

Using Internet-based Cooperative Learning Projects to Reduce Class Size and Improve English Education

Judith A. JOHNSON (Department of Electrical and Electronic Engineering)

Reduction in class size in order to increase the quality and amount of time students used English was achieved through the use of Internet-based group projects. During the semester course, students practiced communication skills using content-based materials, conducted research on the Internet, and give a PowerPoint presentation in English. Additionally, they acquired experience in data organization, computer usage, note taking, and collaboration.

Key Words: *CALL, independent study, project, English*

Introduction

Although research in foreign language acquisition shows that a ‘communicative’ language class of 40-80 students is untenable both logistically and pedagogically, classes of this number are still being assigned to teachers of English in the Faculty of Engineering of Yamaguchi University. The fact that students attend only one 90-minute class per week, increases the severity of the situation. Students have virtually no time to assimilate new information nor formulate, express, and exchange ideas, opinions, and feelings— to *communicate*.

Taking into consideration, not only the foreign language needs but also the overall educational needs of second-year university Engineering students, an alternative instructional model with the principal goals of creating a more practical language learning environment that would be conducive to effective learning and nurture the development of essential academic, professional and social skills was designed. Specifically, the goals were 1) providing students more substantial contact time with the teacher, each other and useful content, 2) developing students’ cognitive and creative thinking skills, 4) improving their computer skills, 5) developing their research skills and 6) giving them an authentic experience in making a Power Point (PP) presentation.

Procedure

One class of students was divided into

two groups which studied different learning modes for six weeks of the semester, then switched places for another six weeks.

Group A attended in-class instruction with the teacher. They practiced basic communication skills (reading, writing, listening and speaking) using content-based materials which were interrelated, thereby, reinforcing the skills. The lessons provided them opportunities to identify and solve problems, analyze and interpret data and exchange ideas and information related to the content. They were grouped in pairs or groups of 3-5 members, depending on the activity. Students were assessed on in-class participation, homework assignments and a final oral evaluation of individual and group communication skills, based on the content studied

Group B worked on their projects, independently, in a computer center. A Teaching Assistant was present for 30-60 minutes of the class to take role and assist students in the use of PP software, which they used to create the visual portion of the presentation. Students were divided into groups of 4-5 and assigned one of the following areas of research related to science, technology and society:

- Economic Growth and Human Development
- Energy—Fuels for the Future
- Climate Changes
- NASA Landsat Satellites
- Technology for Human Development
- Natural Hazards
- Stratospheric Ozone Depletion

All group members were responsible for acquiring fundamental knowledge about the topic then, based on that knowledge, select a more specific aspect for their individual research. The end product was a cohesive group PP presentation that was assessed according to the guidelines distributed to the students at the beginning of the course. (See Appendices A-E for all handouts.)

Students first handed in a group presentation outline which showed the section for which each member was responsible. A second outline showed how the individual planned to organize their research data. The last written assignment that was handed in was a detailed outline of the group presentation which contained the main points of each student's presentation. This was used as a handout that classmates used to help them follow and take notes during the presentations. After the presentations, while the teacher was making the PP slide of the written test based on information contained in the presentations, students had 25 minutes to speak with each other in order to gather missing information and to study their notes. Answer sheets with spaces for the student's name, class and student number were prepared for the class by the teacher before the presentations. Students were not allowed to refer to their notes during the test.

Results

In addition to researching English resources on the Internet and giving an oral presentation in English, students also acquired elementary skills in data organization, computer usage, note taking, and collaboration. At the end of the course, by means of the short questionnaire shown in Figure 1, students were asked their opinions about the project.

Students' responses to their computer-based language learning projects were largely positive, as shown in Figure 2. Some of the positive replies to what was interesting about making a PP show and why making the show was interesting (Question 1) were, "I used the software for

Questionnaire

1. Was making a Power Point show interesting?

Yes No

What?
Why?
2. Did you learn something new or interesting?

Yes No

What?
3. Was this the first time for you to give
 - a. a presentation in English? Yes No
 - b. a PP presentation? Yes No
4. Did you like working in a group?

Yes No

Why?

Figure 1

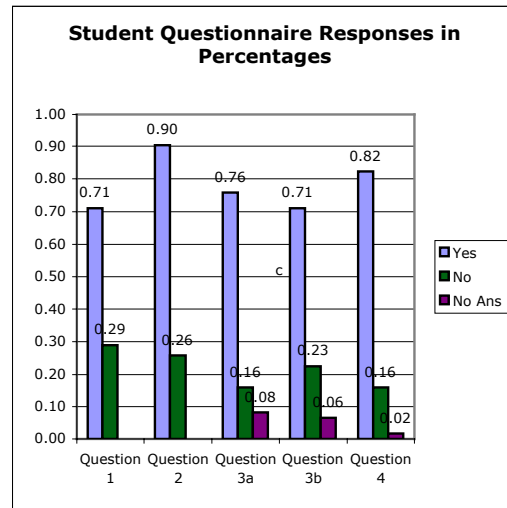


Figure 2

the first time; It was the first time for me to make a presentation; I learned new information; Talking to everybody; Research; I could use the computer; Using Internet; Supplied time to study using the PC; Useful to understand my friend's research; Useful for me to join society; Because I could do it; I learned to use the

Internet, and I could learn about my topic.” Those who answered negatively said that: “It’s my weak point; I didn’t know how to use the computer; I can’t use PP; A presentation in English is difficult; and I can’t understand.”

Students who said that they had learned something interesting (Question 2) wrote that they had learned, “Making a PP presentation; How to make a presentation; Explaining in English; and Thinking about the world’s problem.” Most answers referred to what they had learned about their particular topic. Reasons cited for not having learned anything new were, “Difficult sentences; and Can’t translate to Japanese from English.”

Seventy-five percent of the students said that this was their first experience in giving an oral presentation in English (Question 3a) and seventy-one percent said it was their first time to give a PP presentation (Question 3b).

The overall response to working in groups (Question 4) was positive. Sample comments by students who said they’d liked working in groups were, “I didn’t have to work alone; Can share opinions; I can work with my friends; I like cooperating with other people; Knowing others’ ideas is interesting. Members can talk together and work faster; Discussing is fun; Group members are interesting; Friends help me (give and take); Making friends with other people; Several people have several ideas; I can get a lot of information; The group is important; and There is responsibility.” The negative responses were, “It’s my weak point; Some people don’t attend meetings; Some members don’t work hard; Everyone has his own way, so I like to work alone; My ideas didn’t match the other members’; and I don’t like cooperation.”

Discussion

Augmenting a communicative, in-class instruction with Internet-based projects was successful in that students were able to have more ‘hands on’ experience with English than they would have received in a normal, overcrowded class. According to the

questionnaire responses, students were able to research and acquire new knowledge about their own topic and those of others in English. Furthermore, the knowledge helped them better understand relationships between science and technology and society.

Most students made their first presentation in English and learned how to use PP software to enhance their presentation. Each student took responsibility for his or her own section of the presentation as well as the group’s presentation and accompanying handout. Most presentations contained an average to high amount of creativity and were well organized.

Students appreciated having the opportunity to interact with classmates and work together to accomplish a common task. Almost everyone enjoyed making new friends with whom they could exchange ideas and information.

Listening to the presentations of their classmates, gave students much-needed practice in taking notes. The authentic need for them to find missing information in order to do well on the test, gave them the opportunity and motivation to approach other people and ask questions. Such opportunities are virtually non-existent in overcrowded classrooms.

As this was the first attempt to use this new instructional model, there are improvements that must be made. For example, it was found that some students only superficially researched their topic. In the next course the individual presentation outlines will be more closely scrutinized and students with sparsely written outlines will be asked to see the teacher to discuss their work.

Areas of research that help students learn more about other science and technology and gain a deeper insights into their relationships to the individual and society will be added to the original list.

Appendix A

Handout # 1

Assignment

1. Your assignment is to browse the Internet to look up information on your (1) group topic and (2) individual theme, organize the data.
2. Using the information, make a Power Point presentation (with handouts) to the class.
3. Hand in an outline of your presentation.
4. Hand in a research log – a list of the information; title and URL of all information used in your presentation.
5. Hand in the group Power Point show.

Assessment

You will be evaluated on:

1. Presentation -
 - Preparation (Were you ready?)
 - Can you talk about the topic without reading Notes? Clarity and effectiveness of the presentation (Were you interesting, convincing and well-organized?)
 - Were the visual aids you use effective?
 - Were handouts used?
2. Outline of presentation (may be the same as the handout)
 - Research log (titles and addresses of all information used)

Appendix B

Handout # 2

Group Presentation Outline

Class: _____
 Day _____ Period _____

Topic: _____

Theme 1

Name: _____
 Student # _____

Theme 2

Name: _____
 Student # _____

Appendix C

Handout # 3

Individual Presentation Outline

Name : _____
 Student # _____

Class: _____
 Group A B Day: _____ Period: _____

Group Project Title: _____

Theme Title: _____
 Theme: 1 2 3 4 5

- I. Introduction/ Definition
- II. Main points of discussion
 - 1.
 - 2.
 - 3.
 - 4.

Appendix D

Handout # 4

My Internet Log

Name : _____

Student # _____

Class: _____

Group A B Day: _____ Peiod: _____

Group Project Title:

Theme _____

Date	Title	URL	Description

Appendix E

Handout # 5

Smple Group Assignment Sheet

Technology for Human Development -- Activity Sheet--

Most people view technology as a positive force in globalization. However, a growing number of people have doubts about this. The fact is that there are some technologies that and can be both beneficial *and* harmful to human development on a global scale.

The goal of your project is to search the Internet to find new, useful and interesting information about this topic. And--using visual aids such as photos, graphs, etc.--show your data to the class in a logical, easy-to-understand 10-minute, oral, group presentation.

You will need to research many sites in order to make an accurate report. However, you can begin your search at these URLs:

<http://www.undp.org/hdr2001/>
<http://www.changemakers.net/studio/99july/jarman.cfm>

Keep a log of all the URLs that you take information from to use in your report.

Group Questions– All members must answer these questions.

1. What is ‘human development’?
2. Since when (age) has technology contributed to human development?
3. Name four kinds of recent technology that most Japanese people use today.
4. Compare the use of one of the technologies in question 3 with the use of the technology in a developing country .
5. Give an example of a technology that can be both beneficial and harmful to individuals, and the global society. Explain.
6. What does ‘GMO’ mean?
7. Are genetically altered foods permitted to be sold in Japan?
8. Is technology equally available to women and men, globally?

Individual Research Areas – Each member is responsible for researching and presenting information about one of the themes, below.

Focusing on human development, discuss

1. non-hi-tech development alternatives for rural and local communities
2. healthcare
3. genetically modified organisms
4. computers
5. hi-tech corporations (big-businesses)
6. cultural arts, crafts and values

Group members must work together to combine all the sections into one well-organized and well-balanced (similar amount of information and time) Power Point presentation.

R eferences

Brinton, D.M., Snow, M.A. & Wesche, M.B. (1989). *Content-based Second Language Instruction*. New York: Newbury House

Hutchinson, T., & Alan Waters. (1987). *English for Specific Purposes. A learning-centred approach*. New York: Cambridge University Press.

Johnson, J. (2002). Using Interactive Software for the Independent Study and The Need for Teacher Training. *Globalizing Yamaguchi University, First Steps: A Language Center for Functional Integrated Language Education*. (pp. 47-54). Yamaguchi, Japan: Yamaguchi University Language Center Group.

Kessler, Kessler (Ed.). (1992). *Cooperative Language Learning, A Teacher's Resource Book*. New Jersey: Prentice Hall Regents.

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