

ARTICLES

ACTIVE LEARNING THROUGH COMPUTER-ENHANCED ACTIVITIES

by Joy Egbert

Department of Teaching and Learning

College of Education

Washington State University

egbert@wsunix.wsu.edu

Our current understanding of conditions which facilitate the learning of additional languages (see, for example, Spolsky 1989; Thomsen, 1999; Egbert & Hanson-Smith, 1999) encourages us as language teachers to develop language-learning tasks that provide opportunities for learners to interact socially and academically in the target language. To interact in this sense means that students are not just part of the same group, but that they have reasons to talk to each other, to make decisions, negotiate meaning, and develop understandings together. The literature on conditions for language learning also indicates that learning takes place when learners are active. An active learner focuses on meaningful language and content-learning tasks (Willis, 1996, 1998). Examples of how such tasks may be created abound both in texts (cf., *The ESL Standards for Pre K -12 Students*, 1997) and on the Internet (cf., *Using the ESL Standards*, 2000); however, even teachers who support active students and interactive classrooms may not adhere to these principles when they incorporate computer technologies into their lessons. There are many reasons for this; it could be, for example, because of the drill and practice nature of the software available, the teacher's lack of experience in developing computer-enhanced tasks, or participants' expectations for the technology.

Computers can often make it easier to develop tasks during which language students of any age or language level are active and have opportunities to interact. Even when this is not obviously the case, there are many ways to create such learning opportunities during CALL activities. Below are examples of three hypothetical computer-enhanced EFL tasks that are made more effective by the addition of structures that encourage interaction and active learning. These examples are not specific to language levels or student characteristics in that

they can be adapted for use by a variety of populations. However, in all of the examples the keys to interaction and active learning are: 1) evenly divided roles in which individual learners are responsible for an equal portion of the work, and 2) a task that requires social interaction to complete.

Example One: Grammar practice software

Research supports the use of grammar drill and practice for remediation for some students, and software to support this activity is easy to find (check the CELIA archive at <http://www.latrobe.edu.au/www/education/celia/celia.html> for examples). Drill and practice grammar software is often used as in the following scenario:

Yoon is sitting in her individual computer carrel completing each stage of an ordered grammar drill and practice program. The section of the software that she is currently working on requires her to choose prepositions from a given set of words and use them to complete a series of unrelated sentences. When she finishes this section, the computer will calculate her score and she will then move on to the next section until her time at the computer is over.

Although Yoon may gain a greater understanding of preposition usage from this activity, isolated, decontextualized practice of discrete grammar points may not be the most effective way of learning or practising grammar. In the following scenario, the use of the same software is transformed by the activities that occur around it:

Enaam and Shexa are sitting together near the computer, but during this activity Enaam is not permitted to view the computer screen. Shexa is working on the preposition section of the grammar software. As each sentence comes onto her screen, she reads it aloud to Enaam, who copies it onto her paper. They discuss which preposition should be used in the sentences and then Shexa enters it on the keyboard while Enaam writes in on the paper. When the section is finished, Enaam and Shexa work to write a story using the disconnected sentences on the paper. Enaam is responsible for fitting in all the even numbered sentences, and Shexa is responsible for the odd numbered, although they both discuss the overall story and the extra information they need to include to have the story make sense. As they plot the story, both students write it down. Eventually they will compare their story with stories that other student teams create with the same sentences from the software.

In this scenario, the computer is used as a tool rather than the focus of instruction. Shexa and Enaam are using the prepositions repeatedly and so getting practice using the form, but they are also interacting, discussing, and actively working with and through the language in ways that Yoon is not. Because Enaam cannot see the computer screen, there is an information gap between the students, encouraging them to interact to complete the task. Both students are active because each student has a role to fulfil, and the interaction that takes place between them involves not only one grammatical form but rather a variety of vocabulary, structures, and meanings.

Example Two: Internet e-mail exchange

Many language teachers have their students engage in e-mail exchanges (for more examples, see Warshauer, 1995). Often, the task appears like the one in the following scenario:

Ms. Sivert's EFL class meets in the computer lab once per week. During this time, Ms. Sivert has arranged for her students to participate in a keypal project, in which each of her students e-mails another student in the language program. In the first few weeks of the activity she gave her students topics to write about, but now she allows them to write whatever they want to. Students who finish early are then permitted to do other activities in the lab until the period is over.

Ms. Sivert has the right idea. Her students are using technology to communicate efficiently in writing with others. However, they may or may not be truly interacting if there is no critical need to negotiate meaning or develop an understanding between keypals. They may also be using their common first language rather than the target language. In addition, there is no built in structure that makes sure that all students are as active as possible - one student may write a sentence and then sit and do nothing while others may write longer messages without addressing any new content or language. There are many ways to use e-mail in this same manner while adding structures to make sure that students are interacting and that they are each active in the process. The following scenario describes one such adaptation:

EFL students in Mr. Thong's class are involved in their "Mystery Character" assignment. They are conducting Internet and library research on a character from current political events that they have chosen. In each group, one student is assigned to research the character's background, one to discover information about the character's current situation,

and one to uncover interesting little-known facts about the character. Group members will pool their information in order to pose as this famous mystery person. They compose an e-mail message with clues to their character's identity in English to send to their native-English-speaking keypals in the USA. Their pals will use clues from the messages, reference materials from their library, texts, classmates, and other resources to form questions to ask the mystery character. After an exchange of several messages, the native speakers will eventually guess who the mystery person is. Once they guess correctly the roles will be reversed, with the native speaking students sending the clues and the EFL students trying to guess the name of the character.

In this adaptation of the keypal exchange, learners are responsible not only for helping their group understand and use the information they have found individually, but also for understanding their teammates' information. In addition, the group must develop clues using information from each learner and write these clues in the appropriate message format. The keypals, in order to discover the identity of the mystery character, must negotiate meanings with their EFL partners. The added structures make the e-mail activity a rich language learning opportunity.

Example 3: Web-based research

The usefulness of the Web for helping students conduct research has been noted throughout the CALL literature (see, for example, Egbert & Hanson-Smith, 1999; Kitao & Kitao, 2001, and links; Warschauer & Healey, 1998). The manner in which the research takes place, however, can make a difference in how effective the language and content learning is. For example, in the scenario below, the learner spends more time looking for resources than focusing on reading or writing in English.

Ivan is conducting Web-based research on American politics for a documented essay for his senior English language class. He is using a search engine to help him find relevant Web sites. So far it has taken him 2 hours to find a single useful site that he can comprehend fairly easily. He anticipates that it will take him the rest of the week just to get his resources together. He will then scan them quickly, type his paper using a word processor, and hand it in to his teacher.

In this scenario, Ivan is being exposed to a variety of resources in English, but he does not have the time or the English proficiency to read deeply into any of them. Developing Web searching skills may be one goal of the research project, but achievement in reading and writing should not be subordinated to it. The scenario below has the same goal of completing a research paper, but the process is very different:

Galya and her three teammates are working on a WebQuest about the electoral system of the United States; the goal is to write and publish a documented paper. The WebQuest format requires each member of the team to fulfil a specific role in the information-gathering process, and it provides handouts for members to complete with specific information. Web sites and off-line resources are listed for each role, so that team members do not have to spend extra time looking for initial resources. Students pool their results to decide on a focus for their paper. During the writing process, students also have individual roles that require them to interact with their teammates. When they finish their paper, they will publish it on the Web so that the US-based political experts that have agreed to help them can give them feedback and insight on the contents of their essay. After this process is complete, they will publish their paper to the Web for others to comment on.

The students in this scenario are participating in a WebQuest (for more information on WebQuests, see Dodge, 2000). The teacher has arranged before the project starts for experts that she contacted through a political electronic discussion list (for more on electronic lists, see Warshauer, 1995b; Neou, 1997). Interaction is added to the research project in two ways: First, the students must interact with their teammates to compile their information and compose their paper. Second, the team must interact with their experts to answer questions and respond to feedback. The change in audience from teacher to expert makes the task more authentic and perhaps more interesting and motivating for students. In addition, students are active because each has a role in each step of the process. They are also more focused on language and content because they must express both clearly for their experts and because the WebQuest process has streamlined much of the off-task activity.

Conclusion

The purpose of these examples is not to show that individual computer use does not have its place in the language learning classroom (it does), or that using the computer for remediation and practice is not effective and efficient for some learners (it is). Rather, the scenarios

encourage language teachers to use computers to provide the same (or better) opportunities for interaction and active learning that they do without them. By creating equal roles for learners and developing tasks that require social interaction to complete, we can make learning with computers as effective as learning without them.

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