

An Instructional Design for International Collaborative Learning Focusing on Communication

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The advantages of the Internet enable teachers in the world to break the communication barriers between their schools and collaborate with each other, giving them opportunities for richer educational practices than ever accomplished. I assume that collaborative learning like an international exchange naturally lead the students to acquire the knowledge to communicate with their peers using ICT skills. In this paper, two international exchange projects that have years of practice are reported, i.e., new types of collaborative education projects that the development of the Internet has enabled us to carry out. The international exchanges reported here have been possible because both students and teachers have effectively used the various functions of the Internet. To use English as a “common international communication language” is particularly important for the youth in Asia, and the students have come to realize the importance of English as a communication language through these projects. Also, since these practices are based on the infrastructure of the Internet, they have elucidated what kind of Internet use produces richer educational results. At the final stage of the exchanges, “joint presentation in English” is designed. Students communicate and collaborate over the network, and finally meet with each other and try to give a presentation as a product of their collaborative work. The files and scenes of their presentations are stored on the network and used as educational materials in Asia as well as models for the activities in the following years. We will report how to design international exchange education in this Internet age.

Keywords : use of the Internet, design of international exchange education, presentation in English, international collaboration, barriers of English

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Background and Purpose

Computer Education and International Exchanges through the Internet

Internet education was introduced when 100-school project was launched in 1994. 100 elementary, junior high and senior high schools were selected as model schools, where dedicated line was provided to get Internet access to seek for a chance of Internet use at school. Since this new type of media was just about to explode as means of communication then, it attracted attention for its high potential as means of international exchanges and cross-cultural understanding. Computer education became essential because of the educational use of the Internet, and as a result all the schools started computer education as a mandatory subject.

According to this educational administration, computer rooms were installed at schools to promote international interactions based on the Internet.

There was also a big improvement on teachers' computer use, and about 76.8% of the teachers have learned to use computers for educational purpose by the end of 2005.

The standard of ICT literacy as a teacher was defined in February in 2007 and more use of computers at school is expected.

This research is to study how teachers promoted international exchange projects while computer education was developing. Some activities from these projects, as model activities, will be examined and applied to other international exchange activities.

Purpose

- 1 . Outline the history of computer education in Japan
- 2 . Define what internet-based international exchanges should be
- 3 . Evaluate the model activities according to the participants views

Preceding Research

We can find several international projects taking place thanks to the Internet.

ICT Model School Network is operated by APEC Cyber Educational Cooperation (ACEC). Under this project, high school students in Korea, Japan and Indonesia have been working together over video conference to discuss Intercultural understanding and English education. Four to six model schools from each country have been participating in experimental exchanges. Korea has been playing a leading role.

Asia-Europe Classroom is operated based on the network among teachers of junior and senior high schools. It is an international exchange project by the Asia-Europe Foundation (ASEF). Anyone who can communicate in English can participate. Teachers from Asia and Europe are doing collaborative projects such as a peace project for stronger ties between these two parts of the world.

They are good examples of internet-based projects. However, since they are operated by teachers and not operated on a regular basis, they are not qualified to be models.

An Instructional Design for International Exchanges

International exchanges for education purpose are carried out under the influence of the situations of computer education of participants' countries. Here are two activities which models are taken from.

The World Youth Meeting and the Asia Student Exchange Program reported here has been held 11 times as international exchange studies programs with the help of the Internet. They have lasted 10 years, and those who participated when they were junior high school students are now college students joining the team which administers these events.

An Outline of the World Youth Meeting

The first World Youth Meeting was held at the Nagoya International Center in 1999. Since this first meeting, the steering committee has been constituted of 20

junior high school, senior high school, and college teachers. We have had eight meetings so far, and not only the Ministry of Education, Culture, Sports, Science, and Technology but also the Boards of Education in local communities, the Japan Association for Promotion of Educational Technology, etc., have supported us. The three stages of pre-event communication and collaboration, interaction and collaboration in the event, and post-event communication give students opportunity to study ITC, international understanding, and English.

Presentations on experiences of homestay in Japan and topics such as welfare and internationalization have been given, and the files and scripts used in the presentations have been put on the WWW for the use as valuable English educational materials after they have returned to their home countries.

The participating countries so far have been Germany, the U.K., Zimbabwe, Sri Lanka,

Papua New Guinea, Australia, the U.S., Nepal, Korea, Taiwan, China, Cambodia, Thailand, etc.(mentioned as WYM in the rest of the paper)

An Outline of the Asia Student Exchange Program

Though the World Youth Meeting is an event held in Japan, the Asia Student Exchange Program is a network-based international exchange event held overseas. The organizing committee in Taiwan takes the initiative in administering the event in cooperation with the Ministry of Education in Taiwan and invites Japanese participants.

Internet-based international exchange with Asian countries began in 1995 with the help of the Center for Educational Computing (the organization which promoted the 100-School Project) when Asian high school students began communicating with each other over the Internet. Since that time the event had been held in Japan until 1999 when it was held in Seoul in Korea, and then it moved to Taiwan and has been held there since then.

In 2006, a huge number of people participated in the event, including about 60 participants from Indonesia, Malaysia, and Thailand, and 60 from Japan, 1000 From Taiwan. The program and the use of the Internet are similar to those in the case of

the World Youth Meeting.

Main participating schools from Japan this year were three high schools and four universities Nihon Fukushi University, Kansai University, Tokyo International University, and Ritsumeikan University. (mentioned as ASEP in the rest of the paper)

History of the Two Projects and Fundamental of the Internet in Japan

Table 1. History of the two projects

WYM	ASEP	Form of collaboration of the two groups	Major media use				Internet connection rate in elementary, junior and senior high schools in Japan
Theme	Theme		H	M	T	File Exchange	Upper Figure: Connection rate Lower figure: fast line rate (%)
1999	Do you know my country?	ASEP started in 2000	b	b	c	×	57.4% 27% of telephone lines are ISDN for internet use 57.4%
2000	From Misconception to understanding	Taiwan and Japan ASEP started after WYM as a model. Executive committee was formed in both groups. The project consists of home stay and event. Collaborative presentation in English continued	B	B	B	C	81.1% more than 400 kbps) 12.8%
2001	New International exchange, New English Education	Peace and War WYM in summer and ASEP in winter became annual event supported by the local educational board..	B	B	B	C	97.9% (more than 400 kbps) 38%

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2002	ICT and international exchange	Welfare	Fixed as annual exchange event in winter and summer. Key persons of both countries were fixed	B	B	B	C	99.5% (more than 400 kbps) 57.0%
2003	Environment and social welfare	Asian Love	TV conference without actual visits because of SARS	A	B	B	A	99.8% (more than 400 kbps) 71.6%
2004	Welfare And International Cooperation	Cultural Mosaic	Collaboration with public institutions such as Ministry of Education and boards of education	A	A	B	A	99.9% (more than 400 kbps) 81.7%
2005	International collaboration	Our Earth, Our home	Each event was supported by public institutions	A	A	A	A	99.9% more than 400 kbps) 84.0%
2006	Welfare International collaboration, International cooperation	One Planet	TV conferences Collaboration on a regular basis	A	A	A	A	

H.P: Homepage、 M.L: Mailing list T.V video conference FILE: file exchange(internet line)

From the events above, four functions of the Internet and three elements were focused.

Mailing list to exchange information, homepage to send information, and media use such as file exchange take an important role to make collaborative presentations. These are essential tools when participants in different countries design questionnaire, and exchange information such as excel files.

○ Homepage

It provides necessary information and connects participants far away from each

other. On the homepage, the participants can keep track of progress of the preparation. This also helps concerned parents find all the details when the participants visit overseas.

○ **Mailing list**

There are four kinds of mailing lists operated. One for teachers, another for students, and both have English and Japanese base. This means of communication was effective even when the condition of connection was not as sufficient at the early stage.

○ **Video conference system**

The participants can of course have face-to face communication through this device and can present documents and presentation files as well. It is used not only to get to know each other but it played an important role when discussing all the details concerned with the organization of the events.

○ **File exchange**

The Internet connection and skills of software use improved and various information started to appear in the presentations. One of the marked elements introduced in 2001 was data based on the questionnaire cooperatively designed and exchanged over the net.

The four functions above made great changes on the international collaboration, especially on the presentation making at the last stage of the collaboration.

The following three elements are important as models.

○ **Product design**

The goal of these two projects is to make the best of functions of the Internet to make “collaborative presentation in English” as the final outcome of the exchanges. The process of making presentations requires the participants to spend considerable amount of time together for preparation. This way of project designing elaborately

leads the participants to work independently and cooperatively for the specific goal.

○ **Collaboration of the teachers**

The executive committees were formed on both sides in Japan and on the ASEP side. These committees were strengthened gaining support from the local boards of education and Ministry of Education. In the meantime, there were interactions on a regular basis using videoconference system.

To start cross-border collaboration, there need to be strong ties among participants in the same country.

○ **The process of the exchanges**

The form of exchanges are classified into three stages

• **Preparatory (Pre-event) exchanges**

Task before the participants visit the country where the event is held. They introduce themselves using pictures and video, make questionnaire according to the theme and prepare for the collaborative presentations.

• **Presentations at the event site**

Visitors stay in Japan for ten days. The visitors enjoy home stay program for cross-cultural experiences. The hosts and visitors prepare for collaborative presentations.

• **Wrap-up (Post-event) exchanges**

The participants exchange their views over the event, collect all the presentations and make CDs.



Figure 1. Japan and Cambodia joint presentation at the World Youth Meeting

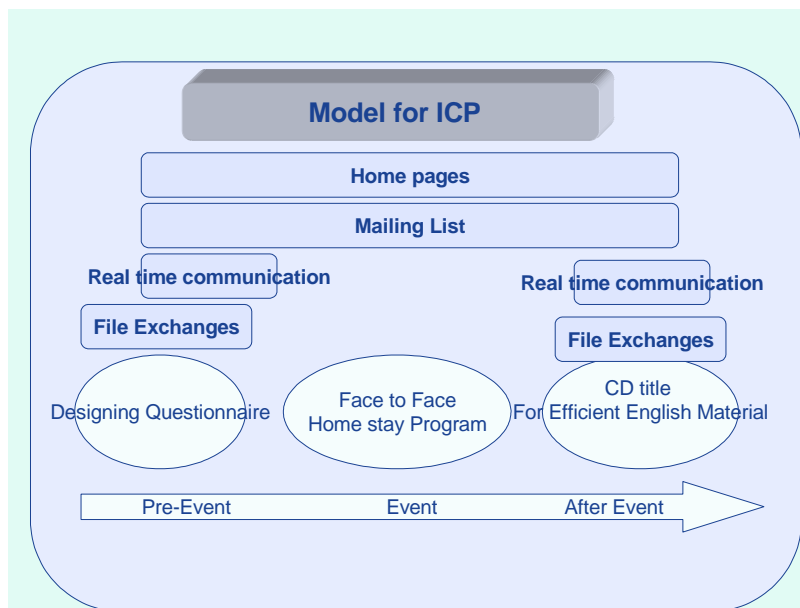


Figure 2. International collaborative project model

Analysis on the International Exchange Project

The elements of the international exchanges have been developed through the project which has continued since 1999. The last ASEP was held in December 2006 in Kaohsiung in Taiwan. I took some model Japanese participants from this event and analyzed their views on the event.

The same teachers participate in this event every year but students interchange newly. If the instructional design is appropriate, some result can be seen.

This table 2 shows the result of the questionnaire to the students. 34 questions were asked to 46 students.

There were four choices to choose from according to the level. Each choice gives the following figure: yes very much:4, yes:3, not so much:2, No:1. From this figure, it is clear that the four functions, mailing list, homepage, file exchange, were fully used.

In the area of communication in English, some significant differences were found in the questions in table 3. Student' understanding how to proceed arrangement increased from mean score 3.02 to 3.36 ($t(45)=-2.353, p<0.5$) after the event. Students' awareness of the importance of English in their live rose from a mean score 3.49 to 3.66 after the event. Students' wish to continue study English also

**Table 2. Evaluation of the models comparative figures
between before and after the event**

		N	mean
Using mailing list	before	46	3.53
	after	46	3.41
Browsing homepages	before	46	2.23
	after	46	2.27
Real-time communication is convenient	before	46	3.32
	after	46	3.23
Use of the Internet promoted preparation for the presentation	before	46	2.70
	after	46	3.00

Table 3. Comparative figures in the area of communication in English between before and after the event

I've learned how to proceed arrangement	before	46	3.02
	after	46	3.36
English is necessary in my life	before	46	3.49
	after	46	3.66
Want to continue to study English	before	46	3.78
	after	46	3.80
I did my best for this project	before	46	3.28
	after	46	3.66

become stronger from a mean score 3.78 to 3.80 after the event. Students' satisfaction to contribute the event became more bigger from a mean score 3.28 to 3.66 ($t(45) = -3.530, p < 0.1$) after the event.

These results suggest that their joint collaborative presentations were so successful and that presentations became good results for them to evaluate their international exchange activities.

The table 4 shows the result of the survey on the students' activity conducted after the event. The students answered to the questions in the same way as the last chart. The college students who independently participated in this project used mailing list very much and realized that internet use helped the preparation.

Table 4. Comparative figures of college students and high school students

	College- 1 、 high school- 2	N	mean	Gap of the average
Using mailing list	1	17	3.53	0.46
	2	29	3.07	
Use of the Internet promoted preparation	1	17	3.13	0.69
	2	29	2.44	
Network communication was used to make arrangement	1	17	3.47	0.61
	2	29	2.85	

High school students used the net only for the self-introduction but the teachers did all the arrangements. That's why they didn't appreciate the efficiency of the internet use.

Conclusion

Internet was introduced to schools in Japan in 1995. Ever since, the international exchange activities taken here have been continuously operated and have showed models exchanges for the Internet era. Homepages and use of mailing lists are the basic activities and exchanges before and after the event are important elements of the model activities.

These models depend on the computer education of that country. Above all, free videoconference software was used starting in 2006 and it made interaction between countries more frequent.

Since the year 2003 when computer education started at school, there was no need of teaching basic computer skills such as E-mailing.

If there is room for improvement, it should be integration of different subjects. What's more, there should be a new view of English as a language not as one of the subjects of entrance examinations. English should be taught for its communication purpose. Computer education has just started and hasn't played its primary role. It should teach not only how to use software or make presentations, but also information processing at the real communication situations.

Newly introduced subject, Integrated Study, was expected to integrate different subjects and teach "international exchange projects". However, teachers were not capable and still there was a long way to go to meet the original purpose. To make the matter worse, this subject could be possibly eliminated to meet different academic need.

Communication competence sufficient in the international situations is necessary in this island country, Japan. Such ability can be developed through computer education, English education and Japanese education.

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