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Guest Editor's Introduction

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WebQuests

The concept of WebQuest was created in 1995 by Bernie Dodge and then developed jointly with Tom March. This new concept very quickly gained the interest of teachers, the engagement of students, and spread all over the world. WebQuest has a recognized status of learning strategy, appearing in undergraduate and graduates courses in teachers' education and is also a research issue. Research results focusing on WebQuests have been described in master dissertations, presented in conferences and published in journals. They report students' reactions to WebQuests, their involvement in group work, and their learning results. Research is also conducted focusing on teachers as designers of WebQuests to be solved by their students (Almeida *et al*., 2003; 2004; Carvalho, 2003; 2005; 2006; Viseu & Carvalho, 2003; Gomes, 2006).

There is a large amount of WebQuests available online, however they may have different parts or blocks, due to an evolution in the nomenclature used. We identified three phases during its evolution. The names of some parts changed and their sequence was reorganized, as it is synthesized in table 1.

1st Phase **Dodge (1995)**	**2nd Phase** **Dodge (1997; 1998)**	**3rd Phase** **Dodge (1999a)**
Introduction	Introduction	Introduction
Task	Task	Task
Information sources	Process	Process
Process	Resources	Evaluation
Guidance	Evaluation	Conclusion
Conclusion	Conclusion	Teacher Page

Table 1 –Three phases on the evolution of the WebQuests

In 1995, Dodge presented a WebQuest as being composed by the following six parts: Introduction, Task, Information sources, Process, Guidance and Conclusion.

In the second phase (Dodge, 1997; 1998), the Guidance became integrated in the attributes of the Process. This integration is easy to understand considering the purpose of the Guidance as defined in Dodge's early work:

> "Some **guidance** on how to organize the information acquired. This can take the form of guiding questions, or directions to complete organizational frameworks such as timelines, concept maps, or cause-and-effect diagrams as described by Marzano (1988, 1992) and Clarke (1990)." (Dodge, 1995)

Other changes include the replacement of the Information Sources by Resources and the addition of a new block – Evaluation:

> "The Evaluation block is a new addition to the WebQuest model. Clearly, if we're going to justify the expense of using the web for learning, we need to be able to measure results. Since the learning we're looking for is at the loftier reaches of Bloom's Taxonomy, we can't gauge it with (readily) with a multiple-choice test." (Dodge, 1997)

The third evolution of a WebQuest considers five building blocks addressing students' activities and one devoted to the teacher (Teacher Page). The Resources became integrated into the Process, as it facilitates the interaction of the students with the links to explore.

Although the Teacher Page is a WebQuest block it plays a different role: it is not for student's use. Therefore, the link that gives access to it shouldn't be in the main menu, close to the other links the students will use. We normally suggest that this link should appear in the WebQuest's main page.

Dodge (2001; 2003; 2006) and March (2006) realized that there although there are many WebQuests online, only a few are real WebQuests. The format is followed but focused on low-level factual recall (Dodge, 2006). Most WebQuests ask learners to find the answers to simple questions for which there is only one right answer, "instead of a task that called for analysis, synthesis, evaluation, judgment, problem solving or creativity" (Dodge, 2006: 4).

The task "is the single most important part of a WebQuest. (…) A well designed task is doable and engaging, and elicits thinking that goes beyond rote comprehension" (Dodge, 2002). The author advises to avoid retelling because it is too basic. Unfortunately it is used more often than desired. "I was able to categorize tasks into twelve types, eleven of which required higher level thinking. The twelfth type, Retelling, was the most common and was to be avoided" (Dodge, 2006: 4).

The first definition of WebQuest, published in "Some thoughts about WebQuests", pointed out that: it is an inquiry-oriented activity; learners interact (group activity); some or all of the information comes from resources on the Internet, and there are two levels of WebQuest: short and long. Later on, the author stresses that the WebQuest focuses on "using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis, and evaluation" (Dodge, 2001: 6). It provides structure and guidance for students and teachers. March (2003) emphasizes that "a real WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide

Web and an authentic task to motivate students' investigation of an open-ended question, development of individual expertise, and participation in a group process that transforms newly acquired information into a more sophisticated understanding". To March (2003) the WebQuest should be "real, rich and relevant", the tasks should "entwine thematic and interdisciplinary relationships". He gives some examples such as "challenge students to evaluate the most promising combination of alternative energy resources, (…), or distinguish between terrorist acts and fights for freedom in a quest to reach a definition of terrorism that can apply cross-culturally" (March, 2005: 17). It is important to contextualize the topic and relate the WebQuest to previous and subsequent activities. A WebQuest should be used when everything else "seemed lacking" (March, 1998).

In the studies carried out, researchers reported that students' interest in the WebQuest is due to its structure and challenging activity, the need to use computers and the Internet. When comparing results achieved through the resolution of a WebQuest versus a traditional class, better results were achieved (Guimarães, 2005; Quadros, 2005; Barros, 2006; Sampaio, 2006; Silva, 2006). After finished a WebQuest, the satisfaction obtained by the teachers and the students was high, due to students' engagement in solving the task, the discussion and sharing of ideas in groups or in pairs, and the quality of the final product (Couto, 2004; Cruz, 2006, Cruz *et al.* 2007; Martins, 2007).

In some studies, students asked the teacher to explain them what they had to do because they did not want to read it on their own (Guimarães, 2005; Quadros, 2005; Barros, 2006; Cruz, 2006; Martins, 2007). They didn't behave autonomously, they are not used to decide on themselves, and they didn't feel confident. As the teacher didn't help them, they succeeded on solving their difficulties. If a WebQuest is well done, everything is there, the teacher shouldn't help the students but should motivate them to understand what is asked, giving them confidence.

It is also important to study the effect of short and long WebQuest in students' engagement and learning. This was analysed in the studies of Neves (2006) and Vieira (2007). The results achieved with the long WebQuest were more successful with 8^{th} grade students (Vieira, 2007) than with 5^{th} grade students (Neves, 2006). We think that long WebQuest are more appropriate to older students, because it demands more dedication to the same subject for a longer period of time. However, further research is needed on this issue.

Other aspects to study are related to group size effect (3, 4, 5 students) and group constitution (suggested groups by the teacher or chosen by the students) and the impact it may have on students' learning and performance.

Gender is another aspect that needs to be examined. In some studies where there were groups of girls, researchers reported that they were more teacher dependent (Cruz, 2006) and more concerned with the task to be solved (Couto, 2004) than boys. Quadros (2005) realized that boys revealed more interest, showed more work and responsibility. Guimarães (2005) also reported that two male students that have no interest at all in the Mathematics class changed drastically their behaviour and interest in solving the task. However such reaction didn't happen with two girls in the same study. This aspect also worth to be investigated and is related to studies about users' technology acceptance.

WebQuests are learning strategies that has been calling the attention of educational researchers. This issue presents four papers on the subject. Tom March revisits the key elements of WebQuests, and emphasizes the potential and the opportunities offered in a Web 2, presenting "The MyPlace Project". Leite, Vieira, Silva & Neves reported three studies in science education for citizenship: two studies compare the effect of short and long WebQuests in learning in 5th and 8th graders, and the third study is about the image of scientists (students' ideas about scientists and their work), comparing the results achieved by two groups: one that solved a WebQuest with another that hadn't received any instructions about procedures to be followed. Barros & Carvalho enlarge the potential of the WebQuests including some features to motivate students to extensive reading in English as Foreign Language, naming it a ReadingQuest. Two groups were compared having in mind students´ attitudes towards extensive reading in English and learning results, one group solved the ReadingQuest and the other one had traditional classes about the subject matter. Finally, Brito & Baía reflect about the WebQuests in teachers' training and in teaching practice, reporting an experience.

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