WEBQUEST – ACTIVITY FOR INTERNET BASED LEARNING

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ABSTRACT

WebQuest is one of the effective methods of using ICT tools in the process of learning. It is an activity dedicated to making significant use of WWW resources. WebQuest idea derives from Bernie Dodgie, of San Diego State University in the USA. Since 1995, he has been developing this method, and he encourages teachers to accept and use it in their classrooms. The WebQuest activity may be a special example of the project method. There are many WebQuests in the field of Science (WebQuest Science). We have started to train teachers and students in using this method, and we would like to share our early experiences. The first group consists of teachers, who have taken in-service training course to become school ICT-coordinators. The main objective for them is to help other teachers to integrate ICT with their subjects. ICT-coordinators have designed interdisciplinary WebQuests. Computer science students belong to the other group. They are being prepared to teach ICT and informatics in different types of schools. Their task is to design a single-discipline WebQuest. Both groups are very interested in this new method, and work willingly on the design process. The results of their work will be demonstrated.

KEYWORDS

WebQuest, Internet, project work

INTRODUCTION

There are already thousands of schools connected in some way with the Internet. Teachers who are new users of this technology need some guidance in the new forms of learning environments now opening up to us. As it was shown in the report of Pew Internet & American Life Project organization (The digital disconnect), many students are far ahead of their teachers and principals in taking advantage of online educational resources. Students want to be assigned more engaging Internet activities, that are relevant to their lives. It's a great challenge for schools and teachers to identify and to use effective methods of using Internet in the process of learning.

WEBQUEST – DEFINITION AND ATTRIBUTES

"A WebQuest is an inquiry-oriented activity in which some, or all, of the information that learners interact with comes from resources on the Internet, optionally supplemented with videoconferencing" (Dodgie, 1997). This activity is very similar to project work. Teachers had to make school activities much closer to the pupils' life and experience, and a WebQuest can engage students and help teachers to develop his pupils' thinking skills.

WebQuests are deliberately designed to make the best use of the learner's time. There is very questionable educational benefit in having learners surfing the net without having a clear task in mind. To achieve that efficiency and clarity of purpose, WebQuests contains the following elements:
1. An **introduction** that sets the stage, and provides some background information; communicates question that WebQuest is centred around.
2. A **task** that describes what the end result of the learners' activities will be.

3. A **process** – a description of the steps learners should go through to accomplish the task. Learners will access set of the **information sources** (identified by the teachers) needed to complete the task. Many of the resources are embedded in the WebQuest document itself, as anchors pointing to information on the World Wide Web. Information sources might include web documents, experts available via email, or real-time conferencing, searchable databases on the net, and books and other documents physically available in the learner's setting. Because links to resources are included, the learner is not left to wander through webspace, completely adrift. It might be provided some guidance on how to organize the information gathered.
4. An **evaluation** section that describes how students' performance will be evaluated.
5. A **conclusion** that summarises what students will have accomplished or learned by completing this activity.

There is WebQuests' teachers' page, too. There are also other sections: learners, curriculum standards and necessary resources. The first of them describes the grade level and course that the lesson is designed to cover: what the learners will need to know prior to beginning this lesson.

Curriculum standards describe the outcomes succinctly using the language of existing standards. Resources needed describe what is needed to implement this lesson (e.g., specific software, email accounts, etc.)

WebQuests are most likely to be **group activities**, although one could imagine solo quests that might be applicable in distance learning, or library settings. The tasks in WebQuest might be enhanced by wrapping **motivational elements** around the basic structure, by giving the learners a role to play (e.g., scientist, detective, reporter), simulated personae to interact with via email, and a scenario to work within. WebQuests can be designed within a **single discipline,** or they can be **interdisciplinary**.

The results of pupils' work might take different forms, but always it is required to use ICT tools, for example, to prepare the webpage containing a solution to the task. Putting the results of students' thinking process back out onto the Internet serves three purposes:
- it focuses the learners on a tangible and hi-tech task
- it gives them an audience to create for, and
- it opens up the possibility of getting feedback from that distant audience, via an embedded email form.

THE WEBQUEST PAGE

A rich source of information about WebQuests is the web site hosted by the Educational Technology Department at the San Diego State University (The WebQuest Page). This page is maintained by Bernie Dodgie, who has been developing the idea of WebQuests since 1995. You can find there a huge quantity of materials and examples of good practice useful for teachers, and for teacher training.

The training materials are prepared in many varying forms, so it is possible to choose those which are most suitable. There are WebQuest templates, which are prepared in two basic versions: a student page and a teacher page. The templates are helpful to start the process of designing your own WebQuest. Even teachers who have a little practice with creating webpages are able to prepare their own WebQuests.

Before creating a new WebQuest, it is possible to search a library of WebQuest examples. Currently there are over 1000 WebQuests available in the WebQuest library!

Teachers are encouraged to adapt existing WebQuests to their school practice. On the Saskatoon (East) School Division page (Science WebQuests) we can find a lot of links to very interesting science WebQuests, e.g. Women in Science (Holtman, 19th Century Science), Space Station Phyve (de Ruvo).

EXAMPLES OF WEBQUESTS

We have started to train teachers and students in designing WebQuests, and we would like to share our early experiences.

The first group consists of teachers, who have taken in-service training course to become school ICT-coordinators. They are experienced teachers in teaching one subject, mostly informatics or ICT separate subject. The main objective for them is to learn how they could help other teachers to integrate ICT with their subjects. ICT-coordinators are often coordinators of school across-curricular projects, so they have designed interdisciplinary WebQuests.

The second group consists of computer science students from our department. During didactics of informatics course, they are being prepared to teach ICT and informatics in different types of schools. They have no experience in teaching, so WebQuest is introduced as a one of active teaching methods. They started with designing single discipline WebQuest. The topics, which they have chosen are mostly connected with social, ethical and legal aspects of using ICT. These topics are often considered difficult to teach in the classroom, so there is a need to point on the active methods of teaching and learning. Some examples with short description are given below:

Buying a Computer
Pupils have to prepare information about computer components, their parameters and calculation of costs according to some job's needs (e.g. those of a musician, graphic designer, or secretary).

Searching the Internet
Each student takes the role of a journalist, who prepares a short article for his newspaper, using materials from the Internet. The article should include information about the process of searching, the search-engines used, queries, a description of the results, and of course links to useful sites.

Are the Computers and the Internet Dangerous?
Students play the roles of specialists who are working in the "Internet-clinic". They have to study some cases, and elaborate diagnoses for them.

WebQuests, described above, can involve pupils for two or more class periods. The results of pupils' work are presented in an electronic form (e.g. web page, text document or presentation). The instructional goal is extending and refining pupils' knowledge.

CONCLUSIONS

In our materials for teachers and textbooks for students (Gurbiel et al., 2000, 2001) we put the emphasis on the project work in the classroom. Now we want to popularize the WebQuest activity among teachers, to improve and to enrich their school practice. Both groups, we have worked with, teachers and computer science students, are very interested in this new method, and work willingly on the design process. The next step is the huge task of preparing materials and sites about WebQuests in Polish, to make the idea more available for our teachers.

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