procedures.

Filamentality

Filamentality (<http://www.kn.pacbell.com/wired/fil/>) is a free interactive website that guides users in picking a topic, searching the Web, collecting Internet sites and turning Web resources into learning activities. The learning activities can take many forms – WebQuests, treasure hunts, multimedia scrapbooks, subject samplers and hotlists. *Filamentality* allows storage of the finished product on the Internet. With reference to the [checklist](#) for interrogating Internet research sources, history students could also construct their own activities for use by other class members.

TrackStar

TrackStar (<http://trackstar.hprtec.org>) is another free interactive website offering teachers and students a system to construct Internet research activities. It allows users to annotate websites and construct quizzes with the use of *QuizStar* (<http://quiz.4teachers.org/>). The site is easily navigated and provides an online tutorial and templates to guide development. It also allows online storage of Tracks on the Internet provided they meet the ethical requirements of the site.

Databases as ‘Mindtools’

US researcher David Jonassen defines Mindtools as ‘computer-based tools and learning environments’ that ‘foster constructive learning, in which learners construct their own knowledge rather than recall the knowledge of the teacher’. In evaluating databases as Mindtools, Jonassen found they engaged critical thinking and enabled transfer of learning.^{xii}

Constructing databases

The process of database construction is excellent for developing the skills of identifying and analysing information. Data can be derived from many sources and constructing a historical database can be a fascinating, albeit time-consuming, project where fieldwork is combined with later classroom activities. The steps involved in a project like this are as follows.

- 1 **Purpose:** In consultation with students, determine the purpose of the database (questions to be answered and/or hypotheses to be tested); establish database fields and design data collection sheets.
- 2 **Plan:** With support from the school administration and the community, plan the field trip to collect data. Examples include a trip to a local historic town, cemetery or museum, or interviews with elderly residents.

- 3 **Onsite data collection:** Distribute data collection sheets to student groups so they can clearly identify and collect information for later entry on database.
- 4 **Analysis:** Collate and investigate the data. In the classroom discuss the validity of data with students. Enter data into the database. Manipulate the data to analyse the information – observe trends, suggest relationships and draw conclusions.
- 5 **Presentation:** To a wider audience, present the findings in graphic, pictorial or oral form to another class, a community group or a local library.

Suggestions for classroom practice

Creating a simple database – A cemetery excursion

Focus question

Today, people of many nationalities live in our town, but what nationalities lived here in the 19th century?

Hypotheses

- There were fewer nationalities.
- People lived shorter lives.
- There were many deaths of children under twelve.
- People were much more religious.

Data collection

A sample of two individual records arranged in fields.

Name	Birth/death date	Age	Place of birth	Inscription
Bridget Ryan	1843–1866	23	Dublin, Ireland	Until the daybreak – and the shadow flee away.
Luigi Marchetti	1838–1885	47	Naples, Italy	Requiescat in pace

Class discussion

- How accurate is our data?
- Did we collect enough records to draw valid conclusions?
- What data about modern life do we need to make comparisons?

Conclusions

The cemetery survey showed that two of our hypotheses were correct. However we did not find many deaths of children under twelve. Our conclusions could be based on insufficient evidence because we only had time to look at 250 graves. The inscriptions on the 19th century graves suggest that people were quite religious but we need to look at more 20th century graves to make better comparisons with the past.

Using tables as an alternative to a database

Database construction in Excel™, Access™, FileMaker Pro™ or other specific database software may be problematic for some students or teachers.

Entering data into a Microsoft® Word™ table with header rows is a simpler option, especially for a small number of records. Tables can then be sorted (go to 'Table' on the main toolbar then select 'Sort...') or individual records located (go to 'Edit' on the main toolbar then select 'Find...'). Although not a true database, a table like this can be a useful simulation.

Organising ideas

Brainstorming tools

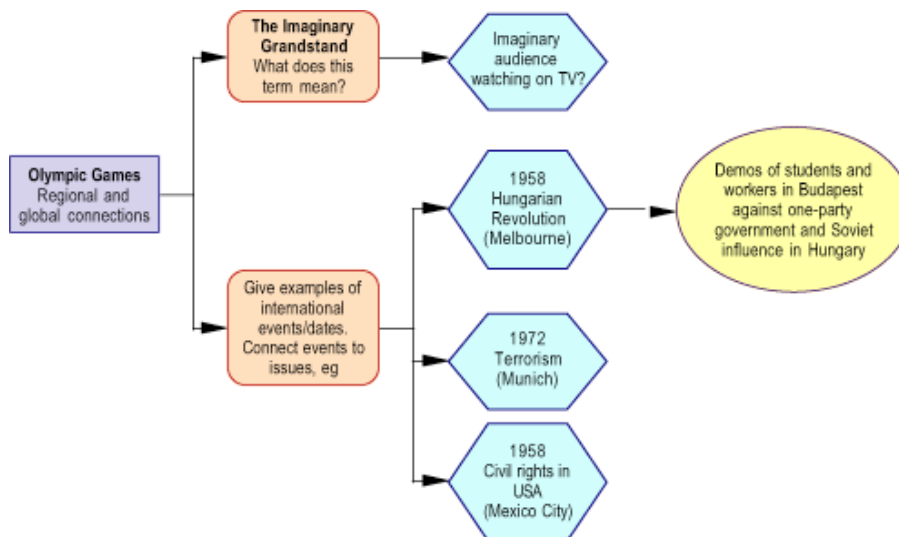
The use of graphic organising applications such as Inspiration® is becoming common practice in some SOSE, HSIE and history classrooms. The programs enable users to create diagrams that show the connections between ideas.

Graphic organisers are particularly useful for brainstorming and conceptualising because they:

- are quick, simple and fun to use;
- provide a range of symbols to identify main and subordinate ideas;
- permit symbols to be shifted and reorganised as students change their thinking.

An example of an Inspiration® brainstorm

In the example below, a middle secondary class were exploring the connections between the 1956 Olympic Games as a sporting event and the political and social events of the time.



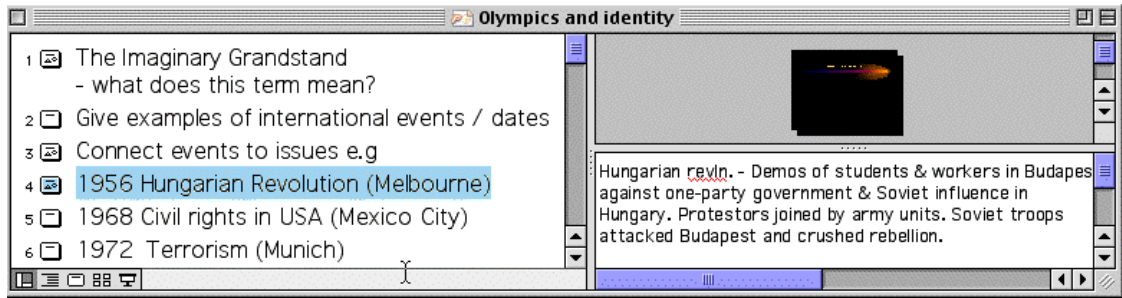
Example of an Inspiration® brainstorm.

The reference to ‘imaginary grandstand’ comes from the student’s reading of an article by an Australian historian who explored the impact that television broadcast of the Games had on the way Australians saw themselves in ‘the world’.

Scaffolding

Scaffolding in presentation programs

Constructing a framework for writing tasks is easily managed using the ‘Outline’ facility in PowerPoint™. The program allows users to type main points on the left-hand side and keep research notes in a box on the right-hand side. Information can be shifted, deleted, revised or transferred to a PowerPoint™ slide presentation or a word processing program.



An example of a PowerPoint™ scaffold.

Scaffolding in word processing programs

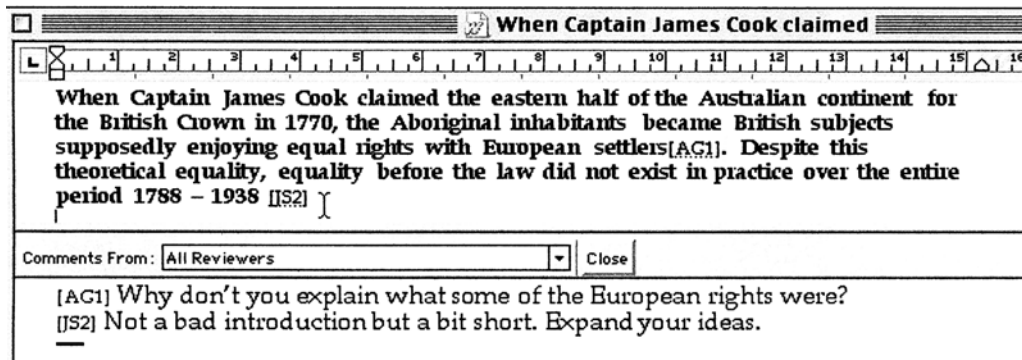
Scaffolding is also possible in word processing programs. Students can use bold fonts for significant ideas, bulleted lists for subordinate ideas and highlighting for important points. The 'Cut', 'Paste', 'Copy' and 'Replace' commands are invaluable both at the planning stage and for drafting extended pieces of writing.

Communicating and presenting information

Inserting comments within Word™ documents

Students may communicate opinions and engage in historical debate in very simple ways.

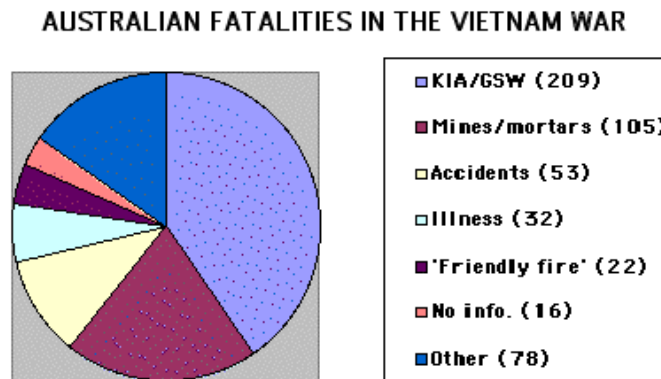
The following example involves using the 'Insert comment' function of Microsoft® Word™. Students read each other's work as email attachments or on floppy disk then insert comments at appropriate points. They then return the file to the original writer who uses the comments as a guide to redrafting.



Example of comments inserted in a Word™ document.

Making a graph or chart

Students may like to present the results of their research on a chart or graph. This form of presentation is particularly useful for statistical evidence and can be integrated with the Science or Mathematics learning areas. Here is an example of historical data transformed to a pie graph in Microsoft® Graph™ (a component of Word™).



Example of statistics inserted in Microsoft® Graph™

Using PowerPoint™

Students are becoming very adept users of PowerPoint™, multimedia and applications for the World Wide Web. PowerPoint™ lends itself to linear construction and for presenting historical arguments. The presentations are simple to construct and offer levels of design and animation features to enhance the speaker's message. The professional look of a PowerPoint™ display encourages students to publicly offer and value their work.

A note about PowerPoint™ in the classroom

As with all information communication technologies, students and teachers should avoid surrendering critical judgement to their attractive formats and seeming ‘magic’. A PowerPoint™ is no substitute for rigorous content. In fact, as university educator Tara Brabazon has argued, PowerPoint™, both in teaching and in student presentation, can be antithetical to effective learning:

If I could uninvent one software programme, it would be PowerPoint. Without exception, the worst presentations, lectures and budget briefings I attend have been conducted using this tragic package. Presenters break all the rules of public speaking – repeating verbatim the words on the screen, letting the technology determine the pace and order of the presentation, and even the need for a darkened room. Also, many of these presentations either do not run or start late because of ‘problems with the technology’.

For students, new problems emerge ... Students desire access to the overheads of a lecture – it means that they do not have to attend the lecture. More seriously, the students that ‘check’ their notes against the PowerPoint slides will invariably copy down any points they missed – word for word. This is not critical thinking: in fact, it is not even thinking ... The illusion of access promoted by computers provokes a confusion between the presentation of information and the capacity to use, sort and interpret it ... Information is therefore not the issue: the methodologies through which to assess it must be granted more attention.^{xiii}

See also [‘Implications for assessment’](#).

Student-created websites and Web pages

Web presentations allow more flexible branching, where users can explore related topics and make their own choices about the course of historical investigation.

Building a history website can be an absorbing project for teachers and learners alike. Students are usually highly motivated and derive great satisfaction from the final product. Whether contributing to the school’s official home page or constructing an associated site, students are able to display the results of their research in a blend of interesting text, attractive illustrations, amusing animations and appropriate audio files.

Constructing a website is no longer the difficult task it once was. Modern software now helps users to build websites without first needing to learn complex codes or use awkward design principles. With a little assistance, most students can easily build sites that showcase their work to local or international audiences via the school intranet or the World Wide Web.

Some possibilities

Examples of history web pages include the following:

- displaying excellent examples of student work, such as essays, posters or multimedia presentations
- documenting the findings of a history excursion, illustrated perhaps with photos taken on the school’s digital camera
- presenting the results of class research, such as an investigation of a local area
- promoting the school and its history, with reference to the school environment, past students and staff, and academic and sporting achievements.

Issues to consider

Rights and obligations

Most material on the Internet is copyright. Pictures and text may not be downloaded without permission and should not be included on a student website unless copyright conditions have been met. That said, students also hold copyright in their own original work and may legitimately include a

copyright symbol on their site, unless of course they want other viewers to use it freely. It is also wise to ask other website owners for permission before including links to their sites.

Precautions

Once a website is launched on the Internet, it can be accessed by a large, anonymous audience. While most viewers are probably well-intentioned, others may not be so. Students and teachers are therefore cautioned against including personal telephone numbers or private email addresses on a website. Personal photographs that identify students by name should also be avoided. These precautions are generally not necessary if the material is to be displayed only to a restricted audience on the school intranet.

Maintenance

Owning a website is like owning a pet. It requires ongoing care and maintenance. Links can become out-of-date, contact information may change and new research might require additions or deletions to a historical narrative. It is the responsibility of the site owner to keep all information current and to make sure that all links work.

Expenses

Most websites are not free. Payment for the domain name and hosting of the site will usually be required. Linking a history site to the school's homepage is often the best and cheapest way to set up a site. The school's technology staff can advise on this process.

School history websites

Many schools proudly describe their own history or showcase student work on their homepages. The following are a few examples.

- School and local history intertwine in many NSW schools. The websites of Adaminaby Primary School (<http://www.adaminaby-p.schools.nsw.edu.au/history.htm>) and Rye Park Primary School (<http://www.ryepark-p.schools.nsw.edu.au/history/history.htm>) are two interesting examples of school history on the Web.
- Albuera Street Primary School in Tasmania (<http://www.albuerastreet.tased.edu.au/>) invites visitors to assist with the construction of its school history. Past students and staff are asked to contribute their photographs and memories of school life.
- MacGregor State School's Queensland Web Challenge site (<http://www.macgregoss.qld.edu.au/webchall.htm>) includes student entries for a Centenary of Federation competition in 2001. Developed around themes of immigration, women's fashion and education, the websites are examples of good history research and sound design.
- Years 5 and 6 students at Orford Primary School, Tasmania, used the 'Our Town' unit in *Discovering Democracy through Research* to research and write a history of their town during the 1960s. To publish their history, they designed, developed and created content for a school-based site at <http://www.tased.edu.au/schools/orfordp/histmenu.html>.

Contributing to a project

Teachers of history can often involve their students in projects outside the classroom. The Internet is a conduit of information about some of these and the project websites may present student contributions to a much wider audience than the school or local community. For example, the Peoplescape project (<http://www.peoplescape.com.au/>), set up by the National Council for the Centenary of Federation, received many nominations from school-age children and some of their contributions are now online.

The National History Challenge (<http://www.historyteacher.org.au/nhc/>) encourages primary and secondary history students to participate in a nationwide competition. Students may work as individuals or in groups, choose from a broad range of topics and present their entry in a variety of formats. Students are able to choose between an individual research essay, a multimedia presentation, a three-dimensional museum display or a performance.

Valuing student work

Students may put many hours into designing, researching and presenting information. It is therefore important that they see their work is valued and will not simply disappear into cyberspace once a website is discontinued or a PowerPoint™ presentation completed. Their presentations can be given more permanent status by burning them to CD or printing and binding them into hard copy.

Recognition at a school assembly or a ceremonial ‘handover’ of the product to a relevant community group or school library also builds a sense of pride in their achievement.

Interactivity and online communication

Interactivity on the Web

Despite problems of equity and access within some school and community sectors, the Internet has become an important new tool in many history classrooms. Interactive websites allow students to do such things as unwrap a mummy (<http://www.nationalgeographic.com/channel/inca/>), take a 'virtual tour' of Naples and Pompeii (<http://ww2.webcomp.com/virtuale/us/napoli/movie.htm>), fight an ancient battle or wander through a prehistoric village http://www.bbc.co.uk/history/multimedia_zone/.

Truly interactive websites give students choices, allow them to make decisions and permit them to manipulate information. The *Salem Witchcraft Hysteria* site (<http://www.nationalgeographic.com/salem/>) for example, takes students to 17th century Massachusetts and involves them in their own witchcraft trial.

The excellent *American Photography: A Century of Images* site (<http://www.pbs.org/ktca/americanphotography/>) is especially recommended. It deals with such issues as digital truth, presidential image-making, photography and war, cultural identity and persuasion. Its discussion of these areas covers [media awareness](#) and is reinforced by the experimental image lab that allows users to crop photographs in order to create different historical understandings.

Some of the sites listed in the *Best of History Web Sites* (<http://www.besthistorysites.net/>) also include interactive games and searches. For example, the British Museum's *Ancient Egypt* site (<http://www.ancientegypt.co.uk/>) offers a number of entertaining 'challenges' as users explore various aspects of ancient Egypt.

Interactivity and CD-ROMs

Interactivity is also a feature of many educational CD-ROMs. These resources often have advantages over the Internet when access issues (either line availability, cost or quality of Internet access) reduce the time available for Internet use.

CD-ROM interactivity is as variable as the products themselves and teachers need to assess each CD and plan their teaching and learning accordingly.

Some history CD-ROMs suffer from the 'asset rich—educationally impoverished' syndrome. They are often overpowered with historical materials but fail to offer teachers or students effective structuring or a workable pedagogical framework for searching and using the materials. Faced with a tyranny of endless choices and a maze of navigation routes, students might temporarily enjoy a 'play' or a free-wheeling exploration in the resource, but the engagement will not produce any significant or lasting history learning.

As with any history resource – textbook, teaching kit, video or film – teachers need to assess history CD-ROMs for their usefulness.

A checklist for evaluating a CD-ROM history resource might include the following.

- Provision of structures or scaffold by which users can explore the assets with purpose. Such structures might include the use of contained narratives, focus themes or questions, problems to be solved, clearly articulated and relevant tasks to be done.
- How the CD will support the teaching and learning of historical literacies.
- Engaging interactivity with educational purpose and outcomes rather than mere 'bells and whistles'.
- Suitability for the student age and literacy levels.
- Compatibility with school networks, hardware and versions of installed software.
- Provision of facilities for downloads, printouts, note capture and teacher support notes.
- Ease of navigation, clear menus and effective site maps.
- Existence of clear installation instructions and a 'helpline' contact.

Net communication: Email, bulletin boards and chat rooms

Terms like ‘cyberschool’ and ‘global classroom’ (<http://www.globalclassroom.org>) have been invented to describe the power of the Internet to connect schools around the world.

Web-based interpersonal communication falls into two main categories.

- **Synchronous** communication is an immediate exchange of information that takes place in real time. It may use video-based ‘webconferencing’ (such as CUseeMe™) or chat rooms requiring verified memberships and passwords. Synchronous communication can be technically and organisationally difficult and teachers may find it hard to moderate the exchanges, for example to prevent the transmission of offensive material.
- **Asynchronous** communication is delayed and can be moderated. A typical example is an email exchange between history classes in different parts of the world or a bulletin board where historical debate is conducted in a series of ‘threads’. Bulletin boards can be open to anyone but it is safer to restrict contributions to signed up members with passwords.

Both these forms of communication offer great opportunities for teachers of history. The real dynamism of historical discussion and debate occurs through such contacts.

A typical example is the Year 10 Australian history class that conducted an email discussion with Year 10 students in Hiroshima, Japan. The students asked each other questions about various cultural events and the bombing of Hiroshima at the end of the World War II. Teachers in both countries moderated the discussion and led their classes through associated history studies in the classroom over the course of the project.

Other history projects might involve the sharing of migrant experiences, family histories or histories of local areas.

Communication like this encourages cultural understandings and empathy as students connect to real people. It can lead to international actions, such as joint letters to world leaders, online exhibitions or student exchange programs.

Implications for assessment

Some questions

Teachers of history frequently allow students to choose their own tasks and presentation styles. As a consequence, it can be difficult to assess an assignment that suggests written, musical, dramatic or multimedia tasks. Some issues include:

- Are there any historical skills common to all tasks?
- Are all the tasks equivalent in length and difficulty?
- How can we fairly compare and assess different tasks?
- Do different tasks need different criteria and standards of assessment?

There are no easy answers to issues such as these. Teachers will establish their own practices and assessment procedures in accordance with school and State and Territory syllabus requirements.

However researchers suggest that presentations like PowerPoint™ require a different set of assessment criteria.

Some criteria for assessing multimedia/PowerPoint™ presentations

Content

- Does the presentation have a clear purpose?
- Does the presentation contain accurate, reliable information?
- Does it contain original content?
- If it has multimedia elements, do they help viewers to understand the content better?
- Are the grammar and spelling correct?

Design and technical features

- Is the presentation well designed and operated efficiently?
- Are the pages uncluttered, with useful headings and subheadings?
- Does the creator make use of a variety of features such as sound, pictures, and animation?
- Is the design consistent?
- Are transitions used effectively?

Objectives

- Are the presentation objectives clearly stated?
- Is all the material relevant?
- Is the presentation too big and rambling or too small to achieve stated objectives?
- Is the content unique and not available elsewhere?

Referencing

- Is information up-to-date and gathered from reliable sources?
- Are all reference sources properly acknowledged?

Managing for authenticity

Many students now present their written assignments as word-processed documents. The transmission of information by email, sharing of floppy disks and use of the Internet sometimes make the authenticity of student work difficult to verify.

Teachers can go some way toward managing the problem by requiring hard copies of plans and drafts together with the finished product. Written tasks should have clear assessment criteria based on sound historical thinking and students who present handwritten work should not be disadvantaged. Their work might not look as attractive as the word-processed article but the historical skills and thinking may well be better.

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- ⁱ D Meredyth et al 1999, *Real Time: Computers, Change and Schooling*, Commonwealth of Australia, Canberra, available <http://www.detya.gov.au/archive/schools/Publications/1999/realtime.pdf>.
- ⁱⁱ S Papert 1980, *Mindstorms: Children, Computers and Powerful Ideas*, Basic Books, New York, p 37.
- ⁱⁱⁱ *Computers in Schools: A Framework for Development* 1995, Australian Computer Society and the Australian Council for Computers in Education, Canberra.
- ^{iv} For example, a cooperative study by Laval and McGill Universities, Canada, *The Contribution of New Technologies to Learning and Teaching in Elementary and Secondary Schools*, available <http://www.tact.fse.ulaval.ca/fr/html/apport/impact96.html>, and reports on ICT and school change collated by the Education Network of Australia (EdNA), available <http://ictresearch.edna.edu.au/>.
- ^v T Brabazon 2002, 'Digital Hemlock: Internet Education and the Poisoning of Teaching', *The Australian*, 4 December 2002, p 26.
- ^{vi} BS Bloom (ed) 1956, *Taxonomy of Educational Objectives: The Classification of Educational Goals – Handbook I, Cognitive Domain*, Longman, New York.
- ^{vii} H Gardner 1983, *Frames of Mind: The Theory of Multiple Intelligences*, Basic Books, New York.
- ^{viii} S Papert 1980, *Mindstorms: Children, Computers and Powerful Ideas*, Basic Books, New York, p 186.
- ^{ix} D Meredyth et al 1999, p 160.
- ^x D Meredyth et al 1999, p 303.
- ^{xi} N Cochrane 2002, 'Warning on search engines: No competition breeds bias', *The Age*, 22 October.
- ^{xii} DH Jonassen 1996, *Computers in the Classroom: Mindtools for Critical Thinking*, pp 9–11, quoted in T Brown, *Database: The Educational Use of Databases*, available http://scs.une.edu.au/Materials/312_99/db/dbindex.htm#Introduction.
- ^{xiii} T Brabazon 2001, 'Internet teaching and the administration of knowledge', *First Monday*, vol 6, no 6, http://www.firstmonday.dk/issues/issue6_6/brabazon/.

The teacher of history at work