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著者	Maggard Jeff
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# Computer-Mediated Communication and Political Science: A Collaborative Learning Approach

Jeff Maggard

## Introduction

It is no accident that a growing number of foreign language educators and second language acquisition (SLA) researchers are becoming involved with computer-mediated communication (CMC) to teach academic content. Computer-mediated communication is a multi-modal (semi-whole language) approach used to teach reading, critical thinking, writing, speaking, listening, and technology. This megatrend is spreading rapidly not only because English literacy in the current era requires students and teachers to be technologically proficient but also because the advantages of using information technology (IT) to teach foreign languages are significant.

SLA researchers have long believed that negotiation of meaning enhances interlanguage development (Ellis, 1985; Long, 1991; Swain, 1993, 1995). In countries where foreign language students have limited contact with native speakers of the target language, collaborative projects using IT have proven to be useful for developing interlanguage; moreover, a number of CMC researchers assert that synchronous and asynchronous modes of communication (e.g., chat and email) may even be more beneficial than oral communication (Blake, 2000; Kitade, 2000; Pellettieri, 2000; Warschauer, 1998a). At Miyazaki International College (MIC), EFL instructors employing content-based approaches are using IT to expand language skills and to develop content knowledge, using collaborative learning frameworks. This paper explores how CMC has been used to teach content-based EFL courses in Political Science at Miyazaki International College. Examples provided from these courses include descriptions of methods and activities that may be useful in other content-based educational programs in Japan as well as in other parts of the world.

## The Road to CMC at MIC

From the 1960s through the mid-'80s, use of computer-assisted language learning largely focussed on the ability of computers to develop language competency. Under the influences of behaviorism and audiolingualism, and with the limitations of software programming environments, most computer-assisted language learning software utilized drill and practice (a.k.a., drill and kill) activities to bring about language learning (Schreck & Schreck, 1991). However, as Warschauer points out (1998b), since computers themselves do not constitute a method, the "...computer's effect [could not] be researched independently of the particular way the technology [was] put to use" (p. 757). Today, most SLA researchers do not use this sort of determinist approach to attempt to understand the impact of computers on language learning. Moreover, because of developments in authoring tools, the introduction of the Internet, advances in multimedia technologies, and changes in SLA pedagogy, "drill and kill" approaches are seldom used today.

In the late 1980s, and throughout the 1990s, most SLA researchers began to see computers as instruments used to deliver language content and believed that language learning was brought about through the skillful use of computers to deliver language content (Warschauer & Healy, 1998). Under the influence of the Communicative Approach, many researchers and teachers placed greater emphasis on using computers for authentic communication; since this time, task-based, collaborative, and content-based CMC approaches have been developing, and instructors have begun to use computers to integrate the multi-modal aspects of language learning into lesson plans.

At Miyazaki International College, a substantial number of content-based EFL instructors employ a CMC approach and collaborative learning activities. Most students are introduced to IT tools during their first year, and computer proficiency increases over the next four years as an essential means to facilitate English fluency and content area studies. Moreover, a large number of faculty utilize CMC to promote intercultural awareness, to develop writing and critical thinking skills, to increase reading, paraphrasing and summarization skills, to enrich oral presentation skills, to advance research skills, and to integrate multimedia content and lecture materials into course curriculum. Since 1996, MIC faculty have used synchronous and asynchronous activities to teach EFL courses in Anthropology, Archeology, Art History, Comparative Culture, Cross-Cultural Communication, Economics, Education, EFL, English Teaching Methods, Environmental Issues, Ethnography, History, Information Science, Linguistics, Literature, Philosophy, Political Science, Psychology, Religion, Research Methods, and Sociology (<http://www.miyazaki-mic.ac.jp/classes/>). The use of IT in MIC classrooms ranges from entire courses conducted online to courses where the computer is used to supplement material delivered in traditional classrooms. The present paper merely describes two of these courses, yet from this case study one can get a clear picture of how CMC is being applied in other content-based EFL classes at MIC.

## **Tools: Course Management and Web Conferencing**

Before looking at how CMC works at MIC, a closer look at the tools used to facilitate instruction is needed. There are a number of course management programs available that have web conferencing capabilities. Unfortunately, WebCT® and Blackboard® are costly and require extensive training (particularly for novice computer users). At MIC, WebBoard™ is used for web conferencing because it is simple to use, and it is relatively inexpensive.

### **WebBoard**

WebBoard is a commercially produced conferencing/bulletin board program that allows web forums. It is a useful tool to create a virtual community within the classroom and/or between universities around the world. WebBoard includes the following features: chat, post and reply, editing, spell-checking, web links and images. WebBoard also enables faculty to monitor the user logs of individual students. WebBoard allows teachers to link to web pages, movies, images and documents, and it allows teachers and students to create threaded discussions. As will be explained below, the conferences (i.e., teacher and student postings) can be used in a wide number of ways. In essence, teachers create and manage their own Intranets.

## Case Studies: Introduction to Political Science

During Fall Semester 1999 and Fall Semester 2000, CMC methods were used in Introduction to Political Science, a first year course, to develop critical thinking skills, practice reading and oral paraphrasing skills, improve writing and summarizing skills, safely search for information on the Internet, integrate today's multimedia technology into the classroom, and to give oral presentations (individual and group).

Figure 1 provides an image of what WebBoard looks like: "Conferences" are listed in the left frame and "Postings" appear in the right frame. As can be seen, WebBoard's frames-based organization allows users to select individual student postings.

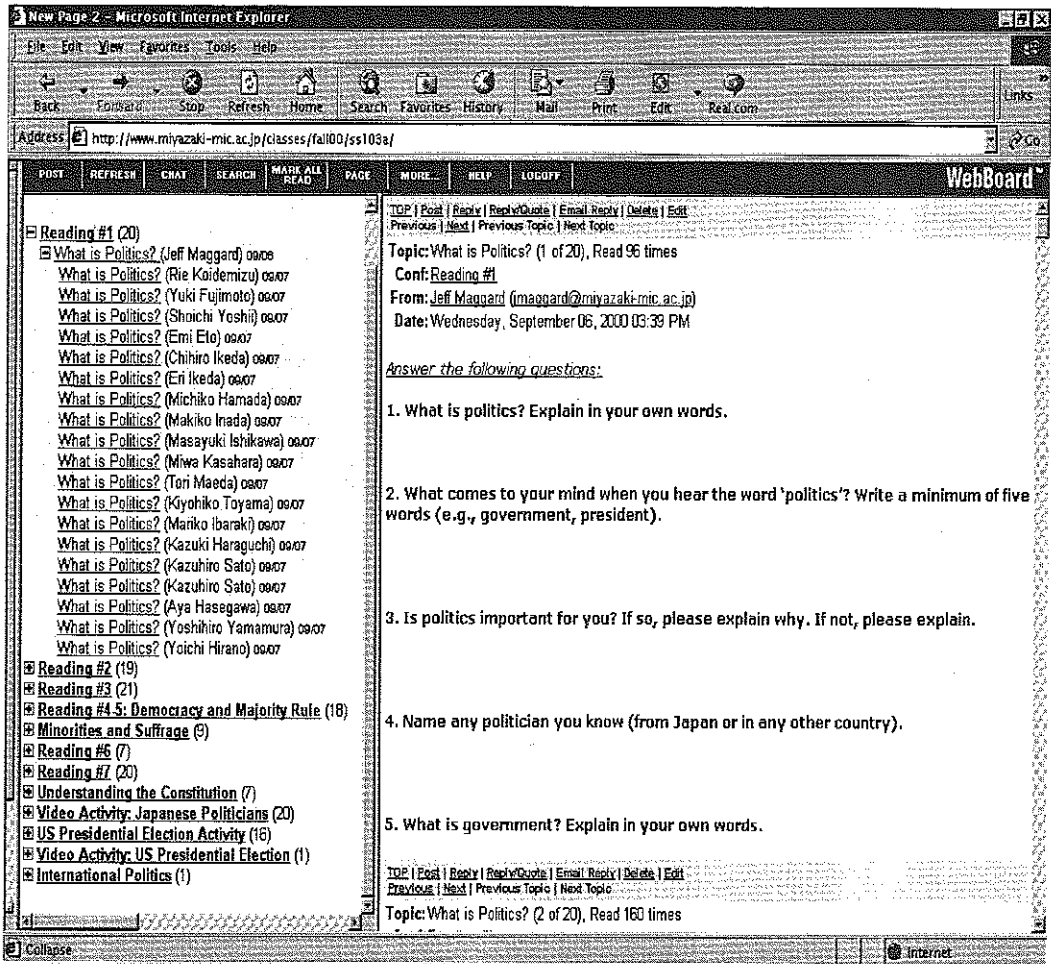


Figure 1: WebBoard Frames

Each Political Science course was held twice a week: one day was spent in a traditional classroom and one day in a computer lab. Each class session lasted for two hours and forty-five minutes. The same instructors taught each class. Furthermore, a course website that was developed during Fall 1999 was also used during Fall 2000 (<http://www.miyazaki-mic.ac.jp/faculty/jmaggard/fall00/ss103a>).

This website provided links to readings, JavaScript crossword puzzles, videos, external web sites, and other academic language learning activities.

### Warm-Up Activities

At the beginning of most computer sessions, students were asked to log-on to the WebBoard, open that week's "conference" and follow instructions that teachers included for each warm-up exercise. Students would answer these questions individually, in pairs or in small groups. This provided insight into the level of awareness on a given topic and a window into the students' existing linguistic abilities and content knowledge. Next, the instructors would ask students to select the answer that one of the class members had posted, and all of the students would read that student's posting. After this, the student who had been selected orally presented what she/he had written. Finally, the student's peers would then paraphrase, ask for clarification, agree, and/or disagree with what was stated and/or written.

In this way, students were engaged in meaningful discourses about the content, through the medium of English, and they were able to construct their own meanings. Moreover, students were always *initially* engaged in discourses for which there were no fixed answers to questions. Sometimes, subsequent to the discussions, the instructors posted model answers; however, this was generally not deemed necessary or appropriate.

After each discussion, the teachers asked students to revise their postings in order to reformulate ideas and to focus on grammatical form. Furthermore, the instructors would occasionally isolate common grammatical errors made by the majority of the class and conduct mini-grammar lessons. After the grammar lessons, students were also asked to do peer corrections of oral and written answers (containing content and language mistakes and errors). In these ways, students were given repeated contact with English and with the content.

### Follow-Up Activities

After the warm-up activities (oftentimes pre-reading activities), students were usually expected to visit internally linked and externally linked texts and websites to locate content-specific information. Sometimes the students visited websites to watch and listen to videos, and at other times students were asked to visit databases to locate information. Most of the time the data, videos and texts were in English, but at times the content was in Japanese, and the students were required to translate information into English. For all activities, the students were given instructions on the course WebBoard. Furthermore, towards the beginning of each semester, students were provided links to specific information, and when they had completed reading and analyzing the information, the students returned to the course WebBoard to post answers. By the end of the semester students were given more freedom in searching for information after the instructors had taught them to do keyword searches. Thus, learning was both teacher-directed and student-directed, and activities were both structured and autonomous.

At times the CMC activities were conducted individually, but most often they were collaborative efforts (in pairs and/or in small groups). For collaborative activities, the teachers assigned group task roles (lead researcher, computer user, writer, editor and speaker). Group task roles were used to lower the affective filter and to give students autonomy in their learning. Table 1 provides an overview of the (general) procedures undertaken to achieve course objectives.

Table 1: CMC Procedures

Teachers	Students
1. Post instructions and pre-reading questions to the WebBoard	2. Answer the warm-up questions individually, in pairs, or in small groups (displaying pre-existing knowledge on a topic)
3. Employ task-based, collaborative, and/or individual speaking activities	4. After posting responses, students paraphrase, analyze, and evaluate each other's answers
5. Correct mistakes and errors as appropriate	6. Correct written and oral mistakes and errors (teacher, self and peer corrections)
7. Post readings/texts to the course web sites (or make external links within WebBoard to external web resources)	8. Read texts, listen to content materials, watch videos (in English and Japanese), then post responses to instructors' questions

### Example Activity: Critical Thinking and Writing

Figure 2 provides an example of a synchronous (real time) pre-reading activity. Students were required to think, write, and make critical comments concerning the notions of authority and nation states. For this activity, students read the questions, visited external websites, and posted their answers. After typing their answers, students were asked to click on individual student postings to read and listen to what others had written. Notice how Internet links have been embedded (e.g., Britannica.com and CIA Factbook) to facilitate safe and quick web searching.

### Example Activity: Listening, Writing, and Oral Paraphrasing

Figure 3 provides an example of a multimedia video activity. Students began by reading the teachers' questions, then they visited the video links and returned to WebBoard to type their answers. After posting answers, the students read and summarized each other's thoughts orally. The timing of this activity was important, as it was just prior to Lower House election time at the Japanese Diet. Students seemed motivated by the fact that the speakers were young Liberal Democratic Party politicians who were giving platform speeches. They were also motivated by the fact that there was an authentic communication task: since one of the teachers was not fluent in Japanese, the students were told that they would need to explain the politicians' ideas to that instructor.

Two weeks after completing this activity (on November 2, 2000), the students were given the same task, this time with U.S. Presidential Candidates. Importantly, the first experience with this activity seemed to have made it much easier for the class to complete the task the second time around.

The screenshot shows a Microsoft Internet Explorer browser window displaying a WebBoard page. The browser's address bar shows the URL: <http://talk.miyazaki-mic.ac.jp/~SS103-29/login>. The page title is "WebBoard - WebBoard Admin - Microsoft Internet Explorer".

The main content area is titled "Conferences" and lists several topics with their respective message counts:

- Reading #1 (20)
- Reading #2 (19)
- Reading #3 (21)
- Authority and Legitimacy (Deleted User) (0)
- Reading #4-5: Democracy and Majority Rule (16)
- Minorities and Suffrage (9)
- Reading #6 (7)
- Reading #7 (20)
- Understanding the Constitution (7)
- Video Activity: Japanese Politicians (20)
- US Presidential Election Activity (16)
- Video Activity: US Presidential Election (1)
- International Politics (1)

The selected topic is "Authority and Legitimacy (1 of 21), Read 138 times". The post details are:

- Conf: Reading #3
- From: Deleted User ()
- Date: Wednesday, September 20, 2000 06:38 PM

The post content includes two questions:

**A. Which statement do you think is true?**

1. Prime Minister Mori has authority because of his very position as Prime Minister.
2. Prime Minister Mori has authority because of his personal qualities that have made him Prime Minister.
3. Prime Minister Mori has authority because it is traditionally so determined in Japan.

**B. Is Taiwan a nation state like Japan?**

Please visit these websites to find the answer: [Britannica.com](http://Britannica.com) and [CIA Factbook](http://CIA Factbook)

The next post in the thread is:

- Topic: Authority and Legitimacy (2 of 21), Read 125 times
- Conf: Reading #3
- From: Sheichi Yoshi (syoschi@miyazaki-mic.ac.jp)
- Date: Thursday, September 21, 2000 02:03 PM

The post content is:

On 9/20/00 6:38:01 PM, Jeff Maggard wrote: <br> >A. Which statement do you >think is true?  
>  
>1. Prime Minister Mori has >authority because of his very >position as Prime Minister.

Figure 2: Critical Thinking

### Example Activity: Research and Presentations

Figure 4 is an example of a synchronous (real time) learning activity used for research and presentations. This activity was collaborative in that it required small groups to conduct research and present findings. To complete the task, students first read the teachers' instructions, then they visited external websites (e.g., the UN, UNESCO, and Encyclopedia Britannica). After this, students returned to the WebBoard to post their answers, Advantages of CMC and Collaborative Learning Methods and to present their ideas.

CMC and collaborative-learning methods are advantageous to using paper and pen methods for a number of reasons. First of all, students receive *immediate* feedback to their linguistic output (of content and language) and do not have to wait until an instructor reads and marks their answers. Secondly, students find it easy to revise mistakes and errors (and the oral response format provides opportunities for more advanced students to correct the mistakes of learners at lower levels who are enrolled in the same course). Thirdly, students can easily compare what they know

with what others have stated. Additionally, CMC and collaborative-learning methods utilize a whole-language approach in which students are repeatedly exposed to spoken and written language, using a variety of media (e.g., electronic and printed texts, web pages, videos, and email). Perhaps the best reason to use these methods, however, is because students are extremely motivated to learn with technology.

Figure 3: Video Activity

### Other Considerations

It is important to notice the way in which meaning was negotiated throughout each semester. Students were repeatedly given opportunities to modify and restructure linguistic output during the (nearly three hour) class sessions.

The Interaction Hypothesis (Gass, 1997; Long, 1996, 1991) states that negotiation of meaning (i.e., resolving miscommunications) enhances second language acquisition. In other words, language learners should be given sufficient opportunity and the right environment to test their linguistic hypotheses (communicative ability) on others. When interaction opportunities are provided,



The screenshot shows a web browser window titled "WebBoard - WebBoard Admin - Microsoft Internet Explorer". The address bar shows "http://talk.miyazaki-mic.ac.jp/~ss103/login". The page content is divided into two main sections:

**Left Section: Conferences**  
 Conferences | 43 New Messages  
 Activity One (23, 22 New) [IC]  
 Activity Two: What is Politics? (1)  
 Pre-reading exercise (22, 21 New) [IC]  
 Reading #2: writing exercise (10)  
 Reading #6: Post-reading question (20)  
 Reading #7: pre-reading exercise (19)  
 What have you learned so far? (17)  
 SDF Questions: A & D (3)  
 SDF Questions: B & E (3)  
 SDF Questions: C & F (3)  
 More questions about the SDF (19)  
 International Politics Activity (16)  
 Internet search activity (Deleted User) 1202  
 Group 1: Globalism (Deleted User) 1202  
 Group 2: Humanitarian Intervention (Deleted User) 1202  
 Group 3: UNESCO (Deleted User) 1202  
 Group 4: Ethnic Conflict (Deleted User) 1202  
 Group 5: The Korean War (Deleted User) 1202

**Right Section: Post Details**  
 Topic: Internet search activity (1 of 3), Read 78 times  
 Conf: International Politics Activity  
 From: Deleted User ()  
 Date: Thursday, December 02, 1999 09:59 AM  
**In-Class Activity: International Politics**  
**Instructions**  
 You will be divided into 5 groups. Each group will make a brief presentation on one concept taken from the last class reading. (The concepts are listed below.) You have about 40 minutes to search the Internet, gather relevant information, and work together to make a concise explanation of the assigned concept to present before the class. Please use the Internet search techniques we have taught you to find useful websites.  
**Assigned Concepts**  
 Group 1: "Globalization"  
 Group 2: "Humanitarian Intervention"  
 Group 3: "UNESCO"  
 Group 4: "Ethnic Conflict"  
 Group 5: "The Korean War"

Figure 4: Research and Presentations

language learners receive feedback (positive or negative) with which they may confirm or refute their original hypotheses. The more interactions EFL students have with English, the better they are able to reformulate their original hypotheses and to modify future output.

According to the Output Hypothesis (Swain, 1993, 1995), ill-formed linguistic output that is incomprehensible to an interlocutor induces negotiation of meaning, and this in turn leads to a reformulation of output which enhances a learner's interlanguage. The CMC methods and collaborative learning activities used in this course greatly facilitated hypothesis testing and output reformulation because students were given multiple opportunities to confirm, reformulate, check comprehension, recast, confirm, and clarify requests.

Moreover, the instructors for these courses believe that the CMC methods used greatly enhanced language and content learning because students were given exposure to discourses in multiple modalities. In other words, students were required to have contact with language and content orally, aurally, kinesthetically

(by writing, and surfing the web to locate information), and visually (by reading texts, watching videos and looking at images).

## Preparing to Use CMC

People who are considering using CMC in the future may want to begin by looking at the types of technology tools available:

- WebBoard - web conferencing (<http://www.WebBoard.com/>)
- WebCT - class manager (<http://www.webct.com/>)
- Blackboard - class manager (<http://www.blackboard.com/>)

Next, determine whether CMC will be used in a mono-cultural or multicultural context. For multicultural contexts, locate a teaching partner at:

- a conference
- Intercultural Email Classroom Connections (<http://www.iecc.org/>)
- Key Pals Club (<http://www.mightymedia.com/keypals/>)
- Global Connections (<http://www.learningspace.org/connect/list/projects.html>)

## Planning and Implementation

Instructors may also wish to keep the following things in mind:

- A. Make a list of goals and priorities.
- B. Learn the IT tools thoroughly (e.g., by using them to plan the course).
- C. Consider the amount of time it will take to implement CMC in your course.
- D. Think about the type of structure and activities you would like to use. Will the course:
  - be student-centered, teacher-centered, or both?
  - use less-structured activities (e.g., chat) or highly-structured activities (e.g., task-based)?
  - use individual, pair, or group activities?
- E. Define the topics, ideas or activities that will be the basis for the online activities.
- F. Envision the progress of the online activities--what problems do you anticipate?
- G. Determine how much time is needed to prepare for using CMC/Collaborative-Learning activities.
- H. Consider how much time will be spent using CMC in class.
- I. Determine how much time students will be expected to spend outside of class.

## Conclusion

SLA researchers have long argued that communicative competence is best acquired through multiple exposures to similar linguistic content (Twaddell, 1973). This is thought to be true because it increases the potential for rapidly expanding a learner's lexical knowledge. Through the use of CMC and collaborative learning activities, students are exposed to language in a variety of ways. By providing opportunities for learners to have multiple exposures to language through various media (e.g., images, sounds, and texts) in a stimulating multimedia environment, it is quite possible that linguistic attributes will be strongly coded onto students' memories.

There are numerous benefits to using CMC. In the case studies above, CMC was used to facilitate interactive, generative discourses. Furthermore, the learning experiences were multi-modal, and students had multiple contacts with language and content in a (largely) student-centered environment. In contrast to traditional paper and pencil activities, CMC allowed teachers and learners to communicate synchronously to an entire class. Moreover, the students were able to make records of texts (discourses) from which they could examine, assess, evaluate, compare, and revise as seen fit. In these ways, CMC promoted interlanguage development and encouraged students to participate in the making of meaning. For those who may be considering using CMC, there is no doubt that it takes a significant amount of time and effort to get up and running, but the payoffs can be considerable and the majority of students enjoy learning with IT.

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