TIPS REPORT

Developing and refining effective search strategies for using the internet in classroom teaching

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Research topic: Technology-integrated pedagogical strategies; Secondary Latin teaching and learning

Geographical area where research conducted: England – Eastern Region

Educational sector of participants: Secondary

Abstract:
This small-scale case-study examined how the use of the internet for GCSE Latin students starting independent research for coursework could support the teaching and learning of generic research skills. The approach employed was based on the idea that electronic information retrieval was quicker , more effective and more enjoyable for pupils. The study examined the use of this approach in work on individually chosen Roman life topics carried out with year 10 pupils over half a term. Evidence was gathered through observation and pupil discussion. The main findings were that students found information more efficiently once they had defined and refined their research strategies before touching the computers and that the most focused lessons were where students used electronic and non-electronic sources in conjunction.

Particpants' information

The participants were a group of year 10 pupils, SAT levels 6-8,
studying Latin outside the timetable. They were beginning preparatory research for course work on 1st Century Roman Life. They could choose make their own choice of topic. Topics chosen by pupils included Roman roads, water engineering, hairstyles, food , gladiators and Pompeii.

Equipment and materials used

Resource Centre containing c.6,500 books of which c.150 relevant to Roman life.
17 networked computers with internet.
Students worked at a terminal each.

Method

This small case study employed several sources of evidence:
Teacher perspective: stimulated recall, notes during lessons
Student perspective: group interview and discussion
Independent perspective; classroom observation

Description/Findings

Pupils had a series of lessons in which the speed and efficiency of information retrieval was observed and timed. In each lesson pupils worked under different search parameters. In the first lesson, they had to use book stock in the Resource Centre only. In the second, they surfed the internet for information. No sites had been preselected and students entered search terms as it occurred to them. They were then asked to reflect on the processes involved in the two lessons. Most preferred using the internet to traditional materials, citing speed, relevance and currency of information, even though most found relevant material more quickly using book stock. Presumably this was because the book stock had been specifically chosen by library and subject staff, targeted and differentiated for KS3 and KS4 whereas the internet was unscreened for relevance. In the third lesson, pupils could choose any materials they wished. All, except one, began the lesson on the internet – mostly using sites they had chosen previously. However, a significant number, while remaining logged on , supplemented or checked information using book stock – in many ways this produced the best lesson in terms of focused activity. In subsequent lessons pupils spent time thinking about the information retrieval process and devising lists of search terms before searching the web. In later lessons, some pupils looked at a specific site, pre-selected by the teacher. It was more difficult to ensure that the pupils had internalised and reprocessed information they discovered.. There was a tendency to print out material indiscriminately or, as a variation, e-mail key site pages to the students' home computer.

Conclusion /discussion

The most effective lesson in terms of achieved learning outcome, pupil focus, pupil enjoyment and minimal behaviour problems was one where a specific site had been identified and interrogated in a way which involved information processing rather than gathering skills. This involved considerable teacher preparation time. It was also only applicable to the short-term goal of one lesson where students were focused on a particular area of knowledge. The research was attempting to devise strategies to enable students to develop as independent, effective, efficient and discerning electronic information gatherers rather remain as serendipitous and credulous surfer-browsers. In such a small scale piece of research, over such a relatively narrow time frame with so many variables in terms of topic, availability of web sites, aptitude of pupils etc. one would hesitate to generalise too readily. However, after students had spent time away from the computers refining their search strategies, devising key search terms and thinking about criteria for judging the availability of web-sites, there was some improvement in the speed with which sites were selected, the relevance and reliability of those sites. Additionally, these thinking skill strategies sharpened the students' understanding of their chosen topic. However, it was difficult to judge if this more considered approach had a general behaviour modifying impact on students' internet research skills in other situations. Although pupils were compliant in the lessons, pupil interviews indicated that , although they could see the rationale behind the initial search analysis, they found it an irritating deferral of their computer time. Some suggested that random searching was just as quick. Indeed there seemed to be a mismatch between pupil and teacher perceptions of speed and efficiency. The subtext of some interview responses suggested that that some pupils regard the internet as

their own private area of expertise and power and resented teacher intrusion or manipulation of what they regarded as their own discrete world

Recommendations

- generic search strategies and skills should be taught and reinforced throughout the whole school either in ICT or library orientation sessions
- common search protocol should be followed in all resource-based lessons
- teachers should pre-select specific sites prior to a resource lesson
- teachers should set focused, interpretative tasks based on secure knowledge of the potential of pre-selected sites
- Resource based lessons should integrate electronic and book resources
- Key web sites should be catalogued as part of the library management system

Research evaluation

There were only 14 Latin students in the main research group all doing different Roman life topics. Therefore, although the findings were also supported by observation of other groups doing resource based research activities in the library, one would hesitate to make great claims for it. If I were designing the project again, I would give every student the same question to research instead of conforming to the Classics department practice of allowing them to decide on their own topic. In carrying out this very modest exercise, I felt I was learning as much about the research process itself as how to successfully integrate the internet into resource based learning. As a result of these observations, I am now actively engaged in devising a internet searching module within the existing library user programme which is delivered to all pupils.