Activity coordinated by:
SI4LIFE

WEBQUEST

TRAINING PATTERN 3

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TITLE

WebQuest

GENERAL DESCRIPTION

According to Bernie Dodge, who conceived and named the concept[1], a WebQuest is an inquiry-oriented activity in which students get all information from the web. A WebQuest is a self-directed online exercise that leads students through the process of completing a variety of tasks leading to a final project. Teachers provide their students with the documents that include links to websites to use the information depending on the activity.

A well-crafted WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate students to investigate an open-ended question, develop individual skills and participate in a group process that transforms newly acquired information into a more sophisticated understanding.

WebQuests are alternative models of course content delivery, well suited for adult learners, which provide opportunities for higher-level thinking, problem solving and collaboration.

WHEN IS IT USEFUL?

WebQuest is based on an exploratory learning strategy: through the process of discovery, or guided discovery, the student learns facts, concepts, and procedures. The focus is on information or resources and the challenge lies in identifying resources effectively.

Scaffolding positively affects student achievement by providing "temporary frameworks to support student performance beyond their capacities"[2]. As students internalize more advanced intellectual skills through ongoing practice, the teacher can gradually remove the scaffolded levels of support. Such scaffolding is at the heart of the WebQuest model. In this sense, WebQuests aren't anything new, except for the fact that they provide a way to integrate sound learning strategies with effective use of the Web.

When students are motivated, they not only put in more effort, but their minds are more alert and ready to make connections. WebQuests use several strategies to increase student motivation:

-      they use a central question that actually needs answering;
-      they are given real resources to work with.

The WebQuest can be carried out **individually or collaboratively**. When possible, the collaborative dimension provides an added value to the learning process. When students take on roles within a cooperative group, they must develop expertise on a particular aspect or perspective of the topic. The fact that their teammates count on them to bring back real expertise should inspire and motivate learning.

HOW TO IMPLEMENT IT? - SUGGESTED PHASES AND TASKS

In a WebQuest students use the web to find information on a specific topic and to solve a problem posed by the teacher/trainer; but, in order to implement a WebQuest, a teacher/trainer should formalize the WebQuest in advance as a digital resource, based on a suggested template created by Dodge[3]. Teachers/trainers may choose from a number of formats (website, Power Point, Google Doc, Word Doc, printed worksheet, etc) in order to present the WebQuest to students. Anyway, the suggested components should be represented, usually as different pages of chapters of the digital resource.

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[1] Dodge, B. (1995). WebQuests: A technique for Internet-based learning. Distance Educator 1, 10–13.

[2] Cho, K., & Jonassen, D. (2002). The effects of argumentation scaffolds on argumentation and problem solving. Educational Technology Research and Development, 50(3), 5–22.

[3] Dodge, B. (1997). Some thoughts about WebQuest. URL http://WebQuest.sdsu.edu/about_WebQuests.html

Dodge's template identifies 6 main elements or components, which are detailed hereafter.

INTRODUCTION

A WebQuest usually starts with a brief orientation or introduction that sheds light on the background knowledge of the topics under discussion. This introduction orients the students and captures their interest, introducing them to the concepts addressed in the assignment. A WebQuest often has a story accompanying it and the introduction can be used to tell the story and give a summarized, basic description of what the student is supposed to learn.

TASK

The task page should present a formal and specific description of what the students are supposed to produce in the WebQuest, which tasks they must accomplish and/or what they are expected to learn (it must motivate and be anchored to a real-life situation).

The official WebQuest site created by Dodge (http://webquest.org/) lists a variety of *task types*, each of which has a different educational purpose. Some types are Journalistic, Mystery, Persuasion, Analytic, and Compilation (the whole list is in the table below).

WebQuest Taskonomy: A Taxonomy of Tasks (http://webquest.org/)

1. RETELLING TASKS: traditional reports, research reports, presentations and posters are used to introduce the use of the web as a source of information.

2. COMPILING RESEARCH (COMPILATION TASKS): this involves gathering information from different sources into a homogeneous work, which can be published on the web or in a non-digital format. The information needs to be reworked by rewriting the resources in different formats, depending on the selection of topics and organisation of the material.

3. SOLVING A MYSTERY (MYSTERY TASKS) - Students are involved in solving a discovery situation that may have historical, social or scientific features.

4. INVESTIGATING (JOURNALISTIC TASKS) - Students act as reporters: they must know the facts, organise and write them respecting the specific genre for the type of news investigated.

5. DESIGNING (DESIGN TASKS) - A design task requires students to generate a product that someone actually needs or a plan of action that aims at achieving a predetermined objective and works within predetermined constraints.

6. CREATIVE PRODUCT TASKS - The creative tasks in a WebQuest lead to the production of a particular type of artefact (painting, play, poster, simulated diary, song, ...). Constraints are the key to this WebQuest and revolve around historical accuracy, adherence to a particular artistic style, use of conventions, limits of scope, measure and purpose.

7. CONSENSUS BUILDING TASKS - This is a WebQuest that can be used for topics entailing controversy (news events, recent history, opposing ethical views, ...) and involves the development of a practice for conflict resolution. A well-designed consensus-building task must ensure that different viewpoints are articulated in the different perspectives that emerge from the various web resources.

8. PERSUADING (PERSUASION TASKS). Persuasion skills go beyond simple reporting, as they require students to develop a convincing case based on what they have learnt and to design in order to address opinions. In Dodge's 'taskonomy', examples include simulations of a city council meeting, a trial, a recorded video aimed at influencing opinions, writing a letter, an editorial, a press release or a manifesto. The strength of a well-done persuasion operation lies in identifying a plausible audience with a different or at least neutral point of view.

9. SELF-KNOWLEDGE TASKS. The aim of a self-knowledge WebQuest is to provide the learner with greater self-knowledge about long-term goals and ethical issues from a self-improvement perspective.

10. ANALYSING (ANALYTICAL TASKS). In an analytical WebQuest, one is asked to reflect on the meaning of similarities and differences, cause-effect relationships between variables, connections between facts.

11. JUDGING (JUDGMENT TASKS) – Students are presented with a series of topics that they have to rank, evaluate by making a documented decision from a limited number of choices.

12. CONDUCTING A SCIENTIFIC EXPERIMENT (SCIENTIFIC TASKS). The limitation of teaching scientific subjects is the lack of laboratory practice. The web offers a plurality of useful resources for scientific practice. Each person of the group will carry out organised research on materials pre-selected by the teacher according to his or her role, then re-process the information collected to arrive at a final product, which varies according to the task and may be a digital resource, a multimedia object, a text, etc.

The Task page clearly states what the student needs to learn by the end of the assignment.

This step defines the outcome of the students' activities. The final product must be described in detail. The task must be clear and sustainable: students must understand it and must have the prerequisites to be able to do it. Instrumental directions for completing the task can also be given at this stage.

THE PROCESS

The third step describes in detail the activities the students must perform in order to complete the task. This section must be well designed because it must provide all the necessary information.

The process should set up an individual or a cooperative/collaborative learning process; in many cases, some tasks can be performed autonomously and other cooperatively.

This page should describe:

- the work groups, the assignment of roles, specifying tasks and responsibilities.
- the work steps, as well as the order and way they have to be carried out.

A good description of this section/page will help other teachers understand how the lesson unfolds and how they might adapt it for their own use, so it is important to include details. The whole page/section is addressed to students, so their steps should be described using the second person.

> **FOR EXAMPLE**
>
> **_First you'll be assigned to a team of 3 students..._**
>
> **_Once you've picked a role to play..._**
>
> **_... and so on._**

The WebQuest might also provide some guidance on how to organize the information gathered. It might suggest the use of flowcharts, summary tables, concept maps, or other organizing structures. It could also take the form of a checklist of questions with which to analyze the information, or of things to notice or think about.

The answer or solution that students' teams develop can be posted, emailed or presented to real people for feedback and evaluation. This authentic assessment also motivates students to do their best and come up with a real group answer, and not simply with something to fulfill an assignment.

RESOURCES

This fourth step involves listing all the resources useful for carrying out the task and is clearly linked to THE PROCESS section. It is important to remember that, as previously mentioned, the focus of the WebQuest is not the search for information, but its use.

Students will access the identified online resources as they go through THE PROCESS section. The WebQuest may (or may not) suggest a set of links that everyone looks at as a way of developing background information. Then, if it splits learners into groups, it should embed the links that each group will look at within the description of that stage of the process.

When applied to adult learning, WebQuest can leave more leeway to students to find the proper resources on the web. Teachers/trainers may suggest criteria for the search or suggest specific databases (e.g. scientific ones) and then leave the students free to identify the proper information. While websites are the main point with WebQuests, they are not limited to this kind of resources, but other materials can be suggested like handouts, books, magazines, or even peer-reviewed journals or scientific papers.

EVALUATION

This penultimate step is of crucial importance to grasp the repercussions of the designed WebQuest.

To be able to carry out a meaningful assessment of positive aspects and critical points, assessment grids should be shared in advance with the students. These grids should clearly outline the stages of the task and the activity to be carried out (with criteria made explicit by means of indicators) and allow students to understand which aspects to focus on. See for instance the table below.

An example of assessment grid from http://webquest.org/					
	1-beginning	**2-developing**	**3-accomplished**	**4-exemplary**	**SCORE**
Stated Objective or Performance	Description of identifiable performance characteristics reflecting a beginning level of performance	Description of identifiable performance characteristics reflecting development and movement toward mastery of performance.	Description of identifiable performance characteristics reflecting mastery of performance.	Description of identifiable performance characteristics reflecting the highest level of performance.	
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Such grids could support different types of assessment that can be carried out in parallel:

- *self-assessment*, which can be carried out individually by the student on the basis of the grid
- *peer-assessment*, which can be carried out for instance by asking each member of the group to rate from 1 to 5 the contribution given by other participants to the whole process
- *students' assessment performed by the teacher*, which focuses on the learning process that the student has put in place. The aim is to assess whether the objectives have been achieved and to guide possible developments.

CONCLUSION

This concluding phase summarises the activity carried out and the teaching and learning outcomes achieved. Emphasis should be placed on all disciplinary and non-disciplinary aspects learnt from the point of view of competences (both cognitive and instrumental).

The conclusion can be a short paragraph that summarizes what students should have achieved or learned by completing the WebQuest. It might also include some rhetorical questions or additional links to encourage students to extend their thinking to other content beyond this lesson.

Six elements						
Phase	**1 – Introduction**	**2 – Task**	**3 – Process**	**4 – Resources**	**5 – Evaluation**	**6 – Conclusion**
Task	It gives a background information on the topic of the Quest, writing an introduction to the overall theme to interest the students	It presents a formal and specific description of what the students are supposed to produce in the WebQuest	It describes in detail the activities the students must perform in order to complete the task.	It lists all the resources useful for carrying out the task and is clearly linked to the process section.	It provides assessment grids shared in advance with the students	It summarizes the activity carried out and the teaching and learning outcomes achieved.
Team	Individual learner or small groups of students (from 3 to 8 members)	Individual learner or small groups of students (from 3 to 8 members)	Individual learner or small groups of students (from 3 to 8 members)	Individual learner or small groups of students (from 3 to 8 members)	Individual learner or small groups of students (from 3 to 8 members)	Individual learner or small groups of students (from 3 to 8 members)
Needed technologies (online)	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.	Individual access to the WebQuest and to the resources suggested for completing the tasks. Access to the Web.

The WebQuest can be produced and published on the Internet using applications available online, which generate them automatically with an attractive and professional layout. Here are some possible suggestions:

- QuestGarden (http://questgarden.com/), which was created by Bernie Dodge to make it easier to create WebQuests without having to master a web editor. It provides step-by-step direction and examples and supporting documents in Word, PowerPoint, etc. can be attached to the WebQuest. A 30-day free trial is available.
- Createwebquest (https://www.createwebquest.com/), which is a rudimental WebQuest editor available for free on the web.

Anyway, WebQuests can be easily created using PowerPoint and sharing the result on the web, *Google Drive* or *Wikies*[4].

TEACHERS' PAGE

While the whole WebQuest is supposed to "address students" and thus the sections/pages should be described using the second person and explaining in detail what the students are supposed to do, the Teacher's Page/section can provide an added value to the resource.

It "addresses other teachers" and supports the WebQuest reuse, providing additional information to any teacher who might want to use the same WebQuest in their own classroom. The Teacher Page could mirror the 6 sections addressing students, providing comments and details about on how to implement or support the process.

ADDITIONAL HINTS AND COMMENTS

Learning to design WebQuests is a process that should go from the simple and familiar to the complex and new. That means starting within a single discipline and a short-term WebQuest and then moving up to longer and more interdisciplinary activities.

Here are some examples of WebQuests addressing adult learners:

- https://web.ics.purdue.edu/~lehman/ct/teacher.html
- https://ozline.com/webquests/china/chinaquest.html
- https://ozline.com/webquests/democracy/debtquest.html

The high added value of a WebQuest is **its reusability**. As a matter of fact, once invested in the creation of WebQuest for a course it can be "reused" in following editions, just after a check about the availability of all the suggested resources. They can also be easily updated and integrated.

Examples in NECTAR context

WebQuests stimulate critical thinking, cooperative learning, authentic assessment, and technology integration and can therefore be used to address different types of learning outcomes. Their reusability also pushes to invest in the creation of such training materials, which can be adopted in several training contexts and initiatives.

In the NECTAR context, a WebQuest can be designed in order to support an effective search on the Web, guided by a well-defined task or problem, for instance about:

- possible suppliers;
- different diets and respect towards cultures and religions;
- how to try out new meals/recipes (evaluating the trial phase in terms of its feasibility in the business/service);
- the identification of opportunities to create value, develop creative and purposeful ideas.

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[4] See for instance "How to make a WebQuest" https://www.wikihow.com/Make-a-Webquest

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