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**CERTIFICATE OF ORAL EXAMINATION**

Margaret Bullard, having been admitted to the Carl and Winifred Lee Honors College in 1994, successfully presented the Lee Honors College Thesis on April 24, 1998.

The title of the paper is:

**"Integrating Technology and Foreign Language Learning"**

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Foreign Languages and Literatures

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# INTEGRATING TECHNOLOGY AND FOREIGN LANGUAGE LEARNING

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Honors Thesis  
April 24, 1998

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## I. INTRODUCTION

We are currently experiencing what some refer to as an “information revolution.” This began with the appearance of writing systems, the invention of the printing press, the telephone, the mass production of audio and video tape recorders, the photocopy machine, the microcomputer, and now the Internet and Worldwide Web (WWW). The growth rate of the WWW has been incredible since the first version was made available in 1993. Aside from the large number of web sites that have been created, the U.S. Department of Education claims that 20,000 educational software titles have been developed and more than one million students take courses over the Internet every year (“Pillar III”). Much of the existing software entails tutorials and programs for the acquisition of a foreign language through multimedia interaction with the WWW.

However, this is not the first time technology and education have united. In the seventeenth century, teachers were using pictures to teach Latin. With the invention of the radio and television, instructors also found uses for these mediums in the foreign language classroom. One of the most popular instruments utilized during the 1960’s and 1970’s was the listening lab. The listening lab enabled students to hear authentic speakers and respond, while instructors listened or recorded the students’ pronunciation and understanding of the language. This was the most effective way for learners to be exposed to authentic speakers until recently. The listening lab has been replaced by satellite technology, video, and the Internet, but teachers continue to search for creative means to encourage foreign language learning. The American Council on Education has found that

emerging national needs require American higher education to organize itself to educate students for competence and success in an interdependent world. The

nation must commit itself now to providing all students with...a powerful, deep-rooted understanding of other languages, diverse cultures, and global issues...In short, if our nation and its people are to prosper in the new environment of the 21st century, our colleges and universities must truly become institutions without boundaries. Their leaders must rethink what is taught, how it is taught, where it is taught, and who teaches it.

As the quest for language learning continues, it is imperative that educators seek innovative approaches to incorporate the use of technology into foreign language acquisition.

Zhao suggests this exploration be guided by a clear understanding of the technological features, a sound learning theory, and a set of well-defined and justified goals (38). A set of goals for foreign language learning has already been established with the National Standards in Foreign Language Education. This document, first published in 1996, represents an “unprecedented consensus among educators, business leaders, government, and the community on the definition and role of foreign language instruction in American education.” Their Statement of Philosophy is as follows:

Language and communication are at the heart of the human experience. The United States must educate students who are linguistically and culturally equipped to communicate successfully in a pluralistic American society and abroad. This imperative envisions a future in which ALL students will develop and maintain proficiency in English and at least one other language, modern or classical. Children who come to school from non-English backgrounds should also have opportunities to develop further proficiencies in their first language. (“Standards for Foreign Language Learning”)

The overall goal is simple. Students need to interact in the target language in “real” communication settings. They also need to have access to current and authentic materials.

It is possible to achieve this goal through the use of the Internet. The Internet provides a number of benefits to foreign language learning. It allows the learner to work in the target language with authentic, up-to-date materials such as Spanish newspapers and radio stations. It provides the opportunity for students to communicate with “native” speakers and learn about other cultures through firsthand accounts. It also offers a variety of exercises and methods of interaction to allow the learner to select his/her individual learning path.

## II. CHANGING ROLES

The emerging role of the instructor and the student in the foreign language classroom differs greatly from the traditional one. In the traditional approach, the teacher explains grammatical rules and assigns homework for students to practice these concepts. Students are required to memorize the rules of the foreign language in order to complete the fill-in-the-blank, matching, and true/false exercises in the workbooks. They return the next day to review the exercises and the process continues. Sometimes the curriculum will be varied with activities to simulate an authentic situation or conversation. An exam is given to the students at the end of the section or chapter to assess how much material he/she has “learned” and whether or not he/she is capable of applying rules of grammar to isolated phrases. The teacher has complete control of the learning environment and there is only one learning style employed in the classroom. If the learner requires a different learning strategy to reach full potential, he/she will have to look for other means to acquire the material or not succeed. The learning process is almost entirely at the professor’s discretion.

In contrast to the traditional instructor-oriented linear approach, the student in the learner-oriented curriculum is responsible for his/her own education. This focus on student-centered learning is a “monumental technological paradigm shift, one that will eventually change the way that all instructors teach and the way that students learn” (Jensen 8).

Peterson contends this shift is due to several factors (31). First, the anonymity of the network promotes a form of discourse incomparable to many “traditional” pseudocommunicative exercises. Next, through the increased participation in computer networks, teachers will no longer have the ability to control discussion. Finally, much of the interaction is learner-generated. Thus the instructor’s control over content will diminish.

Although instructors are relinquishing their authoritative control, they still play an integral role in the learning process. Instead of the traditional instructor role, the teacher is now seen as a facilitator to learning. In this facilitative role, the teacher provides an environment in the classroom and in the materials more conducive to learning. They may assign specific tasks to be completed through Internet use such as viewing certain photos or maps. They might also suggest topics for discussion utilizing vocabulary words.

However, students and teachers cannot “shift” from the instructor-oriented approach to the learner-centered approach without some type of transition. This is why Peterson (31-2) has made the following suggestions for the teacher during the transitional process:

#### Suggestions for Transition

1. The teacher may act as coordinator of learner activity, providing continuity and direction in the early stages of the implementation of network projects.



2. The teacher can also function as a moderator, encouraging learners to take responsibility for their learning, while at the same time facilitating active interaction between learners. This role may also be adopted by groups of learners once a network has become established.
3. In order to prevent possible abuse of the medium, the teacher is advised to remind learners of the public nature of electronic discourse and the conventions that govern its operation.

Teachers are not going to become obsolete. The teaching profession is modifying, not disappearing. The computer will not be a replacement for the teacher, but rather a tool to assist in instruction. Like a tool, computers need someone to use them, to build with them, and to create a design for their use. This someone is the teacher, the individual who has the experience and knowledge of the learning process.

As new technology assists professors with new teaching methods and improves current methods of conducting research and obtaining data, there will be a transformation in the way students approach their own research. According to Lanham, educators cannot ignore the fact that they “will soon have to teach students who have been brought up on interactive electronic ‘texts,’ and [they] will have to prepare them for a world of work that relies on the electronic word” (10). Instructors need to begin integrating these on-line resources to remain current with the contemporary practices of the students. In the beginning, uniting technology and curriculum will seem frustrating and time consuming for those involved. This is common with any new product or activity. However, after becoming familiar with the new medium, the educator will be more efficient in planning and the students will be more responsive to learning.

### III. PEDAGOGY

#### A. Pedagogical Theory

Prior to undertaking the task of integrating technology into foreign language education, one should first become aware of the existing Second Language Acquisition (SLA) theories. In agreement with the National Standards for Foreign Language Education, Zhao has identified three commonly accepted statements about SLA:

1. Learning culture is an integral part of foreign language learning
  2. Comprehensible input and authentic materials are crucial to second language learning and acquisition.
  3. Learners must have the opportunity to experiment with the target language.
- (40-41)

Although the relevance of culture to second language acquisition has been identified, this has not resulted in more practical implementation. Osuna and Meskill contend that students are not acquiring a sufficient amount of culture for the language they are studying (1). Learning about people, their traditions, and their lives makes the learner more cognizant of the purpose for studying a foreign language—to communicate.

The goal of learning a second language is to become a functioning member of the target language community. This goal is best achieved by participating in authentic communication with speakers from the native community, but is not being met due to an insufficient amount of input. According to Krashen's Monitor Theory, comprehensible input is one of the key elements to SLA (15-20). In the traditional foreign language classroom, there is an inadequate amount of communicative or cultural input available in the target language. Too often teachers focus on grammar and structure instead of communication.

In contrast to these techniques, one of the goals of the new genre of language learning is “to immerse the learners in a completely authentic world, giving them the tools and tasks to help them understand and interpret the linguistic and cultural reality around them...” (Furstenberg and Morgenstern 133). According to Peterson, modern concepts of language learning “emphasize learner autonomy and communicative task-based learning models.” He identifies the locus of these models as the negotiation of meaning and the development of interactive competence (30). The “negotiation of meaning” is based on the commonly accepted view that learners must communicate in the target language in order to attain fluency. This appears to be very basic, but many students studying foreign languages rarely have the opportunity to practice the target language. Through the use of the computer, the student interacts in the target language by developing what Chun identifies as “interactive competence.” Interactive competence enables the learner to “generate and initiate different kinds of discourse, which in turn enhances their ability to express a greater variety of functions in different contexts as well as to play a greater role in managing the discourse” (18). As Armstrong and Yetter-Vassot suggest,

when used thoughtfully and creatively, video, CALL, Internet connections, and audio language labs can provide students with more opportunities to interact with and in the target language. When instructors provide students with more than just print media and audiotapes, the learning process becomes more varied, more interesting, and even more individualized. Experiencing the foreign language through a variety of different mediums gives it additional texture, color, and context. (479)

## B. Pedagogical Design

Although integrating technology offers numerous advantages, some type of structure needs to be established for computer-based educational programs. In Zhao's article "Language Learning on the World Wide Web," he outlines a framework for viewing SLA as peripheral participation and situated learning. With Jean Lave and Etienne Wenger's 1991 theory of legitimate peripheral participation (LPP) as its base,<sup>1</sup> Zhao addresses the question of what types of social engagements provide the most ideal context for learning to transpire. He also offers suggestions for how technology may be utilized to create an environment for these engagements to occur. According to this theory, the target language community needs to be accessible in order for learning to occur. Joint participation of language learners and "experts" in the foreign language is essential. In the case of foreign languages, the "experts" were previously defined as linguists or grammarians since most classroom activities focused on linguistic analysis. However, with modern conceptions of SLA, foreign language learning is no longer focused on grammar. The new goal is to achieve "native-like" proficiency. Thus, native speakers are now considered the "experts" and the task of the teacher is to provide access to these persons.

In order to communicate in the target language, there are certain base structures and forms one must first comprehend. Although several methods of input have been criticized for their form-based nature, Armstrong and Yetter-Vassot suggest that students need to practice some type of structural exercises in order to construct a comprehensible utterance (477). Garrett and Van Patten have labeled "processing instruction" as a solution to these opposing views. There is structured input in processing instruction, but it is designed to "direct learners' attention to relevant features of grammar in the input and to encourage form-meaning mappings that in turn result in better intake" (VanPatten 438). The best medium for inserting input in this type of

instruction is through the use of computer assisted language learning (CALL) applications. CALL programs are the most common form of software incorporated with foreign language learning. Most existing theoretical research is based on this methodology or similar variations. In order to incorporate this application into the classroom, Kenning and Kenning suggest the following components be included in the design: the selection of suitable materials, the selection of an adequate methodology to achieve the pedagogical goal, the proper analysis of the type of interface required by the teaching objective, and the careful planning and management of the teaching resources (81).

Until the debate over a theoretical foundation is settled, the existing theories and suggestions must be considered prior to integrating foreign language learning with technology. Technology should not drive pedagogy, but educators should be open-minded to new pedagogical paradigms as the digital community offers more innovations to assist in instruction and promote learning. In order to incorporate multimedia programs into the classroom, it is imperative that faculty and students are involved in the process and are familiar with the technology. It is important to allow a substantial period of time for those who do not have technical expertise to acquaint themselves with the basics of using computers, creating web pages, and integrating and connecting to on-line resources prior to beginning any exercises. In addition, faculty should also have the capacity to add content to the program or to alter any existing information with ease. In order to do this, they must be aware of their technical and logistical possibilities and limitations and have the necessary financial, technical, and professional support. With this assistance, teachers should involve themselves in the creation of these materials since they are the most familiar with pedagogy and language instruction. In addition, the technology needs to be incorporated into curriculum as part of the classroom

material, not as addenda. The formation of a web page and foreign language learning exercises is not just a technical issue, but also a pedagogical one. Robert Godwin-Jones (“Why Do it Yourself?”) advises that it is not necessary to “be big scale/big budget” to be pedagogically effective. Sometimes the simplest applications are the most effective because they are more focused on content instead of glamour. He also recommends that students be involved in the creation of the exercises and/or web page. Especially in higher education, instructors should utilize the intelligence of adult learners. Students know what works and what does not.

### C. Practical Pedagogical Approaches

Before beginning any Internet project, it is important to spend enough time training teachers and students on Internet use and etiquette. Intercultural communication should also be discussed in order to encourage students to be open and sensitive when communicating with people from other cultures. Leh feels that by acclimating both the students and the teachers with this information first, it will be less frustrating and will save a considerable amount of time in the end (195).

Second, Godwin-Jones suggests project creators should “surf the Net” and explore ideas and web page constructions designed by other educators.<sup>2</sup> It is not necessary to create original information and formatting for every project. Sometimes it is possible to incorporate others’ work into a new program (“Emerging Technologies”).

Third, in order to make the program Internet-accessible, one must obtain a URL. From here, a home page may be created with links to other resources and materials until the project is complete. If material should only be available to students enrolled in a specific course, it is possible to restrict access or limit who can view certain portions of the pages.

Fourth, materials should be collected from the Internet to incorporate into the website. These might include photos, maps, or exercises from other web-based tutorials. By including links or addresses to other web activities, students can be directed to certain sites instead of feeling overwhelmed by the quantity of unorganized information on the Internet.

Fifth, create exercises appropriate for specific classes. One example is to give a topic to the students, have them search the Internet, and then report the information back to the class. Another example is to arrange “ask an expert” or “ask a linguist” days. Still others include having students subscribe to language-related mailing lists or writing to pen pals.<sup>3</sup> Another possibility is to integrate a textbook’s cultural section with Internet photos and articles. Osuna and Meskill have created a guide entitled “How to Create a Web Activity for Foreign Languages” (See Appendix 1) as well as offer several other suggestions in their article “Using the World Wide Web to Integrate Spanish Language and Culture” (11-16). The possibilities are endless, but more exercises still need to be developed.

Sixth, Colpaert suggests including a tracking feature in the program to assess productivity and efficiency. This could entail a variety of characteristics including error analysis and language testing (316). The feature would allow teachers to determine where students are having the problems, either grammatically or technically. It would also permit the teacher to conduct some type of testing as a way of validating the progression of the learner.

Seventh, with any program or project, a post-activity evaluation is invaluable. For a program to be effective, one must have input and feedback from participants. This allows the creator to make improvements and modify the program according to students’ needs.

#### IV. BENEFITS

Although the initial financial investment for hardware and training may appear excessive, they do not compare to the benefits reaped from the integration of computer technology into the foreign language curriculum. Peterson claims that the less restrictive environment provided by the Internet promotes learner autonomy and encourages students to take control of their education (30). They are no longer confined to the “typical” classroom setting. Material can now be reviewed anytime and almost anywhere. Students decide their own paths of learning and progress at their own rate.

Learners are more receptive to the target language through the variety of learning styles and activities offered. They no longer have to follow the traditional linear sequence selected by the instructor. Students can select and review the exercises and concepts at their own discretion. They also have the convenience of customized help, review, or extra credit projects as the computer offers “constant feedback and intelligent tutoring” (Colpaert 311).

Technology can also benefit the learning process through the use of interactive, multimedia web pages. Multimedia annotations provide instantaneous access to a combination of visual, textual, and sound enhancements, thus allowing the learner to return immediately back to the text or to explore further explanations and related topics. Lomicka has found that the multimedia interactive function of the web increases the amount of vocabulary words students are able to retain, fosters understanding, and promotes active reading (2).

However, in order to achieve fluency in the target language one must communicate through the “negotiation of meaning.” Networked computers provide this “negotiation of meaning” by encompassing participants in text. According to Kemp, this is accomplished by the “detailed daily class instructions that arrive on screen, through the progress reports delivered



from the instructor in e-mail, through electronic discussion, to the freewriting, essay drafts, essays and critiques themselves” (172). This immersion gives learners time to reflect on and revise work. According to Peterson, this increased attention to written output leads to a higher degree of proficiency and a “qualitatively higher level of writing skills through the enhancement of critical reading skills” (32).

Another benefit of the web is that learners participate and perform better without the pressure of visual or aural cues. Students who ordinarily feel too inhibited in “normal” classroom discussion, participate with more frequency in electronic discussion. In addition, the quality of their written work improves without the “typical” pressures of feeling rushed or intimidated among peers. The environment of electronic discourse is more conducive to learning for those students who do not normally excel or participate in an instructor-oriented atmosphere (Peterson 32).

One of the most popular ways to communicate with technology in the classroom, or outside of the classroom, is through the use of e-mail. E-mail is available twenty-four hours a day for inquiries and comments to be sent and received. The benefits of e-mail are numerous. It can motivate students, help in learning culture, enhance social presence, and assist in foreign language learning (Leh 193). González-Bueno has also identified the following characteristics of foreign language generated through some form of electronic medium: a greater amount of language, more variety of topics and language functions, higher level of language accuracy, more similarity with oral language, more student-initiated interactions, and more personal and expressive language use. She goes on to say:

Communicating in a foreign language through the Internet will not only have a great motivational effect on the students, but may also ultimately improve the

students' foreign language writing and speaking skills as they send and receive e-mail messages. By providing additional possibilities to receive input and produce output in the foreign language, communicating through the electronic medium can establish a rich context for language development to occur. (1)

In general, investigators have found that students react favorably to the integration of technology into foreign language education.<sup>4</sup> With on-line learning, students feel more connected to the speakers of the target language and their culture. They enjoy having the opportunity to utilize their newly acquired skills in an authentic community. A real audience with real discussion topics makes class more interesting and fun.

In addition, technology can also benefit instructors. It allows them to analyze data and conduct research more efficiently. Involvement in project design may generate more enthusiasm toward their profession. Access to authentic, up-to-date materials is one solution to the instructor's goal of stimulating student interest in culture. Most important, ongoing professional development is essential to the self-enhancement that educators crave.

## V. DRAWBACKS

Although there are many benefits to using the Internet in foreign language learning, there are also several drawbacks. According to Peterson, the main challenge from the opponents to CALL and similar instructional methods is a concern that learning in the classroom is going to be "dehumanized." Opponents "fear that the application of computer technology may also act to undermine the social construction of learning" (34-35). Likewise, Lepper and Gurtner agree that the increasing use of computers in education may lead to a "greater regimentation and homogenization of classroom learning experiences" (17). Furthermore, Eldred claims that there

is a lack of user-friendly software and technical support staff (52). Bush claims that the organization and bandwidth of the present system will not be capable of managing such a quantity of information in the future (1). Moreover, Spitzer predicts that a “lack of active teacher input in a moderating or facilitating role may undermine a project, leading to learner apathy, disorientation or in more extreme cases abuse of the medium” (20).

Peterson has acknowledged several other “potential difficulties” from the opposition as well. First, technology is expensive and many people may not have access. Second, learners may feel overwhelmed by the quantity of information available. Third, learners may abuse the anonymity the network provides by posting inappropriate messages. Fourth, the communication generated is not interactive. Thus, some people may feel alone when their message does not receive a response. Also, many people consider electronic discourse as a form of monologue without nonverbal cues (34).<sup>5</sup>

There are advantages and disadvantages to every change and every system. From the research provided, it is obvious that the benefits of integrating technology into the foreign language classroom outweigh any shortcomings. Most of the opposing view’s arguments can be easily resolved with teacher/student input, more developed technology, and patience. Colpaert offers several explanations why certain applications may not have functioned properly in Appendix 4.

## VI. FUTURE

To avoid the challenges mentioned by the opposition, computer programs may need some revisions before fully integrating them into the classroom. However, the educational community itself has several tasks to complete prior to further incorporation of technology into the

curriculum. They need to review existing pedagogical theories, perhaps create new ones, and develop their own multimedia programs. They also need to orient themselves to the world of technology and its applications. To attain these goals, faculty must have technical, psychological, and financial support.

Colpaert suggests a number of questions to be addressed as new technologies are introduced into the learning process and new paradigms are developed. These questions revolve around didactic efficiency, educational effectiveness, and pedagogical efficacy (309-310).<sup>6</sup> Considering these questions, Armstrong and Yetter-Vassot feel that more communicative task-based activities which accommodate a variety of learning styles need to be created (478). In addition, innovative means of integrating these exercises into the curriculum also need to be explored.

As more technology becomes available for use in the foreign language classroom, it will also lead to more questions. Armstrong and Yetter-Vassot predict that the foreign language “classroom” will no longer be a “space with four walls, but a limitless virtual learning environment where students and instructors are engaged in an equal learning partnership” (483). It will consist of surrogate travel, increased use of synchronous conferencing, and Artificial Intelligence. The possibilities of incorporating new technology into the classroom are endless.

More theoretical research needs to be conducted in order to validate the argument of incorporating multimedia technology into SLA. Salaberry (14) contends that a foundation for the design of psycholinguistically sound and valid hypermedia programs is needed (14). In addition, Nagata (10) and Lomicka (6) agree that research of the technological effects on reading comprehension and the effectiveness of different exercise formats needs to be performed. New

technological innovations will also require further research of their integration with foreign language learning.

## VII. CONCLUSION

Considering the goals of the National Standards for Foreign Language Education, it is beneficial to incorporate technology into foreign language acquisition. Although the roles of the teacher and student will change, technology enables them to approach their discipline with a renewed interest. The teacher will be viewed as a facilitator and coach as the focus is placed on student-centered learning. It will require some pedagogical innovation on behalf of the instructor to make this transition, but the benefits are numerous: students will have the ability to communicate in the target language using up-to-date materials, the teacher will be able to spend time in class focusing on communicative task-based exercises while the students review grammar and linguistic forms on the computer, more students will be participating in “classroom” discussion and the quality of their written output will increase, and almost all students will find the computer programs advantageous and fun with their interactive, multimedia capabilities.

However, the task of developing these exercises lies with the educators, not the computer programmers. Technology in and of itself is not sufficient for educational purposes. It is a tool, nothing more. How this tool is guided and what it will construct for language learners in the future is an exciting venture.

In comparison to such inventions such as the listening lab and the radio, the technological capacity of the computer is extraordinary. What is more unbelievable are the possibilities the future holds for combining technical innovations and foreign language learning. We are truly in

the process of a “technological revolution.” Although there are some challenges to overcome, the benefits of incorporating this type of technology in the curriculum cannot be denied.

## NOTES

<sup>1</sup> Lave and Wenger assert that “the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of a community...Rather than learning by replicating the performances of others or by acquiring knowledge transmitted in instruction, we suggest that learning occurs through centripetal participation in the learning curriculum of the ambient community” (29, 100).

<sup>2</sup> See Appendix 5 for a thorough list of how other foreign language websites appear and how other tutorials are constructed.

<sup>3</sup> Leh (195-96) has many excellent ideas for pen-pal activities. For example, the instructor might provide the students with a question to begin the discussion with the pen-pal such as “Who do you live with?” or “At what age are people allowed to drink?” to generate information on culture. Then the student could write a paper or present the results orally.

<sup>4</sup> For example, Armstrong and Yetter-Vassot 479, Osuna and Meskill 6, Nagata 9, and Leh 193 all discovered that students enjoyed using e-mail and the Internet in the classes.

<sup>5</sup> A table of “Hypothesized Positive and Negative Effects” may be viewed in Appendix 2.

<sup>6</sup> See Appendix 3 for these detailed questions.

## APPENDICES

## Appendix 1

## “How to Create a Web Activity for Foreign Languages”

Osuna and Meskill 10

1. Select a topic from your textbook.
2. Think about what language functions can be derived from this topic. In other words, what are some of the communicative acts native speakers engage in when dealing with the topic?
3. Think about the cultural component encompassing the communicative process.
4. Choose tasks that integrate language and cultural in a natural way.
5. Search the Internet for a web site to match your tasks:
  - Do a search by country and key word(s) associated with the topic selected.
  - Browse around different sites to find a good match for the tasks. If you are not satisfied, keep searching or adapt your tasks to the information provided at the site.
  - WARNING: Web sites can disappear without notice. Choose a site that is connected to a government agency, a university, a large corporation. This type of site tends to be more reliable.
6. When you write the activity, give clear and specific instructions.
7. Write the activity in the target language.
  - If the activity is for novice learners, use the language in a very controlled fashion. That is, use the language learners know, yet go a bit beyond their proficiency level. If the language employed is too challenging, they will be inclined to give up on the task.



8. When writing the activity, take advantage of the multimedia dimensions of the medium. Use pictures, graphics, movies, music, etc. Think about what can be accomplished by using a computer as opposed to using a textbook. If possible, write the activity to integrate all language skills:
- Reading. Have students read short selections. Check reading comprehension using true/false statements.
  - Writing. Have students write about what they read, complete open-ended questions, react to visuals, etc.
  - Speaking. After the activity is completed students can discuss, compare, and contrast tasks.
  - Listening. There are wonderful musical recordings on the web. Lyrics in the target language can function as a mirror of the target culture. Use them to elicit discussion.
9. Consider the length of the activity. One hour is a good amount of time on a task.
10. If your activity is curriculum based and integrates language with culture, your students will experience linguistic growth, enriched cultural knowledge, and increased motivation. Sounds too good to be true? Try it!

## Appendix 2

## Hypothesized Positive and Negative Effects

## Peterson 35-6

Asynchronous Conferencing	<ul style="list-style-type: none"> <li>• opportunity for reflection before responding</li> <li>• opportunity to revise written work</li> </ul>	<ul style="list-style-type: none"> <li>• loss of impetus to reply</li> <li>• slowness in decision-making</li> </ul>
Synchronous Conferencing	<ul style="list-style-type: none"> <li>• opportunity for more authentic dialogue</li> <li>• immediate response</li> </ul>	<ul style="list-style-type: none"> <li>• need for a skilled moderator to facilitate (control?) dialogue</li> <li>• technostress</li> </ul>
Learner autonomy	<ul style="list-style-type: none"> <li>• removal of time distance constraints</li> <li>• promotion of interactive learning</li> </ul>	<ul style="list-style-type: none"> <li>• “contextual deprivation”</li> <li>• reduced feedback</li> </ul>
Teacher/learner roles	<ul style="list-style-type: none"> <li>• redefinition of teacher and learner roles</li> </ul>	<ul style="list-style-type: none"> <li>• loss of pedagogical leadership</li> </ul>
Anonymity	<ul style="list-style-type: none"> <li>• increased written output</li> <li>• increased participation by minority groups</li> <li>• learners take control of their learning</li> </ul>	<ul style="list-style-type: none"> <li>• less reading</li> <li>• reinforcement of existing inequalities</li> <li>• information overload</li> </ul>

- |                  |   |  |
|------------------|---|--|
| Collaboration    | <ul style="list-style-type: none"> <li>• “empowerment” of learners</li> <li>• increased self-disclosure</li> <li>• increased collaboration between learners and between teachers and learners</li> </ul>              | <ul style="list-style-type: none"> <li>• lack of accountability</li> <li>• “flaming”</li> <li>• “aloneness factor”</li> </ul>  |
| Technical Issues | <ul style="list-style-type: none"> <li>• language skills enhanced through activity in the TL</li> <li>• learners gain vital computer skills</li> <li>• new opportunities for inductive “learning by doing”</li> </ul> | <ul style="list-style-type: none"> <li>• greater regimentation of learning</li> <li>• high costs of new technology, dangers of monitoring and control</li> <li>• “dehumanization” of learning</li> </ul> |

## Appendix 3

## Detailed Questions

## Colpaert 309-10

Didactic Efficiency	How can a specific learner learn more, in less time, with less effort? How does s/he get acquainted with a new system as quickly as possible? How can we guarantee long term satisfaction?
Educational Effectiveness	How can we produce systems capable of bringing about positive changes in the educational system? What are the implications for teacher training, for the development of learning materials (text books) and for curriculum optimization? Do teachers and trainers find a new role and new challenges for themselves?
Pedagogical Efficacy	How can we build in the power to produce results and solutions for real problems at the individual level (psychological problems, communicative problems, etc.) And at society level (job performance and productivity, multicultural interaction, equity, integration,...)?

## Appendix 4

## Several Reasons Why Certain Applications Did Not Function Properly

## Colpaert 310-11

- The added value of the technology had been defined in loose terms.
- The advantage of the system was described in advertising style.
- Few systems had been conceived from a didactic point of view. In many cases, we were dealing with spin-off technologies that were initially developed for other purposes.
- The different learning situations (school-based, autonomous, on-the-job,...) of the user had not been taken into account
- The role of the teacher or trainer had been neglected: teachers were expected to change their teaching methods, to follow courses on new technologies, to prepare lessons with authoring tools, but on the other hand they had little impact on the system itself.
- Contents were ill-adapted to the specific needs of the user.
- Specific problems related to application development (such as formatting of rich and varied contents) had been under-estimated.
- Systems had to cope with problems of time management, portability (to other systems) and transportability (to other places).
- Integration into the curriculum has always been a major problem, both in school and in company environments.
- Due to a technology-driven approach ('we have a solution, let's find a problem') or to an exaggerated market-driven approach, there was a lot of wishful thinking.

## Appendix 5

### Internet Resources

#### Examples of Internet incorporated into curriculum

<http://www.bbk.ac.uk/Departments/SpanishTecla/TeclaHome.html>

Tecla page full of great exercises that you can incorporate into your curriculum.

<http://138.87.135.33/class/welcome.htm>

Foreign Language Resources on the Internet

Be sure and click on “View Projects” for some exciting ideas on how to integrate the Internet into the classroom syllabus.

<http://www.govcontractsweb.com/mbarna/>

Bienvenidos a la página de Español I y II by Marilyn Barna-DeWald

Teachers, check out what she has done to incorporate the Internet into her curriculum. Excellent photos and links.

<http://www.studyspanish.com/tchinfo.htm>

Free e-mail service to monitor students' progress.

<http://wwwsol.hum.flinders.edu.au/Si97.htm>

Programa de Español 1121 Primer Semestre 1998

Products to Create Web Pages

<http://views.vcu.edu/wcb/docs/wcbindex.html>

Web Course in a Box—free to higher education.

<http://www.vcu.edu/teaching/intro.html>

PageMill

Help Creating Web Pages

<http://www.richmond.edu/~jpaulsen/wwwguide.html>

Papers, Tools, Guides and Tutorials for Using the World Wide Web in Foreign Language

Instruction

<http://www.auburn.edu/~mitrege/knowledge/index.html>

KnowledgeDesign Instructional Resources

Your Home for Web-Based Foreign Language Instructional Resources

<http://www.gorin.com/class/>

A 15-minute class: How to write Web pages in HTML 2.0

<http://www.geocities.com/Heartland/Plains/3641/howtos2.html>

All About HTML & Web Page Development--very thorough

<http://www.vcu.edu/idc/li/interact.html>

Language Interactive

A Trailguide to Creating Dynamic Web Pages

This is an excellent site to check out when creating a means for students to answer/respond to questions. It gives you the basics and some examples on JavaScript and CGI.

<http://www.developer.com/>

developer.com

For help designing cool games like “hangman” to incorporate into your tutorial.

<http://mld.ursinus.edu/~jarana/Colby/welcome.html>

Juan Ramón de Arana’s workshop on “Creating Language Interactivity on the Web”

Explains how to create self-check web pages and how to arrange for the instructor to receive the responses.

<http://www.fln.vcu.edu/cgi/archive.html>

Language Interactive Web Scripts: Examples for Language Learning

Provides sample forms and scripts for guestbooks, evaluations, reading comprehension questions, and more.



### Audio

<http://cgi.netscape.com/eng/mozilla/2.0/extensions/info.cgi?audio/x-pn-realaudio>

RealPlayer Plug-in for RealAudio and RealVideo

### Language Learning Centers and Associations

[wysiwyg://teachlink.77/http://polyglot.lss.wisc.edu/lss/lang/teach/teachlink.html](http://wysiwyg://teachlink.77/http://polyglot.lss.wisc.edu/lss/lang/teach/teachlink.html) p. 10-11/11

<http://www.furman.edu/~pecoy/teaching.htm>

Teaching with the Internet

Professional Associations for Language Teachers

Language and Technology Professional Associations

### Language Learning and Technology Resources

The journal *Hispania* is an excellent resource on related articles, reviews of products, and new websites.

<http://www.li.net/~ndonohue/www.html>

The Internet & The Classroom

Before doing anything, everyone should check out this site which includes a comprehensive list of the best links to everything from how to use the Internet to how to integrate it into curriculum to research articles.

[http://www.well.ac.uk/odl/t\\_and\\_l.htm](http://www.well.ac.uk/odl/t_and_l.htm)

WELL Web Enhanced Language Learning

Teaching and Learning on the Web Language Tools and Resources

<http://www.furman.edu/~pecoy/teaching.htm>

Teaching with the Internet

E-mail and Newsgroups for Language Teaching and Learning

General Resources for Language Teaching and Technology

Technology Resources for Lab Planning and Design

<http://www.kn.pacbell.com/cgi-bin/listApps.pl?Technology&Hotlist>

Blue Web'n Applications: Technology Hotlist

Check out this page for links to professional development, curriculum planning, and other great sites.

<http://polyglot.cal.msu.edu/llt/vol1num1/default.html>

Language Learning and Technology

A journal for second and foreign language educators.

wysiwyg://teachlink.77/http://polyglot.lss.wisc.edu/lss/lang/teach/teachlink.html p. 10/11

Incorporation Ideas/Examples

wysiwyg://teachlink.77/http://polyglot.lss.wisc.edu/lss/lang/teach/teachlink.html p. 1/11

<http://www.furman.edu/%7Epecoy/lessons.htm>

Web-Based Activities for Foreign Languages

Examples of vocabulary, grammar, listening comprehension, information discovery, and other multimedia uses of the web.

### Existing Programs and Tutorials

wysiwyg://teachlink.77/http://polyglot.lss.wisc.edu/lss/lang/teach/teachlink.html p. 6/11

<http://scrtec.org/track/tracks/a00581aa.html>

<http://mld.ursinus.edu/~jarana/Ejercicios/Self-Check/Horca1/hangctrl2.html>

wysiwyg://treeFrame.indice.116/http://mld.ursinus.edu/~jarana/Ejercicios/Self-Check/left.html

Excellent.

<http://mld.ursinus.edu/~jarana/Ejercicios/Instructors/colores.html>

<http://php.indiana.edu/~jsoto/lengua.html>

<http://www.muw.edu/~rmccalli/SpGram101intro.html>

<http://www.coastside.net/hmbhs/spanish/spanweb.htm#Gram>

<http://mld.ursinus.edu/~jarana/Ejercicios/Self-Check/index.html>

<http://www.ild.com/demos/spanish/slesson1.html>

<http://www.ild.com/demos/spanish/sex1.html>

<http://www.geocities.com/CollegePark/Campus/2024>

<http://www.studyspanish.com/culture.htm>

<http://www.studyspanish.com/tchinfo.htm>

Free e-mail service to monitor students' progress.

<http://www.june29.com//Spanish/>

Web Spanish Lessons by Tyler Jones and Jennifer Chambers

<http://www.umn.edu/~amigos/Virtual/cosas1.html>

<http://csgwww.uwaterloo.ca/~dmg/lando/verbos/con-jugador.html>

Comp-jugador--conjugates verbs.

<http://www.umn.edu/~amigos/>

<http://grub01.physto.se:8080/cgi-bin/ssis/~calcato/espanol0.html>

<http://www.umr.edu/~amigos/SPAN1>

Links to some fun activities to do with verbs.

<http://www.umr.edu/~amigos/SPAN2>

<http://www.cyberramp.net/~mdbutler/index.html>

Webspañol--with lessons, links, pronunciations, explanations, jokes and more.

<http://mld.ursinus.edu/~jarana/Ejercicios/intro.html>

EXCELLENT tutorial for teachers and students.

<http://www.dat.etsit.upm.es/~mmonjas/gram.html>

Página de la Lengua Española

<http://www.govcontractsworld.com/mbarna/>

Bienvenidos a la página de Español I y II by Marilyn Barna-DeWald

Teachers, check out what she has done to incorporate the Internet into her curriculum. Excellent photos and links.

<http://members.aol.com/maestro12/moon/arch.html>

Excellent site for those of you teaching or interested in Spanish architecture and culture. Lots of pictures and slides too.

Additional Links to Incorporate in Tutorials

<http://www.hull.ac.uk/cti/langsite.htm>

Internet Resources for Language Teachers and Learners

A large collection of useful links to Internet sites which may be beneficial to teachers and learners of languages.

<http://www.gmsmuc.de/english/look.html>

Langenscheidt's New College English/Spanish Dictionary

<http://radiocentro.com.mx/joya93.7/>

Stereo Joya 93.7 FM for some authentic Spanish tunes.

<http://www.geocities.com/CollegePark/Campus/2024/host.html>

Contextual Spanish Vocabulary

Will Dechent lists links to his favorite radio stations here.

<http://www.concentric.net/~Bev1/span.shtml#Interactive>

Awesome resource page for links to Spanish News, Tutorials, Research Projects, History, Holidays, Culture, Newspapers, Education, Search Engines, and more.

<http://www.hul.ac.uk/cti/langsite/hispanic.htm>

Hispanic Language Sites with links to newspapers and journals.

<http://netra01.bcftcs.ac.uk:80/Spanish/plang.html>

### La Gente y su Lengua

Includes links to Spanish courses, Famous Hispanics, Madonna's Website, and other resources.

<http://central.itp.berkeley.edu/~thorne/HumanResources.html>

### WWW Foreign Language Resources

Links to Spanish newspapers, maps, and WWW servers

<http://www.puravida.com/members/puravida/class/>

### A Touch of Spanish Class

With the right sound application you can visit this website to hear Ana speak some popular Spanish phrases or you can subscribe to her mailing list to talk to other people interested in Costa Rica. If you don't know anything about Costa Rica, that's okay because she has all kinds of cool stuff on her "¿Qué Pasa?" page.

<http://www.studyspanish.com/links/ recip.htm>

The thorough list of "Reciprocal Links" that this page has to offer can get any Spanish student/teacher off track.

<http://www.public.asu.edu/~meccjc/studentlinks.html>

### Spanish on the Web

Links to CNN in Spanish and the Spanish television network GalaVisión

<http://www.artsci.wustl.edu/~langlab/Spanish.html#A>

Spanish language resources

The title of this one says it all. This site has links to everything related to Spanish.

<http://www.lingolex.com/bookshop/generalspanish.htm>

Lingolex

Books to help you learn Spanish for sale.

<http://www.worldlanguage.com/prodlist.htm>

World Language Resources

Product List of Programs for Sale in a variety of languages.



## WORKS CITED

“American Council on Education.” (1995). “Why Study a Foreign Language or Culture?”

World Language Institute. State University of New York at Buffalo. 25 February 1998.

<<http://wings.buffalo.edu/academic/departments/AandL/world-language/>>.

Armstrong, Kimberly M. and Kimberly Yetter-Vassot. “Transforming Teaching through

Technology.” Foreign Language Annals 27 (1994): 475-86.

Bush, Michael D. “Language Learning via the Web.” Paper presented at the 1996

Symposium of the Computer Aided Language Instruction Consortium Albuquerque, NM.

29 May 1996. <<http://molier.e.byu.edu/calico/calico96.html>>.

Chun, Dorothy M. “Using Computer Networks to Facilitate the Acquisition of Interactive

Competence.” System 22 (1994): 17-31.

Colpaert, Jozef. “Learning from the Past, Building New Working Hypotheses: The

Didascalica Criteria Framework for More Added Value in CALL.” Computer

Assisted Language Learning 9 (1996): 309-18.

Eldred, Janet C. “Pedagogy in the Computer-Networked Classroom.” Computers and

Composition 8 (1991): 47-61.

Furstenberg, Gilbert, and Douglas Morgenstern. “Technology for Language Learning and

Teaching: Designs, Projects, Perspectives.” Wilga Rivers, ed. Teaching Languages in

College. Lincolnwood, IL: National Textbook Company, 1992. 117-40.

Garrett, Nina. “The Problem with Grammar: What Kind Can the Language Learner Use?” The

Modern Language Journal 70 (1986): 133-48.

--- . "A Psycholinguistic Perspective on Grammar and CALL." William Flint Smith, ed.

Modern Media in Foreign Language Education: Theory and Implementation.

Lincolnwood, IL: National Textbook Company, 1987. 169-95.

Godwin-Jones, Robert. "Emerging Technologies." Language Learning and Technology 1

(1998). 23 March 1998.

<<http://polyglot.cal.msu.edu/llt/vol1num2/emerging/default.html>>.

--- . "Why Do it Yourself? An Object Lesson." Language Interactive. Virginia

Commonwealth University. 23 March 1998.

<<http://www.fln.vcu.edu/cgi/yourself.html>>.

González-Bueno, Manuela. "The Effects of Electronic Mail on Spanish L2 Discourse."

Language Learning and Technology 1 (1998): 50-65.

<<http://polyglot.cal.msu.edu/llt/vol1num2/article3/default.html>>.

Jensen, Robert E. "The Technology of the Future is Already Here." Academe (July-August

1993: 8-13.

Kemp, Fred. "The Origins of ENFI, Network Theory, and Computer Based Collaborative

Writing Instruction at the University of Texas. Network-Based Classrooms: Promises

and Realities, T. Batson, B. Bruce and J.K. Peyton, eds. Cambridge: Cambridge UP,

1993. 161-80.

Kenning, Marie-Madeleine, and Michael J. Kenning. Computers and Language Learning:

Current Theory and Practice. Chichester: Ellis Horwood, 1990.

Krashen, Stephen D. Principles and Practice in Second Language Acquisition. New York:

Pergamon Press, 1982.

Lanham, Richard A. The Electronic Word: Democracy, Technology and the Arts.

Chicago: U of Chicago P, 1993.

Lave, Jean, and Etienne Wenger. Situated Learning: Legitimate Peripheral Participation.

New York: Cambridge UP, 1991.

Leh, Amy Sheng-Chieh. "Electronic Mail in Foreign Language Learning:

Communication and Culture." Proceedings of Selected Research and Development Presentations at the 1997 National Convention of the Association for Educational Communications and Technology (19<sup>th</sup>, Albuquerque, NM) ERIC Document (1997): 189-200.

Lepper, Mark R. and Jean-Luc Gurtner. "Children and Computers: Approaching the

Twenty-First Century." American Psychologist 44 (1989): 170-78.

Lomicka, Lara L. "To Gloss or Not to Gloss: An Investigation of Reading

Comprehension Online." Language Learning and Technology 1 (1998): 41-50.

<<http://polyglot.cal.msu.edu/llt/vol1num2/article2/default.html>>.

Nagata, Noriko. "Input vs. Output Practice in Educational Software for Second Language

Acquisition." Language Learning and Technology 1 (1998): 23-40.

<<http://polyglot.cal.msu.edu/llt/vol1num2/article1/default.html>>.

O'Donnell, James J. "Better Communication." University of Pennsylvania.

<<http://ccat.sas.upenn.edu/jod/teachdemo/bettercom.html>>.

Osuna, Maritza, and Carla Meskill. "Using the World Wide Web to Integrate Spanish Language

and Culture: A Pilot Study." Language Learning and Technology 1 (1998): 66-87.

<<http://polyglot.cal.msu.edu/llt/vol1num2/article4/default.html>>.

Peterson, Mark. "Language Teaching and Networking." System 25 (1997): 29-37.

“Pillar III: Educational software will be integral part of the curriculum – and as engaging as the best video game.” The U.S. Department of Education Office of Educational Technology. 18 March 1998. <<http://www.ed.gov/Technology/pillar3.html>>.

Salaberry, M. Rafael. “A Theoretical Foundation for the Development of Pedagogical Tasks in Computer Mediated Communication.” CALICO Journal 14 (1996): 5-34.

Spitzer, Michael. “Computer Conferencing: An Emerging Technology.” Critical Perspectives on Computers and Composition Instruction, eds. G. E. Hawisher and C. L. Selfe. New York: Teachers College Press, 1989. 187-200.

“Standards for Foreign Language Learning: Preparing for the 21<sup>st</sup> Century.” National Standards in Foreign Language Education Project of ACTFL, AATF, AATG, AATI, AATSP, ACL, ACTR, CLASS, and NCSTJ-ATJ. 7 April 1998. <<http://www.actfl.org/htdocs/standards/standards.htm>>.

Van Patten, Bill. “Grammar Teaching for the Acquisition Rich Classroom.” Foreign Language Annals 26 (1994): 435-50.

Zhao, Yong. “Language Learning on the World Wide Web: Toward a Framework of Network Based CALL.” CALICO Journal 14 (1996): 37-51.