

# Web-Enhanced English Learning: Integrating Pedagogy and Technology in the EFL Classroom

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## Abstract (摘要)

Calls for materials and methods in the English as a Foreign Language (EFL) curriculum which establish learner-centeredness and provide for greater expressive opportunities have been made by instructors and researchers alike (i.e., the natural approach, learner-centered curricula, the "output hypothesis"). Subsequently, the Internet, especially the World Wide Web (the Web), has been hailed as the medium by which such materials may be created and disseminated, and methods applied and conducted. Unfortunately, recent practical results in this area have not been encouraging with many web-based courseware suffering from a lack of a solid grounding in learning theory. To assist instructors in overcoming this obstacle, an experimental courseware design approach is being offered. **WEEL**, or *Web-Enhanced English Learning*, is a theoretically-grounded guideline for designing and implementing web-based components to provide the EFL learner with an enhanced environment for language acquisition and development. Accordingly, the first section of this paper establishes a conceptual framework for designing web-based courseware based upon the concepts of situated learning, or constructivism, and the output hypothesis. Next, a rationale is given for integrating hypermedia and Computer Mediated Communication (CMC) into the EFL curriculum. Finally, a prototype web-based college EFL courseware--Internet Skills and English Expression (**ISee**)--will be presented and analyzed in the context of learner-centered instruction and expressive opportunities.

**Keywords:** Computer-Mediated Communication, English as a Foreign Language, hypermedia, output hypothesis, situated learning, web-based courseware

## 1. The Pedagogy

### 1.1 Program goals

The goal of the contemporary Taiwanese college English as a Foreign Language (EFL) curriculum for non-majors is to produce graduates able to express themselves in English. Moreover, modern Second Language

Acquisition (SLA) theory maintains that for a program to reach such communicative goals, it must present learners with relevant, motivating materials, and place them in naturalistic communicative environments (Omaggio, 1986; Nunan, 1988). Unfortunately, instructors using printed materials and traditional classroom activities have had difficulty in attaining these goals. The problem is that these materials and methods are restricted by their inflexibility and inability to provide an adequate environment for motivated communication. Thus, a solution must be found if instructors are to meet pedagogical goals and learners are to benefit from EFL instruction. Before proposing a solution, a brief introduction to the construct of situated learning (Lave & Wenger, 1991), or constructivism, and Swain's (1985) output hypothesis and their influence on EFL instruction will be offered.

## 1.2 Situated learning and the output hypothesis

To create a successful EFL curriculum, the first order of business is to establish a theoretical framework to act as a guide for materials and activities development. For the WEEL courseware design, situated learning and the output hypothesis are used to establish such a framework.

*Situated learning* establishes a perspective for EFL curriculum design by placing the focus of learning on the interaction of the learner with others. In his analysis of situated learning within the second language learning environment, Salaberry, (1996) states the following:

*"...according to Vygotsky (1978), the mechanism of thought is the internalization of external behaviors which occur while interacting with others. Moreover, the most important "tool" used in social interaction is language..."*

Subsequently, the situated learning environment for an EFL curriculum needs to display at least the following features (adapted from Oliver, 1997):

- an authentic context for learning that reflects the way in which the knowledge and skills will be used
- learning derived from authentic activities
- support for collaborative construction of knowledge
- promote reflection to enable the construction of meaningful abstractions
- promote articulation to enable tacit knowledge to be made explicit

What we have here is a general theory of learning which can be adapted to the needs of both EFL curriculum designers and learners. By grounding a curriculum within the framework of situated learning, a focus for materials and activities creation is established.

Additionally, Swain (1986) and Swain & Lapkin (1995) provide us with a more specific theory of Second Language Acquisition (SLA) which they refer to as the *output hypothesis*. At its simplest, the output

hypothesis maintains that sufficient opportunities for expression must be built into the second language curriculum. This emphasis of the prominent role of output is in reaction to Krashen's (Krashen & Terrell, 1988) monitor theory which emphasizes the role of comprehensible input. The output hypothesis also has support from the field of psycholinguistics. De Bot (1996) argues, based upon two psychological models of learning--Levelt's (1993) language production model and Anderson's (1982) ACT learning theory, that the efficacy of output can be explained in terms of its role in building up a coherent set of knowledge and in enhancing fluency by turning declarative knowledge into procedural knowledge.

Thus, situated learning and the output hypothesis provide the curriculum designer with a clear focus: create materials and activities which promote interaction among learners using the social interactive "tool" of language, emphasizing the need for expressive opportunities.

## **2. The Technology**

As mentioned, traditional printed materials and in-class activities often fall short in providing the learner with a relevant, naturalistic environment for language acquisition and development. A proposed solution to this problem is to enhance these traditional materials and methods with hypermedia and Computer Mediated Communication (CMC).

### **2.1 Hypermedia**

In the **WEEL** courseware design approach, hypermedia allows an instructor to create curriculum materials which are relevant to activities and motivate the learner to acquire and develop the target language. The rationale for using hypermedia as a materials enhancer for traditional information-poor classrooms has been summarized by Alloway et. al. (1997). The most relevant features to EFL instruction are listed below::

- **Content is current**--The flexibility of hypermedia allows the instructor to create and collect the most current information regarding curriculum topics.
- **Content can be from primary sources**--Learners will be exposed to authentic materials on the Web, including, electronic magazines, newspapers, books, etc.
- **Content is comprehensive**--Created and collected hypermedia materials will provide learners with access to resources unavailable locally.
- **Learners can publish online**--Artifacts created for and collected from the Web can be shared with a wider audience.
- **Content is readily accessible**--Course information is quickly and easily accessible from school, labs, libraries, dorm rooms, offices, and homes.

Exhibiting the features listed above, hypermedia is an ideal medium for providing a relevant and motivating

structure within which CMC activities may be conducted.

## **2.2 Computer Mediated Communication**

Whereas hypermedia provides the learner with an environment in which relevant and motivating materials may be accessed and created, Computer Mediated Communication (CMC) allows them the opportunity to apply their newly acquired skills to naturalistic, communicative activities.

Fortunately, Salaberry (1997) has proposed a list of the major characteristics of CMC intended to guide in the design pedagogical activities. An abbreviated list of characteristics relevant to this paper follows:

- the learner addresses a specific audience for purposes other than demonstrating a skill
- expansion of the network of peers (sharing the work with fellow students)
- increased access to cross-cultural information (sharing information with other communities)
- increased access to experts' advice/guidance (expert-novice interaction, native speaker-nonnative speaker contacts, etc.)
- freedom from time and location constraints
- emergence of new discursive environments: absence of nonverbal cues (e.g., more spontaneous participation in group work)
- emotional involvement (increased motivation)
- emergence and expansion of a new asynchronous mode of communication (e.g., e-mail and web-base forums)
- safer environment in which learners may try to communicate with more advanced speakers without "losing face"

Thus, with hypermedia acting as a relevant structure, CMC activities provide the EFL learner with opportunities to communicate in the target language. It is now time to look at a prototype web-based curriculum being designed and implemented for a college EFL course for non-majors.

## **3. ISee: A prototype EFL courseware design for the web**

Although computer-based, hyperlinked instruction for second language learning is ongoing (Li, 1996; Zhao, 1996) and hypermedia courseware environments have been implemented in other fields (Marriott & Ng, 1996;

Nkambou & Gilles, 1996; Shyu & Hu, 1997), there are still few examples of collaborative, web-based courses available specifically for EFL. Thus, a prototype curriculum--Internet Skills and English Expression (**ISee**)--which puts into practice the integration of EFL pedagogy with web-based technology is being designed and implemented for a college EFL course for non-majors.

### **3.1 Hypermedia materials: Providing relevant support and information**

In **ISee**, hypermedia plays the specific role of both supporter and information-provider. As supporter (already mentioned above), hypermedia provides a structure for CMC activities, providing links to relevant, course-specific materials. As information provider, hypermedia presents structured tutorials encompassing a topic to be covered in class and which eventually leads to a related CMC activity.

Within **ISee** hypermedia support includes the following components:

- **Syllabus**--providing course goals, policy, grading, and schedule.
- **What's New**--providing up-to-date information about course content and activities.
- **Assignments**--providing a quick overview of in-class and online assignments
- **Discussion**--providing instructions for participating in CMC activities.
- **Reference**--providing links to course-specific readings and browsings.
- **Web Shed**--providing links to both pedagogical and technological tools and resources.
- **People**--providing contact information for instructor and learners

The main role of these documents is to provide support for the learner with regard to online, as well as in-class, topics, assignments, and activities.

Hypermedia information-provision is based in the **Tutorials** section of **ISee**. The tutorials are complete lessons based upon a learning sequence called CADRE, or **C**onnection, **A**cquisition, **D**evelopment, **R**eflection, and **E**valuation. As learners complete a sequence, they acquire necessary linguistic and technical skills to participate in a CMC activity. The types of CMC activities incorporated into **ISee** are described below.

### **3.2 Computer Mediated Communication tasks: Providing naturalistic, communicative opportunities**

In **ISee** CMC tasks are designed to give learners an opportunity to express themselves in naturalistic, communicative ways. Three electronic outlets available to the learner include posting to an epal through a tandem exchange, posting to a course specific (yet, globally-accessible) web forum, and posting to discussion

lists specifically created for EFL learners. Each of these opportunities provides its own expressive opportunity as described as follows:

- Epal exchanges are provided to give the learners freedom to communicate about loosely-structured topics (including lifestyles, interests, customs, and culture) encouraging naturalistic expression. Epals may be native speakers, though are usually second language learners themselves.
- The web forum is more structured and limited in that learners must respond to course-related questions and discussion topics. This activity is meant to promote collaboration on the local, peer level.
- Discussion lists provide the learner with much greater input and range of topics. These lists are established through the International EFL/ESL Email Student Discussion Lists (Holliday & Robb).

The CMC activities are meant to provide learners with the opportunities for expression (output) often absent in the traditional classroom setting.

#### **4. Conclusion**

This paper has established a rationale for integrating pedagogy and technology in the EFL curriculum. Situated learning, along with the output hypothesis, provide a theoretical framework within which pedagogical materials and activities can be created by focusing course design on the interaction among learners while emphasizing the importance of language production. Subsequently, it has been argued that hypermedia and Computer Mediated Communication provide the instructor with ideal tools and media through which this focus and emphasis can be put into practice. Finally, taking a prototypical web-based courseware--**ISee** as an example, it has been shown that the integration of pedagogy and technology has the potential to significantly enhance traditional EFL instruction, more effectively assisting learners to attain curricular goals of expressive competence in the target language. The next phase of this project is to make an empirical examination of the results from a pilot study involving the **ISee** web-based courseware. Specific questions to be addressed include how learners react to hypermedia materials and CMC activities, what difficulties are encountered while implementing and maintaining a web-based courseware, and, most importantly, what specific linguistic advancements are made by learners as a result of being exposed to a web-based courseware.

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