

Webquest – a Super Constructivist Learning Tool

Carmen-Liliana Mărunțelu
Cristina-Dana Popescu
"Ovidius" University of Constanta, Faculty of Letters, Romania
maruntelucarmenliliana@gmail.com
popescu.cristina@univ-ovidius.ro

Abstract

Contemporary society is unquestionably one of permanent, dynamic knowledge. In this context, lifelong learning is no longer considered only a way to improve initial training, but a lifelong learning process. Currently, we are witnessing a strong trend towards virtualization of education. An interesting and effective alternative to traditional learning methods is a modern technique, based on the constructivist idea of developing, through personal effort, one's own knowledge, which involves numerous search activities in the Web space and which largely includes cooperative learning. This article presents some relevant aspects of the use of WebQuest technology in education.

Key words: WebQuest, task, computer programming, training.

J.E.L. classification: D83

1. Introduction

The organization of the training process with the help of computer networks ensures a satisfactory training only in a higher motivational and interactive context. In the case of online teaching, teachers must prepare materials, make them available on the computer and motivate and guide each student through continuous interaction.

For example, in a lesson, the computer can be used to simulate a scientific model or a distributed interactive representation. A group of students can also use the computer to obtain the information needed to complete a task on the Internet, discuss, debate, collect information, and present data found collaboratively.

Computer programmed training is an algorithmic method that is a set of principles and pedagogical means promoted by the development of cybernetics, mathematical, logic and modern technical means.

The essence of the method consists in distributing the study material in units or "quantities of information" that can be assimilated at once, putting problems in front of the student and asking him for an activity aimed at solving them.

Using specific Internet tools (World Wide Web - WWW), the WebQuest technique proposes a new working method, which is based on the constructivist idea of elaborating one's own knowledge through personal effort, being a viable alternative to traditional learning methods (<http://webquest.org/>). It is based on a search model in the web space, which also includes elements of cooperative learning.

2. Theoretical background

The WebQuest technique was first developed and implemented in 1995 in the U.S.A. by Bernie Dodge and Tom March, professors at San Diego State University. The WebQuest model was adopted by many schools in a very short time.

WebQuest is an activity based on problem formulation and investigation, in which some or even all the information that students come in contact with has Internet resources, optionally being supplemented with video conferencing.

WebQuest activities are group activities and individual investigations are possible, useful in distance education or in search activities in a library.

A WebQuest can be seen as a set of motivational elements around a basic structure, by assigning a role to each student in the group, by creating virtual characters for students to interact with via email and a scenario for them to interact with.

WebQuest activities can be created within a single discipline or can be interdisciplinary.

There are at least two distinct levels at which a WebQuest can be organized:

Short-term WebQuest - aims to acquire and integrate knowledge. At the end of the implementation of such a project in a short period of time, the student accumulates a significant amount of new information and proceeds to understand them in depth. This type lasts for 1-3 hours of the course.

Long-term WebQuest - aims to expand and structure knowledge. After completing a long-term WebQuest, the student processes the information accessed in depth, by processing it and transforming it to a certain extent.

Finally, the student demonstrates the knowledge of the learned material by creating a product, for which he expects an online or offline reaction from others. This type lasts between a week and a month.

Long-term webQuests follow at least two aspects: what thought process is needed to solve the tasks and what form they will take once they are solved.

3. The stages of elaborating a WebQuest project

The elaboration of a WebQuest project (<http://webquest.org/index-create.php>) must go through the following steps: introduction, task, information sources, process, evaluation, conclusions (<http://webquest.sdsu.edu/Templates/lesson-template1.htm>).

1. *The introduction* describes the context of action, the essential information and a motivational support in which the necessary premises are created for the employment and impetus of the students in the learning process.

It is often in the form of a scenario, in which it is done: introduction to the topic, motivating readers and the central question.

2. *The workload* is the essential part of a WebQuest. This provides a purpose and an orientation of the student's activities, while laying the foundations of the promoter's curricular intentions. In fact, one of the purposes of the WebQuest technique is for students to complete a task (homework) using the information available on the Internet. There are a number of tasks that can be successfully completed using a WebQuest.

The task formally describes what students need to accumulate at the end of the WebQuest and consists of:

- solving a problem or a mystery;
- formulating and arguing a position;
- designing and creating a product;
- analysis of the complexity of an aspect of reality;
- reflection on the person;
- creating summaries, summaries;
- creating persuasive messages or advertisements, journalistic products;
- creative activity;
- any activity whose solution involves the processing and transformation of information accumulated by students.

There are several types of tasks in WebQuest, which we exemplify below:

- Playback tasks

Sometimes all students are asked to do is go through the information and then show that they understand it. In this case, they can make reports as a result of searches, which in fact provide an easy introduction to using the Web as a source of information.

- **Compilation tasks**

A simple task for students is to take the information from a number of sources and arrange it in a common format. The resulting compilation can be published on the Web or presented in the form of traditional, non-digital products.

To perform a compilation task at the level of a WebQuest, a series of processing of the compiled information is required. Simply compiling a list of the most interesting sites or a collection of web images, arbitrarily joined together, is not enough.

- **Mystery tasks**

Sometimes a method of drawing students' attention to a topic is to present it in the form of a puzzle or to introduce a mystery frame. The method can be applied starting from the level of primary education and can be extended to courses for adults.

Such a task, well prepared, requires a synthesis of information from various sources. It is preferable to create a jigsaw puzzle, for example, that cannot be solved by simply finding the answer on a particular page.

- **Journalistic tasks**

One way to implement a WebQuest is to ask students to behave like reporters in presenting a special event. Such a task involves gathering facts and organizing them into a story that can usually fit into the usual genres of the press. In evaluating how to solve it, you will focus on accuracy and not creativity.

- **Design tasks**

The design represents in this case "a plan or a protocol for achieving certain objectives". A design task involves the creation by students of a product or action plan that fulfils a predetermined purpose and that works taking into account the constraints imposed.

The key element in developing such a task is to define the constraints as close to reality as possible. After all, a task in which there are no constraints leads to the adoption of an "everything works" attitude, which is far from simulating the real situation and which does not fit into everyday life.

- **Creative tasks**

Such tasks involve making products with an imposed format (drawings, posters, sketches, games, journals, songs, etc.) but they are much more open and unpredictable than design tasks. The evaluation criteria for these tasks take into account creativity and expressiveness, as well as the ability to capture the specifics of the chosen topic.

As in the case of design tasks, here too the essential element is the definition of constraints, which differ depending on the product created and the chosen subject.

- **Collaboration tasks**

People generally contradict each other because of differences in their value system, beliefs, experiences, and goals. The essence of such tasks is given by the most productive combination of several points of view. In this case, historical or recent events, which can be many good or bad examples, happy or not, can be the basis for the development of such tasks.

- **Belief-type tasks**

Such a task involves more than a simple rendering of a fact by students. They are forced to develop compelling presentations based on their own knowledge. Convincing tasks may include, for example, a presentation to a regular audience or a trial, writing a letter, an editorial, or a press article, or even making a poster or videotape, all of which are intended to influence those they are addressed to.

These tasks are often combined with collaborative tasks, but their goal is for students to develop the ability to convince an audience of a point of view. In fact, such tasks are contrary to the collaboration type, which aims to achieve a consensus between divergent points of view.

- **Self-knowledge tasks**

Sometimes, the purpose of a WebQuest is to provide a better understanding of oneself, knowledge that can be developed through assisted exploration of online and offline resources.

A well-defined self-knowledge task causes students to answer questions about themselves, but does not allow them to obtain only short, typical answers.

- Analytical tasks

One aspect of knowledge is understanding how things are interdependent and how they refer to each other within a subject. In the case of an analytical task, students are asked to look closely at one or more things, to find similarities and differences, and to emphasize their importance. They can look for cause-effect relationships between these things and discuss their implications and meaning.

Such a well-defined task involves more than a simple analysis of the results obtained.

- Thinking tasks

Thinking tasks present students with a series of elements, which they must clarify or evaluate, or involve making a decision from a limited number of options.

Usually, but not necessarily, students take on various roles in completing such tasks.

- Scientific tasks

Scientific methods have led to the creation of technologies that allow the use of a vocabulary specific to the field. Access to science has become common to all members of society and it is very important for a student to know, from the first year of school, how science operates.

The web allows people to know both historical data and cutting-edge information, but at the same time offers the opportunity to know and even conduct real scientific experiments.

3. *Sources of information* represent a set of resources needed to perform the task (WWW links). These can be:

- web documents;
- experts (which can be accessed by e-mail or video conferencing);
- databases accessible on the Internet;
- books or other documents accessible to students in traditional form;

4. *The process* is an essential feature of a WebQuest project and must be divided into a number of well-defined steps. It includes a detailed description of the steps that students must take to complete the task (demonstrations for each step, guidelines for organizing the information gathered by students in the form of: summary tables, flowcharts, concept maps or other structures)

5. *The evaluation* describes the way in which the performances achieved by the students will be appreciated. Appreciations will be both individual and common for group work.

The requirements must be:

- objectives in relation to the level of preparation of the students;
- clearly formulated;
- consistent in relation to the studied material;
- specific to the activities imposed by the task (clear goals, the concordance of the assessments with the specific tasks and the involvement of the students in the evaluation process).

6. *The conclusions* summarize students' achievements as a result of the project. These may also include rhetorical questions or additional links through which students may be suggested the possibility of extending or transferring reasoning to other content than those conveyed in the project.

4. Conclusions

The WebQuest technique is a learning method that combined with traditional methods can turn the Internet into an important source of information, if it is exploited rationally and efficiently. Modern methods and means of learning and assessment are an important support for a quality education.

5. References

- Siebert, H., 2001. *Învățarea autodirijată și consilierea pentru învățare. Noile paradigme postmoderne ale instruirii*. Iași: European Institute Publishing House
- Stan, E., 2004. *Pedagogia postmodernă*. Iași: European Institute Publishing House
- Văideanu, G., 1988. *Educația la frontiera dintre milenii*. Bucharest: Politica Publishing House
- * * * <http://webquest.sdsu.edu/>
- * * * <http://www.crocodile-clips.com>
- * * * <http://www.chemcollective.org/>