BLENDED LEARNING IN JAPAN AND ITS APPLICATION IN LIBERAL ARTS EDUCATION

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INTRODUCTION: THE JAPAN CONTEXT

Blended learning is increasingly permeating and transforming schooling, university education, workplace and corporate education worldwide. Japan is not an exception to this development. This chapter focuses on the emerging practice of blended learning in Japan and discusses a variety of instructional approaches in blended learning in the context of a Liberal Arts College in Japan.

World Economy not Leading e-Learning

According to the white paper from the Economist Intelligence Unit, Japan was ranked 23rd in the 2003 e-learning readiness ranking (The Economist Intelligent Unit & IBM, 2003). The rank was based not only on connectivity, but also capability of delivering and consuming e-learning, content quality and pervasiveness of learning materials, and culture including the number of institutions supporting e-learning. Among Asian countries, South Korea ranked Number 5, and Singapore Number 6. For Japan, as a world-leading economy, its 23rd ranking out
of 60 in e-learning readiness was certainly not as high as anyone had expected. At least three explanations seem possible for understanding this situation.

First of all, Japan, compared with other developed countries and emerging ones in Asia, was late in the development and implementation of a comprehensive national ICT strategic plan and in the use of ICT in education. A comprehensive e-Japan Strategy (Prime Minister of Japan and His Cabinet, 2001) was initiated in January 2001 in pursuit of making Japan the world's most advanced IT nation within five years and connecting all its classrooms to the Internet by 2005. In contrast, the United States established a $200 million Technology Literacy Challenge Fund in 1997 to help every child in every school utilize technology to achieve high standards by the dawn of the 21st century. The major European countries - Germany, France, UK, and Italy - all announced major programs for Information Technology in education in late 1990’s. South Korea began to implement a more comprehensive national strategy called “Cyber Korea 21” in 1999 to promote a vision of a Cyber-nation, to strengthen the IT industry and telecommunication services, and to maximize the utilization of IT in various systems of the society including education. Singapore began to implement the Masterplan for IT in Education in 1997.

Another possible explanation for the late development of e-learning in Japan seems to be related to Japanese culture. Japan values synchronous modes of education and face-to-face interaction over asynchronous interaction more than any other countries. The Japanese government used to allow only synchronous modes of interaction in distance education until 2001. That is, until recently, distance education institutions in Japan could not offer their courses at a distance without adding face-to-face components or real-time interactions. Given the heavy uses of asynchronous features of the Internet technology, e-learning could not easily proliferate in Japanese culture.
Finally, extensive use of mobile phones in personal communications and information search could have slowed down the use of the desktop PC-based Internet in teaching and learning. As Tim Clark who published the Japan Internet Report pointed out, Japanese people in general are heavy users of Internet-enabled mobile telephones to send and receive emails, to search information, to study simple languages, or to play games. In this culture of using the Internet via mobile phones, “accomplishing quick errands” is more emphasized than studying (Clark, 2003).

But as the higher education market is becoming more competitive and new types of technologies challenge the way educational institutions teach, the Japanese government has begun to implement its e-Japan Strategy in various sectors of society, including education. In addition, the Advanced Learning Infrastructure Consortium (ALIC) was established in 2000 as Japan's center to promote e-learning.

**Trends in Higher Education in Japan: E-learning for What?**

Over the recent few years, Japanese higher education institutions have become increasingly competitive in recruiting students. Student population of Japanese higher education has been declining since 1992 when it saw more than 2 million attendants. In 2010, only 1.2 million students are expected to attend higher education institutions. Many colleges and universities in Japan have suffered from insufficient enrollments and low academic abilities of new students. Some institutions have worried about closing down their services. Moreover, a new government policy changed the status of the national universities in Japan from public to private (i.e., independent administrative corporations) in April 2004. This new policy requires all universities to be evaluated by external quality assurance agencies every six years for continuing governmental financial support.
On the other hand, government regulations for higher education have been loosened. For example, the face-to-face schooling requirement in distance education was removed for graduate schools in 2001. That is to say, graduate degrees now can be obtained without attending any face-to-face classes and fully online graduate programs can be offered to degree-seeking students. In addition, a maximum of 60 out of 124 credit hours required for an undergraduate degree could be offered at a distance.

In this changing environment of Japanese higher education, e-learning has been adopted at several universities to attract more students by providing a better quality education and/or to extend higher education to adult learners. Examples below illustrate how and why Japanese higher education institutions have blended e-learning with their conventional modes of education. Those examples show a variety of blended learning practices and experiments in Japanese universities.

**BLENDED LEARNING IN JAPAN: DEFINITIONS AND DEVELOPMENT**

Before we discuss a wide range of blended learning practices in Japan, we will first introduce definitions of blended learning widely accepted in Japan.

**Definitions of Blended Learning**

Blended learning is considered a mode which blends various modes of teaching and learning. Blended learning can be a blend of face-to-face schooling with distance learning mode. A more popular definition of blended learning, however, is an integration of e-learning components in face-to-face or conventional distance learning situations. In this definition, the Internet or network-enabled mobile phones can be used either as a supplementary or a main tool for instruction. A majority of blended learning cases in Japanese universities incorporate the Internet as a supplementary device in classroom instruction. Only a few cases use the Internet
as a main delivery medium and provide online courses with face-to-face sessions as supplementary. Examples below are selected to illustrate different definitions of blended learning used in a Japanese context.

**Old-type Blended Example: The University of the Air**

The University of the Air (UoA) began to offer distance education to adult learners in Tokyo via terrestrial broadcast channels in 1985 and extended its service area to cover all the regions of Japan in 1990 by establishing video-based learning centers, and in 1998 by utilizing Communication Satellite Broadcasting (The University of the Air, n.d.).

UoA adopts a type of blended learning by requiring all the students to take 20 credit hours of face-to-face classes called “Schooling” during their course work. “Schooling” can take one of the following three forms: (1) once a week schooling, (2) weekend schooling, or (3) an intensive schooling. For the 20 credit hours of face-to-face classes, regular classroom lectures are provided instead of broadcast lectures. UoA’s case provides a good example of broadly defined blended learning where face-to-face interaction is blended with conventional distance education. With the introduction of the Internet technology, this practice of blended learning begins to integrate online components in its conventional distance education system.

**School on the Internet: An Initiative for the Future**

The WIDE Project, launched in 1988 by Keio University, was to establish a Widely Integrated Distributed Environment, a new environment based on operating systems and communications technology. In 1997, the WIDE project opened the WIDE School on the Internet (SOI), or the WIDE University, to provide a unique educational opportunity to students from all over the world (WIDE University, 1997). The WIDE University now has more than
800 hours of classes available through its archives. Each class consists of video lectures and class handouts to support learners’ independent study. Bulletin boards are used for interaction and an online report submission function is also available.

To Prof. Murai, known as innovator of the WIDE project and Mr. Internet of Japan, the answer to improve the quality of conventional university education was to blend his invented online teaching environment called WIDE with his own face-to-face lectures.

Sharing Free LMS: From iii online to exCampus.org

A joint research team from the National Institute of Multimedia Education and the Interfaculty Initiative in Information Studies at the Graduate School of Interdisciplinary Information Studies at the University of Tokyo started a project called “iii online” in 2002. The “iii online” (Interfaculty Initiative in Information Studies, 2004) is an e-learning site with four graduate-level online courses, which also provides management functions such as online registration, report submission, upload and management of on-demand video and supporting materials, and asynchronous interactions using bulletin boards and emails. The iii online has also offered an open learning management system called exCampus (http://www.exCampus.org) to the public. exCampus is known as an online tool to support blended learning. The iii online attracted more than 46,000 viewers including students of the University of Tokyo and those in the general public interested in lectures from Japan's most prestigious academic institution. In this example of blended learning, Internet technology was used as a main instructional tool.
More toward Online than Face-to-Face

Sinshu University (http://www.shinshu-u.ac.jp/english/) created the Graduate School of Science and Technology on the Internet (http://cai.cs.shinshu-u.ac.jp/sugsi/) as the first case of a totally e-learning graduate program in Japan and accepted eighty-seven graduate students in 2002. The same university started its online undergraduate program in 2004, targeting juniors who have completed 64 or more credit hours in other universities and now wishing to earn an undergraduate degree by completing the remaining credit hours via the Internet. Twenty-two students were accepted to start their junior year at the Sinshu University. Sinshu’s undergraduate program is a blend of online and campus-based courses. An online course at Shinshu consists of lecture notes, a free bulletin board and tests.

BLENDED LEARNING IN A LIBERAL ARTS COLLEGE

In this part of the chapter, we will discuss a case of blended learning adopted in a liberal arts college in Japan and analyze different instructional approaches and strategies for integrating online technology into face-to-face instruction as supplementary.

Doing a Liberal Arts Education

The International Christian University (ICU) is a small liberal arts college with a fifty-year history, consisting of about 2,800 undergraduate students and 200 graduate students. Students represent 40 different nationalities including Japanese. It is a bilingual institute using both Japanese and English, and is composed of 158 full-time faculty including 47 non-Japanese members (Bulletin of the College of Liberal Arts, 2004). ICU has been recognized as one of the finest universities in Japan pursuing high quality liberal arts education based on the ideals of democracy and Christianity. The features listed below seem to have stimulated some of ICU faculty to use online technologies to support their classroom teaching environments.
Interdisciplinary General Education Program.  At the core of the liberal arts education available at ICU is the General Education program (GE).  All ICU divisions are expected to offer interdisciplinary GE courses face-to-face in addition to the courses in their specialized fields of study.  Many of the GE courses have an enrollment of over 100 students.

Language Programs.  ICU faculty can offer their courses either in English or Japanese.  Between 15 – 30% of ICU’s courses are offered in English.  To support the students, ICU offers two language programs: the Japanese Language Program (JLP) and the English Language Program (ELP).  Each ELP or JLP course is conducted with a group of less than 20 students.

Interaction and Internality.  Emphasizing interaction and internality in teaching and learning, ICU has implemented a set of policies to support interactive teaching and learning and international collaborative activities.  These policies include financial and administrative support for special lectures given by foreign scholars, fellowships for visiting scholars, support for student exchange programs, and support for a variety of international discussion forums.

Time Constraints.  ICU adopts a trimester system.  With three terms per year, students taking an average of fifteen credit units per term are fairly busy.  Considering all the teaching and advising responsibilities, administrative and/or other social services, and personal research activities, ICU faculty members are also under a great deal of time pressure during the terms.  For this reason, efficiency is valued at ICU.

Development of Blended Learning at ICU

As with many universities in Japan, the Web has been used as a tool to publish course syllabi at ICU.  ICU Web syllabi can be retrieved only within the on-campus Intranet.  In addition to posted syllabi, a great number of ICU faculty members have used email as a tool to collect assignments and communicate with students.  However, using personal emails for these
purposes has been noted as an inefficient method. Consequently, after the introduction of WebCT, a commercially available online Learning Management System, by one of the faculty members with the financial support from the University in 2000, several faculty have begun to adopt WebCT as an integral part of the teaching and learning process in their courses. Currently more than twenty courses are using WebCT in a variety of ways.

Analysis of Instructional Approaches and Pedagogical Strategies

Most of the courses adopting WebCT at ICU follow a model in which online learning components are added to a traditional face-to-face environment in order to facilitate different types of instructional purposes. Four popular instructional approaches to blended learning have been identified. These approaches are shown in Figure 1.

As seen in the above examples of UoA, the WIDE project, and the Shinshu University, many Japanese universities use online technology to disseminate lectures. A limited number of cases promote efficient class management and interactions by introducing online technology. At ICU, however, online technologies have been integrated into traditional classrooms to facilitate knowledge creation and support a variety of open interactions as well. We will now look at four dominant instructional approaches for a mix of online technology and face-to-face classes at ICU. These approaches are elaborated with a collection of pedagogical strategies which have been indicated as effective by the instructors.

Blended Learning as an Instructional Approach for Open Interaction. This example uses blended learning to promote open interaction in a large GE course taught in English, where a
majority of students were non-native English speaking students. With 147 students in a GE course on multicultural education, in-depth discussions on important or controversial issues could not be implemented during the face-to-face class sessions. The instructor, thus, decided to use the WebCT discussion board to stimulate in-depth discussions among students. Major strategies adopting online discussion in this class are discussed below.

Creating small group debate teams: The instructor created twelve debate rooms with one controversial issue in each room. Students were required to sign in to one of the rooms. For example, in Room 1, students would debate on the issue of “whether foreign children should learn the main language quickly.” Students would post their opinions with the following questions to guide their discussion: “What do you agree with or disagree with? Why? What evidence can you give? Look at the arguments on the other side.” In addition to these questions, the instructor gave more detailed explanations on each issue and directions for students to get involved in the debate.

Encouraging integration of classroom lectures in debate: The instructor encouraged students to integrate what they learned in the classes and what they read in the class materials in their online discussions. Students whose primary language was not English seemed more comfortable participating in online debates and posting messages in English than participating in the face-to-face classroom discussions.

Assigning facilitator and wrapper: In each debate group, one facilitator and one wrapper were assigned. The role of the facilitator was to lead, monitor, and facilitate the debate, whereas that of the wrapper was to summarize the debate and post the summary note at the end of the discussion.
Integrating online activities in assessment: This online debate lasted one week. Students were required to post at least one message a day. The number of messages posted and the quality of messages were evaluated by the instructor and included in the evaluation of student performance.

Reducing face-to-face classroom time: During the online debate, no face-to-face classroom meeting was scheduled. The students were able to spend a whole week for the debate.

On average, each student posted about 10 messages during the one-week discussion period. The instructor felt that the online discussion activity helped students apply face-to-face lectures in analyzing real-world problems and developing critical thinking on the given issues.

Blended Learning as an Instructional Approach for Knowledge Creation. This example uses blended learning to facilitate new knowledge development by promoting internationality in a small course. With five students in a graduate course on media education, international experts specializing in media education would be too expensive to invite to face-to-face classroom sessions to provide diverse perspectives on the use of media in education. The instructor, instead, invited a total of three experts to the online classroom.

Bringing internationality into the class: To discuss a variety of ways of using different media in education and training, three experts with international experience in media education were invited to a one-week online discussion session and a one-hour online chat session. The three experts were from the UK, Korea, and Japan.

Combining asynchronous and synchronous online interactions: The one-week asynchronous discussion focused on how different media were used in teacher education in different countries. Two experts, one from the UK and the other from Japan, participated in this
online discussion. As a follow-up activity, the one-hour synchronous online chat was organized after the discussion. Two experts, one from Japan and the other from Korea, provided answers to students’ questions and shared their own experiences during the chat.

*Promoting anchored learning:* Before joining the discussion and the online chat, students were asked to read the article introducing various international applications in the use of media in education. One of the authors of the article was the invited expert for an online class activity. This reading was to provide anchored points for online discussions.

*Integrating online activities in final assessment:* The number of messages posted and the quality of messages during the online discussion, and the summary of the online chat were evaluated by the instructor and included in the final evaluation of student performance.

*Reducing face-to-face classroom time:* During the one week discussion, no face-to-face meeting was scheduled. Instead, the students were required to read the article before participating in the online discussion, post at least one message a day, and participate in the online chat.

Students’ comments confirmed that these online activities succeeded in bringing internationality into the class and contributed to the development of new perspectives of the issues discussed. Inserted below is a comment from one student after the online discussion.

> “I had a great time reading the comments and information about the usage of technology for education around the world. I want to make a great use of this rare opportunity for my paper... (I have to write a twenty-page report about ICT usage in education for another course... laugh) well, thank you very very much to all of you!! Thank you for so many postings and joining our online discussion. It was a great experience for
me to share the opinions with the experts!! And also to our great facilitators!! Thank you!!”

Blended Learning as an Instructional Approach for Information Distribution. This example shows that blended learning can be used to distribute information efficiently. With 15 students in a class, the instructor wanted the students to read all the articles before the class and to check the related web links. After the class, the students were asked to review PowerPoint materials and class handouts posted on the Web.

Posting articles to read before each class: The instructor used WebCT to distribute article readings to the students. The articles were distributed one or two days before each class so that the students could read the materials, print them, and bring them to the class. Sometimes video materials and web links also were provided.

Providing PowerPoint file and class handouts after each class: The instructor used PowerPoint materials for each lesson. Other types of class handouts were also prepared and distributed during class hours. These materials were posted after each class was over. The instructor thought that the students might not pay attention to the lecture if they read the class materials beforehand.

Tracking students’ viewing of the materials: One of the nice features of WebCT is that an instructor can check log-in data. The instructor of this class wanted to make sure that his students checked the readings and class materials on the Web. He analyzed the access day of each student. For those who did not access the reading materials before the class, the instructor was able to send a private email message.

For this instructor, the WebCT was simply an additional teaching tool just like handouts, the blackboard, and PowerPoint. The instructor felt that integrating Web technology in the
class helped the students develop better ideas about the course by being able to read the materials before they came to class and also helped the instructor become more structured.

**Blended Learning as an Instructional Approach for Efficient Class Management.** This example uses blended learning to improve efficiency. In a course with 60 students, the instructor used WebCT to manage course assignments and provide individualized feedback more efficiently.

*Submitting assignments electronically:* Students submitted all their assignments in the designated assignment boxes on the WebCT. The instructor could easily check late submission since the WebCT system recorded the submission date and time of each student posting.

*Providing feedback efficiently:* After receiving each assignment, the instructor provided feedback to each student with a grade. To provide feedback more efficiently, the instructor created a list of 12 different kinds of feedback on common mistakes students would make. Each student was provided with one or more kinds of feedback from this list along with a short personalized message.

By using WebCT, the instructor was able to handle assignment papers electronically (without hard copies!) and quickly provide more individualized feedback to 60 students.

Table 1 summarizes some effective pedagogical strategies for blended learning at ICU to achieve different instructional purposes.

> Table 1

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<th>Strategy</th>
<th>Effect</th>
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<tbody>
<tr>
<td>Blended learning</td>
<td>Efficient class management</td>
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**CONCLUSION**

As seen in the above examples of blended learning in Japan in general, and at ICU in particular, blended learning takes many forms. Using a variety of blended learning cases and
strategies in Japan, it is clear that blended learning is not only a matter of new possibilities but it also brings with it new implications and challenges. This part provides a conclusion of our chapter by offering some of the implications and challenges for blended learning in Japan.

**Adapting Instructional Designs for Blended Learning.** With the emergence of e-learning and blended learning, the concept of instructional design is now gaining public attention in Japan. While conventional instructional design models and strategies in general can be applied in blended delivery of instruction (Jung, 2003; Jung & Rha, 2000), specific strategies of instructional design still need to be developed and adapted for blended learning environments. For this purpose, continuous staff development programs that emphasize course design and interaction strategies for blended courses, and appropriate technical skills need to be integrated into a university system in order to improve the quality of blended learning.

**Establishing an Integrated Support System for Blended Learning.** In Japan, it is difficult to find a university which provides pedagogical and technical support services to its faculty for integrating online technologies in their courses. Our past experience in blended learning tells us that an organized support system including on-demand help is necessary to encourage both faculty and students to develop and strengthen their competencies in blended teaching and learning processes.

**Establishing a Quality Assurance System of Blended Learning.** There still exists strong doubt about the quality of e-learning and blended learning in Japanese universities. A regular system within a university to monitor and evaluate the development and implementation of e-learning and blended learning will be required to ensure the quality of the educational services and to provide accountability to the public (Jung, 2004a). In particular, continuous monitoring
and feedback from students which have not been popular in Japanese universities will help identify problems in e-learning and blended learning and suggest possible solutions.

**Improving Cost-Effectiveness of Blended Learning.** As indicated above, most of the universities in Japan, like in any other country, have been suffering from financial difficulties. Without proving or improving the cost-effectiveness of blended learning, it will remain difficult to secure the funds necessary for integrating online technologies in conventional classroom teaching. Partnerships with business sectors can help reduce investment costs in hardware systems (such as a computer networks), recruit high quality students, and encourage advanced technical skills (Jung, 2004b).

**Introducing Flexible University Policies.** Most of those enrolled in Japanese universities are full-time students aged between 18 and 21. Classroom-based teaching and learning is a conventional mode of university education for those students. University policies and regulations have been developed based on this culture. However, recent changes in the legal status of universities and the introduction of online technologies in higher education are forcing Japanese universities to review and revise their policies and regulations. To attract part-time, adult learners, flexible policies towards access, curriculum, methods, and learning processes have to be developed and institutionalized. Policies such as requirements for classroom attendance should be reviewed.

**REFERENCES**


Figures

Figure 1: A framework for Analysis of Instructional Approaches to Blended Learning
Table 1: Examples of Pedagogical Strategies for Blended Learning

<table>
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<tr>
<th>Purposes of Blended Learning</th>
<th>Examples of Effective Strategies</th>
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| 1) Open Interaction         | • Creating small group debate/discussion teams  
                                  • Encouraging integration of classroom lectures and readings in debate/discussion  
                                  • Assigning facilitator and/or wrapper  
                                  • Integrating online activities in evaluation of student performance  
                                  • Reducing classroom time during online activities |
| 2) Knowledge Creation       | • Inviting external experts to online classroom  
                                  • Combining asynchronous and synchronous online interactions  
                                  • Promoting anchored learning by requiring students to preview materials for online discussion  
                                  • Integrating online activities in evaluation of student performance  
                                  • Reducing classroom time during online activities |
| 3) Information Distribution | • Posting articles to read before each class begins  
                                  • Posting materials used during class to review afterwards  
                                  • Tracking students’ viewing of articles and materials  
                                  • Sending personal messages to students who do not check articles and materials |
| 4) Efficient Management     | • Allowing electronic submission of assignments  
                                  • Creating a list of standardized feedback  
                                  • Combining standardized feedback with personal messages |