

Abstract

In this paper it has been proposed that the WebQuest can be adapted and used in a content-based syllabus in Armenia. This activity involves the use of authentic material from different Internet sources and engages students in reading extensively on a topic related to their discipline, performing tasks of increasing complexity, and creating oral or written texts to present the results of their online work.

The need to promote technological literacy among students and the focus on content-based instruction as the most appropriate method to learn and construct knowledge have resulted in the development of activities to integrate the Internet into the language classroom. Computers have become indispensable in the contemporary world as the powerful means for communication and education. Learners' interest to learning languages has been enforced by the availability of the Internet, which provides easy access to every possible kind of information and serves as an effective tool to facilitate learning.

Integration of Internet into the language teaching process is becoming more and more actual due to its increased role in everyday life and practically limitless opportunities of using a foreign language segment of Internet for teaching purposes. Among the benefits of Internet use in the second and foreign language classroom, the most important are:

- Increased motivation and participation by students.
- More opportunities to interact with the target language and content area
- Greater integration of reading and writing skills and opportunities to practice them in meaningful contexts.
- The possibility of implementing problem solving tasks and tasks developing critical thinking

In addition to the benefits just mentioned, the Internet provides the resources necessary to carry out authentic projects and analysis, and thus develop the communicative competence of students. Such resources allow teachers to design simulation activities and role-playing using authentic material.

The purpose of the article is to analyze the methods of Internet integration into language teaching process and possible ways of applying them in the Armenian classroom.

Activities that can exploit Internet resources for teaching languages take many forms. One of the first ways of integration of Internet is the expansion of the text-book material. This is similar to "Teacher's Resource Book", which is an additional source for various exercises and role-plays. Thus, for instance most of modern books have electronic support which provides additional tasks for the units, including interactive grammar and vocabulary exercises, tests and topic-based games. Besides there can be provided references to other sites concerning the problem and with more examples, which is very significant for a content-based learning.

In using the Web for education, there can be distinguished the following five formats: topic hotlists, multimedia scrapbooks, treasure hunts, subject samplers, and WebQuests. The first two are activities for learners new to the WWW and are limited to simply exploring and downloading Internet resources. These resources can be organised and used later in other Web-based activities. **A topic hotlist** is a Web page

containing sites categorised by topic. A **multimedia scrapbook** is a collection of Internet sites organised into categories, such as photos, maps, and sound and video clips. A **treasure hunt** develops students' knowledge of a topic by providing links to Web sites with information on that topic and by posing key questions concerning the sites. A **subject sampler** is an activity designed to get students to develop an affective connection to a topic by responding to Web sites with a personal perspective.

The last and the most complicated way of integrating internet into a teaching process is a **WebQuest**. It offers quite a serious task, where the subject can be a problem, which supposes several points of view: current events, controversial social and ecological questions.

WebQuests use several strategies to increase student motivation. First, WebQuests use a central question that honestly needs answering. When students are asked to understand, hypothesize or problem-solve an issue that confronts the real world, they face an authentic task, not something that only carries meaning in a school classroom. Although you can't count on getting a response, when students do receive feedback from someone they didn't previously know, they join a community of learners and have their presence, if not their contribution, validated. When teachers choose a topic they know their students would respond to, they add to the relevance.

The second feature of WebQuests that increase student motivation is that students are given real resources to work with. Rather than turn to a dated textbook, filtered encyclopedias or middle-of-the-road magazines, with the Web students can directly access individual experts, searchable databases, current reporting, and even fringe groups to gather their insights.

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.

Lastly, the answer or solution the student teams develop can be posted, e-mailed 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, not simply something to fulfill an assignment.

One of the main (and often neglected) features of any WebQuest is that students tackle questions that prompt higher level thinking. Certainly, the Web can be used as a source for simple information retrieval, but this misses its power and short-changes students. Built into the WebQuest process are the strategies of cognitive psychology and constructivism. First, the question posed to students can not be answered simply by collecting and spitting back information. A WebQuest forces students to transform information into something else: a cluster that maps out the main issues, a comparison, a hypothesis, a solution, etc.

In order to engage students in higher level cognition, WebQuests use scaffolding or prompting which has been shown to facilitate more advanced thinking. In other words, by breaking the task into meaningful "chunks" and asking students to undertake specific sub-tasks, a WebQuest can step them through the kind of thinking process that more expert learners would typically use.

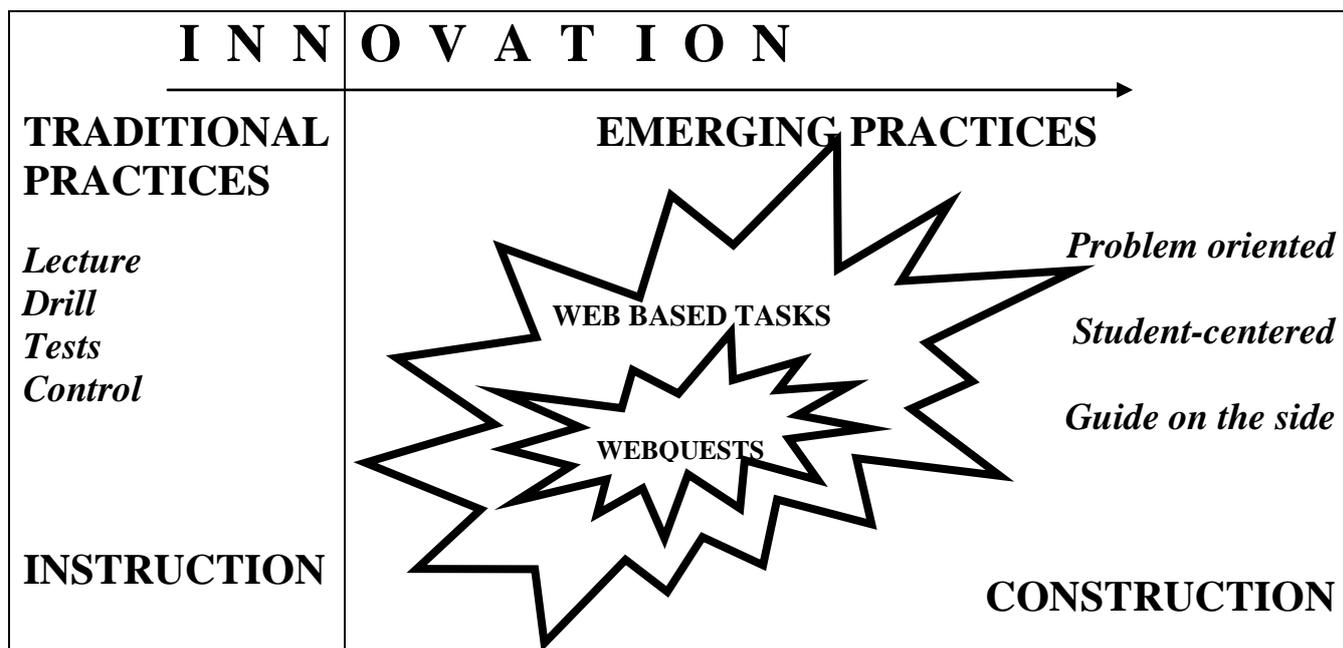
Lastly, constructivism suggests that when students need to understand a more complex or sophisticated topic like those that comprise WebQuests, it doesn't help to serve them simplified truths, boiled down examples, or step-by-step formulas. What they need are many examples with lots of information and opinions on the topic through which they will sift until they have constructed an understanding that not only connects to their own individual prior knowledge, but also builds new schema that will be refined when students encounter the topic again in the future. Until the Web, this kind of activity was very difficult for the average teacher to create because collecting such a breadth of resources was next to impossible.

In WebQuests students take on roles within a small student group and this tends to promote motivation. In addition, because the WebQuest targets learning about large, complex or controversial topics, it's probably not realistic to expect each student to master all of its aspects. Thus learners divide to conquer. This is not to say that students don't gain the overall understanding, because this happens in a later stage

of the process, but it does suggest to learners the reality that not everyone knows everything. In fact, this is one of the great messages that students invariably bring back from interactions with experts. Having students develop expertise and be appreciated for it by their peers is built into each WebQuest. Cooperative learning strategies are then applied to necessitate each student's input. By running several WebQuest groups in the same class, students will also see that different solutions were chosen by each team because of the quality of the group members' research and argumentation skills. As students complete more WebQuests they will become increasingly aware that their individual work has a direct impact of the intelligence of their group's final product.

Modification of WebQuests for Armenian classroom

Innovative approaches quickly integrate into our educational system, especially in foreign language teaching. The development of a WebQuest in the form of Web pages, even if the templates in HTML (hypertext markup language) exist, is not always easy for the teachers. Not many of them are able to manage all the work necessary for the content authoring, HTML files editing, and final publishing on the Web server. Moreover, in the Armenian situation, not all the teachers possess good computer skills, and not all educational institutions are technologically equipped. For some of the teachers it is a bit difficult to get used to the fact that the role of the teacher is changing in spirit of the English idiom “*guide on the side, not sage on the stage*”. As for the students not all the activities, suggested by western educationalists are appropriate for them. Thus it is important to design the tasks according to their conceptions taking into account modern tendencies and evolutionary approaches to education. This process of innovation can be described as the shift from instructivism to constructivism which is well illustrated by the following table



The idea of application of WebQuests in Armenia is still a project, which should receive further development. We are undoubtedly aware of the difficulties connected with the successful application. First one is the time shortage, which is significant for the majority of teachers. It is really not easy for them to find enough time and energy to design the high-quality WebQuest in its full complexity. The creation of a WebQuest could be, in terms of the workload, compared to writing a chapter of a textbook or a whole research study. No surprise that the teachers don't hurry to carry on with such activities as their extra job. On the other hand the ambition to show his/her own qualification and to offer the best practical ideas to others is often a good motivation.

The second problem is linked with the right understanding of the current innovation of education as it is described by shift from instructivism to constructivism. The power of the publishing system, even with the pre-designed WebQuest structure, is no guarantee of the real innovation. The tool itself could be

used in many different ways. There is a real risk of a traditional approach to the Webquest designing that would rather resemble the old instructive lesson, or the teacher may show some other signs of misconception. Therefore the propagation of such a tool has to be complemented by the teacher training scheme.

There are also several tips, which can be useful for designing a Web-quest and can serve as a starting point for enthusiastic teachers.

1. The first stage for a teacher in learning to be a WebQuest designer is to become familiar with the resources available on-line in their own content area.
2. The next step is to organize one's knowledge of what's out there. There exist several sites which can be of great assistance. Spending a few hours on [Non-WebQuest 3](#)¹ will guide the teacher in organizing the resources in their discipline into categories like *searchable database*, *reference material*, *project ideas*, etc.
3. Following that, teachers should identify topics that fit in with their curriculum and for which there are appropriate materials on-line. Research has shown that the most important factor related to student learning and technology use is how teachers relate the technology-based activity to other learning activities. Therefore, it's important to clearly link your WebQuest to previous and subsequent activities, so that the WebQuest is not an isolated experience disconnected from the rest of your curriculum. Relatedly, WebQuests aren't the endpoint, but the beginning of student use of the Web for learning. Ideally, in the not so distant future, students will have internalized many of the cognitive strategies built into WebQuests, so that students direct and guide their own studies and findings. You might call this idea "WebQuests as training wheels."
4. The guidelines for teachers given by Warschauer and Whittaker (1997) are useful for the design of WebQuests and for ways to use them in class. Teachers should consider carefully the goals of the task, not underestimate its complexity, provide necessary support, and involve students in decision making. A [template](#)² is available that guides the teacher through the process of creating a short-term, single discipline WebQuest.

Although the Internet is a useful tool in teaching, it has limitations and can pose problems for some learners. Elementary and intermediate level students can feel overwhelmed by the wealth of information and may lack the proficiency in English necessary to understand many texts. Of course, not all the information accessible on the Web is relevant for students. Additionally, lack of direction may become an insuperable hindrance. Therefore, at every stage of an activity learners need to know the purpose of the task they are performing and what to do next.

These difficulties can be overcome with appropriately planned WebQuests. A WebQuest must be integrated into the CBI curriculum, taking into account the overall design and goals of the course. The teacher should explain the activity, its purpose, the benefits the students can obtain by doing it, and the expected outcomes. Before starting a WebQuest, students should be given some background information on the topic of the task and some practice with the vocabulary they will encounter in the WebQuest. Thus for instance, when working with master's degree students at the Faculty of Biology on a topic "Fetal stem cells", the following WebQuest could be designed and offered to them.

¹ iteslj.org/Articles/Warschauer-Internet.html.

² webquest.sdsu.edu/taskonomy.html)

A WebQuest Fetal Stem Cells in Modern-day Science

Introduction

Throughout history, since the beginning of time, varying diseases and disorders have affected humans worldwide. Ever since then, it has been the goal of scientists and doctors alike to try and relieve mankind of any unnecessary pain and or suffering. For this reason, science and scientists need to search for the very best sources of therapies that have the potential to change people's quality of life. When they are identified, regardless of their sources, researchers need to be able to use them to pursue the development of important therapies. Stem cells are incredibly valuable to science and this is because they have the capacity to develop into any type of cell in the body. And therefore, they have the potential to be used for almost anything, organ transplants, a cure for Parkinson's and much more.

The controversy comes when the cells are harvested. Harvesting can be done by:

- obtaining cells from the embryos of terminated pregnancies
- getting them from embryos from *in vitro* fertilization clinics

Task

Your team must gain as much knowledge about stem cells as possible. Your team consists of **a scientist, a politician, a person, whose relative suffers from Parkinson's disease, a doctor and a student**. Each member of the team will visit a site and respond to the following questions:

1. What are stem cells?
2. Why are fetal stem cells more preferable than adult stem cells?
3. Does a black market exist for fetal stem cells?
4. What diseases can be cured with the help of stem cells?

Process/Resources

Meet with your team of 4 or 5 and choose your roles: **a scientist, a politician, a person whose relative suffers from Parkinson's disease, a doctor and a student**.

Each team member will visit the site listed in the table below.

Stem cells: a primer

This primer presents background information on stem cells.

<http://stemcells.nih.gov/info/basics/basics1.asp>

A politician will visit

<http://www.researchamerica.org/opinions/> and discover the results of several opinion polls about medical research, conducted by Research!

A doctor and a person whose relative suffers from Parkinson's disease, will visit

<http://www.agenet.com/?Url=link.asp?DOC/185> and learn how stem cells can be used in a cure for Parkinson's and Alzheimer's Disease.

A student will visit <http://www.stemcellresearchnews.com/> A site with lots of articles on various stem cell research initiatives.

Teams members will work together and synthesize their information from their site visits. **Do you support stem cells research or are you against?** The team will write a persuasive essay stating and

defending their position on this topic. If you need [help on writing a persuasive essay click here](#). They can also make oral presentations.

Conclusion

Support stem cell research

The Coalition for the Advancement of Medical Research offers an e-mail campaign in support of stem cell research. http://www.stemcellfunding.org/action_in_the_states.aspx

Stop stem cell research

If you are against stem cell research, add your name to this group's petition. <http://www.stemcellresearch.org/>

From above mentioned sample it follows ,that the task must be challenging and relevant to the students in order to maintain their interest and enhance their motivation. The type of WebQuest and the tasks that the students have to perform must be suitable to their level of knowledge of English and the content area they are interested in. The topic should be familiar to them and the material should be related to their field of knowledge, in order to enhance their confidence. The number, length, and linguistic difficulty of the texts will depend on the level of the students for whom the activity is intended. When using authentic materials in CBI instruction, especially considering the abundance of material available online, it is preferable to simplify tasks rather than simplify authentic texts.

The tasks that the students have to complete should be divided into sub-tasks of increasing complexity and should be clearly described, thus guiding students through the activity. As the students work in groups, it is desirable to match less proficient with more proficient students. In this way, the more proficient students can take on the most complex roles and collaborate with the others to complete the task.

The greatest hurdle Armenian teachers will face in implementing WebQuests relates to technology access. No one's situation epitomizes the perfect technology set-up, and the exact details of implementing your WebQuest will vary depending on the kind of Web access you have and the number of computers available. No classroom is free from dealing with the constraints imposed by limitations in technology. Even schools with lots of computers may not have adequate bandwidth to access the Internet quickly. Or, perhaps access is fine, but the computers don't have enough RAM and therefore have to run older versions of Web browsers. The varieties are infinite, but this is a misery we all share.

Here we would like to offer a few scenarios to consider as you face your own problems

Teachers with no computers available in their schools are hard pressed to do a WebQuest, but the intrepid can print out the Web pages for their students to use in class. The fun of computers and Web work can be lost, but perhaps other aspects of the learning experience can be used to increase student motivation.

Teachers in a one-computer classroom can pair students up and create a modular classroom for working on their WebQuests. One rotating station could be the online computer, one could use print-outs from Web pages, another group could use library books, magazines, videotapes, CD-ROMs, etc. Students in this scenario would be in a good position to evaluate whether Web access made a difference.

Teachers with Web access at home but non-networked computers in school can download the Web pages from home and then copy them from disk onto computers at school.

If you have Internet access in your schools, but perhaps lack a sufficient number of computers, you might also try pairing students up for each role (therefore five roles could support ten students). You might also look for access to an online computer lab that might be available for a few class sessions.

Thus the WebQuest is an activity that can be fruitfully exploited in CBI. It helps students develop academic skills such as scanning, skimming, paraphrasing, summarising, organising, analysing, and problem solving. Through extensive reading students acquire the vocabulary related to a topic of their discipline. By using authentic texts to perform real world tasks students become aware of concepts such as purpose and audience and see the utility of studying a second or foreign language.

WebQuests fit well in a learner-centred curriculum that seeks to help students develop autonomous learning. The use of technology with a content-based curriculum results in a learning environment in which students take more control of their learning. The role of the teacher is not to transmit knowledge, but to provide resources, help students develop learning strategies, guide the learning process, and offer support throughout the process.

The use of WebQuests to learn languages integrates the pedagogical benefits of project work, content-based instruction, and language learning via the Internet. Students become more motivated because they are using new technologies and authentic texts to complete authentic tasks related to their disciplines.

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