

Evaluation of Northern Grid Project

Title: Using a Game Shell to Develop Revision Activities for GCSE

Background:

By September 2005, Huntcliff School History Department had developed a website to help GCSE students with revision (see www.historysupport.net or access through www.huntcliff.co.uk >Subjects >History >GCSE). As part of the website, interactive quizzes and tests were available for 4 out of the 17 revision topics covered. They were created using a game shell, 'Hot Potatoes' and aimed to help students identify areas where further revision was required and to reinforce knowledge. However, lack of teacher time meant that development of quizzes had come to a standstill.

Funding from Northern Grid for Learning meant that during 2005/2006 an LSA could develop quizzes for further topics with a particular focus on the type of students she had specialist knowledge of – those on the C/D borderline. For the duration of the project she spent 4 hours a week on developing quizzes for the remaining 13 topics – by the end of the project quizzes had been prepared for each topic.

What you did:

Hot Potatoes Software

Hot Potatoes is free for educational use so long as quizzes produced are published on the web. Quizzes which can be created include multiple choice tests, jumbled sentences, crosswords, fill in the gaps, matching quizzes etc. It was hoped that GCSE students on the C/D borderline could improve their knowledge of key words (which many find difficult), and would be encouraged to revise by the fact that the tests were interactive. A key feature of test generation which makes Hot Potatoes such a useful program is the ability to provide correct feedback to students who answer a question incorrectly so that accurate knowledge is reinforced.

The following comments can be made with regard to the generation of quizzes using Hot Potatoes:

- The crossword is useful for reinforcing key words and quick to create.
- The short answer quiz is useful for general questions although all possible combinations of answers have to be thought of.
- The matching quiz is good for ordering processes or matching dates and is quick to create.
- Multiple-choice quizzes are very time consuming to create as three incorrect responses must be thought of for every question.
- The cloze sentence activity is useful for detailed information. As the project developed it became clear that vocabulary to choose from needed to be added below the cloze activity to make it easier, especially for those who find spelling difficult.
- Fear of breaking copyright meant that images were not used, although this would have made the activities more enjoyable for students.



Using the quizzes

The aim of developing the interactive quizzes was always to encourage student revision at home. However, their use was also considered in other contexts:

- (a) **Interactive Whiteboard Use.** It would be good to be able to introduce students to the tests using the interactive whiteboard, and to use them for whole class starter and plenary activities (e.g. to review vocabulary) however, the small font size means that this isn't realistic.
- (b) **Whole Class Use.** Students in Year 10 and 11 are occasionally given the opportunity to use the computers either in an ICT room, or on a rotation basis using the 5 computers available in the classroom. This means that all students know where to find the quizzes and tests, and to get a feel for whether they find them useful for revision. It also means that the teacher can help them to work out how one or two of the quizzes work which do not have detailed instructions (e.g. flashcards).
- (c) **Independent Revision.** Because the quizzes are available through the website students can access them any time, any place (with internet access). They can choose any History topic they feel they need to revise and can choose different types of quizzes according to their learning styles. From a teacher point of view, it is helpful to be able to send individual students to complete revision tests if they have quickly completed a task (perhaps a test in class) and otherwise their time might be wasted. It is, however, difficult to judge how much use is made of the interactive tests outside of lesson time.

Overall conclusions from the project so far:

Feedback from students

In March 2006 about 30 Year 10s used the tests during lessons and subsequently were asked to complete questionnaires to help to judge the effectiveness of the quizzes for helping them with revision.

- Virtually all the students liked the crossword best, followed by the short answer and multiple-choice quizzes. The cloze sentence activity followed next and the matching activity and jumbled sentence activity were least popular.
- Lots of students commented on how easy the quizzes were to use although some students had difficulties if they were not able to spell the answers correctly.
- Some students described the activities as "interesting" and "fun", some students thought that the activities were "a bit dull". More able students were more likely to find the activities dull and repetitive – but then these are the students more able to organise their revision independently and to utilise a range of strategies to help them remember information.
- Most of the students thought that Hot Potatoes would help them remember their history.
- Most students had Internet access at home and just over half of the students said they would use Hot Potatoes at home for revision.

Success Criterion

- At a basic level the success criterion for the project has been achieved as Hot Potatoes quizzes have now been developed for all revision topics on the website. This was seen as very important by the History Department as if a student goes to revise a particular topic and a quiz is not available, they are less likely to look on the website in the future.
- As the quizzes are available on the web (fulfilling the terms of the Hot Potatoes software and Northern Grid for Learning grant) it is not just Huntcliff students who benefit.
- At a deeper level it is difficult to tell how many students actually use the quizzes at home. In Year 10 just over half the students thought they would in the future – and in Year 11 there are encouraging signs that students are using the website – they will mention if there is a mistake in a quiz, for example. There certainly seems to be most interest among the group of students the quizzes are targeted at (the C/D borderlines) – not surprisingly the more able do not seem to find them challenging. A few students remain disadvantaged owing to lack of ICT access at home – they are encouraged to make use of the computers in the History Department on a lunchtime and after school.
- Two unforeseen advantages of the project have been: (a) the value of working with another member of staff to develop the quizzes – this has led to mutual encouragement to develop the website, and also the benefit of sharing ideas and developing new ways of using the Hot Potatoes software, and (b) the interest of staff in other subject areas in developing interactive quizzes.

Future developments:

During the project it became clear that Hot Potatoes could be used in an increasingly imaginative way – for example to help develop student source evaluation skills (rather than just testing recall) by asking multiple choice questions about a given pictorial or written source. Development in this area would mean investigating copyright conditions for the relevant sources. It also became clear that other departments at Huntcliff were interested in using interactive quizzes and tests on their websites. However they need to be aware that the school website server will only host Hot Potatoes version 5 (less advanced) – this was not an issue during this project as www.historysupport.net is hosted externally and so version 6 outputs can be used.

However, having had experience of using Hot Potatoes the History Department is now also interested in investigating other interactive game shells such as those available through the Schools History and Chalkface websites. These could have the advantage of:

- Using larger font sizes more appropriate for less able students or for use with a whole class on an interactive whiteboard
- Providing a variety of quiz formats which would be more interesting than the rather repetitive formats offered by Hot Potatoes



The History Department is also looking beyond using interactive game shells as a means of helping students to access revision. It is currently investigating using extracts from revision lessons at Huntcliff which have been videoed to help students to revise using their preferred learning styles.

Finally, everybody involved in the project at Huntcliff would like to thank Northern Grid for Learning for the funding which made the development of these interactive tests possible – a step on the way to helping some of our students (and possibly others elsewhere) to achieve their potential at GCSE.

Hannah Mohon (History Teacher) & Cath Hargreaves (LSA), 25th April 2006.