Korea: Virtual University Trial Project

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The Context

Until recently, Korea had only one distance teaching university, the Korea National Open University (KNOU). As Korea opened its education market to the world in the mid 1990s, several foreign education institutions, particularly from Canada, the United States, Australia and the United Kingdom, became interested in providing distance education programs to Koreans. Korean university students began to turn to foreign universities**,** such as the University of Phoenix, for online courses.

Challenged by these foreign competitors, both the Korean government and higher education institutions saw the need to amend the Higher Education Law to permit the Korean private sector and the conventional higher education institutions to compete with foreign universities by establishing degree-granting virtual universities using information and communication technology. The current law permits the private sector and conventional universities to offer virtual courses to their students and the public, but prohibits them from establishing single mode virtual universities. KNOU is still the only single mode distance teaching university offering degree programs.

Encouraged by the recommendation of the Presidential Commission on Education Reform (1997), the government initiated the **Virtual University Trial Project** in February 1998, intended to operate until February 2000. The Trial Project is intended to

- encourage partnerships among universities and the private sector, and the sharing of existing resources;
- create a cost-effective virtual education system without diminishing quality;
- develop and implement Web-based courses or other types of distance education courses;
- identify appropriate policies and standards for running a virtual university; and
- share experiences.

After the year 2000, Korea will likely have several private distance teaching or virtual universities, which will use advanced information and communication technologies to deliver their courses.

The Trial Project has resulted in fifteen virtual entities. A total of sixty-five universities and five companies are participating in the project: eight conventional universities have joined independently (without forming a consortium), and the other 57 universities and five companies have formed seven consortia. Each of the eight conventional universities has established a virtual campus within its own university system, and each of the seven consortia has established a virtual institution outside of its member organizations. The fifteen Trial Project participants have implemented programs using various information and communication technologies (ICTs), such as satellite broadcasting, videoconferencing, video-on-demand, the Internet and Intranet.

Implementation: Sample Cases

The following three case studies illustrate different implementation approaches:

- The first case, **Open Cyber University,** explains how a consortium consisting of conventional universities, a newspaper company, and a network systems integration company divided roles and created a management and quality-control system.

- The second case, **Sookmyung Cyber Education Center**, shows how a conventional private university established a virtual campus system and differentiated its virtual programs and financing strategy from other institutions which were participating in the virtual university trial project.

- The final case highlights how Korea's most prestigious university, **Seoul National University**, integrated virtual programs into its educational system to provide a choice of learning methods to its students and to open its educational services to the public.

Open Cyber University (OCU)
Twelve conventional universities, a newspaper company, and Samsung Data Systems, a network systems integration company, collaborated to manage and fund this university. The member conventional universities provide content and design virtual courses, while Samsung Data Systems provides the hardware and technical skills needed to develop and deliver the courses. The newspaper company advertises the university's programs. All 14-

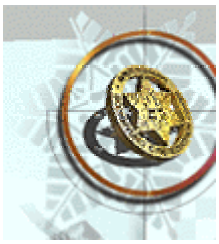
consortium members share the costs of running the university by paying annual membership fees.

OCU offers degree programs for students of its member universities, and non-degree and certificate programs for students from outside of its membership. No extra tuition is required of students from the member universities, but external candidates are required to pay a tuition of $40 per credit hour. In the first quarter of 1998, OCU enrolled 914 students from its member universities and 122 adults from outside its student population in its virtual courses. More than 90 percent of those enrolled completed the courses.

OCU began by creating a virtual university council consisting of representatives of its member institutions to determine OCU policies and make management decisions. Later, a management team consisting of a project manager, computer operators, programmers, instructional designers and media specialists was created to develop and deliver virtual programs. A planning and evaluation team was formed to identify the needs of the target audience, to suggest courses to meet identified needs, to evaluate courses once they were delivered, and to provide recommendations for improvement. For course evaluation, the team considers the number of enrolled students, course completion rates, responses from the students and comments from outside instructional designers.

Delivery and communication strategies include Web-based instruction, real-time interactive education, asymmetrical satellite course delivery and off-line CD-ROM-based instruction. Most undergraduate degree courses for students of member universities require little or no human contact, since the students already interact with professors from their other courses on a regular basis. On the other hand, non-degree courses for adults provide more face-to-face tutoring or real-time interaction based on the assumption that people who are not in the formal education system require more direct and frequent help from the instructor.

OCU collaborates with other virtual universities outside of Korea, including the World Trade University run by the World Trade Association and the National Technological University, which offers courses for practicing engineers. However, the collaborators have yet to make concrete exchanges of programs or staff members. OCU will be established as an independent virtual university as soon as Korean laws permit private distance teaching universities. In fact, OCU has shown interest in running a for-profit university and actively urged the government and the congress to allow the establishment of degree-granting for-profit virtual universities.



Sookmyung Cyber Education Center
http:www.cyberinstitute.net
The Cyber Education Center of Sookmyung Women's University was established in May 1998, and only offers virtual programs for working professionals. In addition to offering virtual courses, the Center disseminates electronic information, establishes professional databases and provides a digital cyber library.

In 1998, the Center enrolled 430 students in virtual programs for pharmacists, general English experts, TESOL experts, and music therapists. In 1999, the Center enrolled 550 students and added other virtual programs for child education experts, nutrition counselors and virtual education specialists. After the expiration of the Trial Project, the Center will assume the new name of Sookmyung Cyber Campus, and will continue to develop and provide virtual in-service courses and graduate degree programs for professionals.

To ensure high quality programs, the Center formed a course development team consisting of an instructional design expert, a programmer, a media expert, a graphic designer and an administrative staff member. Content experts—often-famous scholars or practitioners—are invited from both inside and outside the university. The course development team spends four to six months analyzing learners' needs, designing the course and producing Web-based instruction. The university video and audio production team develops video and audio materials, and digitizes them for integration into the course.

Seoul National University
Soaring towards the Future

Seoul National University Virtual Campus (SNU)
Several years ago, Korea's most respected traditional university, SNU, provided distance education programs via interactive videoconferencing to engineers working in companies. These non-degree programs were intended to supplement the engineers' field experience with information regarding recent innovations in engineering. With the experience in distance education via videoconferencing system, SNU has created a virtual campus that provides Web-based credit courses for both its own and other universities' students. Students from other universities may take SNU courses at their own schools or at home. Fourteen Web-based virtual courses were created in 1998 and twenty more courses are offered on the Internet in 1999. Two non-credit courses are also available. Over 500 students took the virtual courses in 1998.

Virtual courses, which follow the format of conventional courses, use the Web, supplemented by face-to-face tutoring. The university has organized a virtual campus management team, which provides staff development programs for faculty

and helps the faculty develop and deliver virtual courses. Content writing, course design, and virtual course delivery are responsibilities of the faculty that teach the conventional course. A graduate student, who is paid by the university, assists the professor. At the professor's request, the virtual campus management team is available to assist in the development and implementation of the virtual course.

The university's main objective in introducing virtual courses is to expand student access to existing popular courses and provide an alternative method of conventional face-to-face instruction, whereas OCU and Sookmyung focus more on providing virtual programs to adult professionals for profit. As such, no extra fees are required from the SNU students to take the virtual courses. Even non-credit lifelong education programs are free.

Reducing Cost and Improving Quality

Three major strategies seem to be applied to reduce costs in operating virtual institutions: maximizing the use of existing technologies, sharing physical and human resources, and private financing. Since there was no initial funding from the government, all participating institutions had to provide grants to establish the virtual programs. To minimize investments, the institutions used existing hardware and network systems, maximizing their use by forming a consortium and making only limited investments to purchase new hardware. Due to the national technology implementation policy for higher education, most colleges and universities have established a solid server system and are linked to the national educational computer network or the national information superhighway.

In addition, some universities have established a videoconferencing system and are using a satellite channel to deliver courses. Co-development of virtual courses and team teaching among professors from member institutions is encouraged, although such collaboration has been limited to date. This is because there is little or no systematic support for this type of cooperation, or professors are simply more comfortable working independently. However, production facilities, computers and network systems are shared extensively, including those of private companies.

Major strategies to improve the quality of virtual courses include providing training, adopting a concept of instructional systems design, and setting up a monitoring mechanism. Unfortunately, only a few institutions have understood that virtual education of good quality requires an instructional systems approach wherein components are well connected to help students experience meaningful online learning.

In most conventional universities, one of the biggest challenges to the use of educational technologies is the academic staff's negative attitudes towards technology. Many academics believe that technology is good for information transmission, but does not help to construct higher-level knowledge. Human contact during the class hours is considered critical for building such higher-level knowledge. In order to help the academics better understand the nature of virtual education and pedagogical principles of online courses, and thus develop effective design skills, some institutions have provided continuous training in the design and management of virtual courses and on-demand technical assistance to their academic staff.

Moreover, with a few exceptions, most of the Trial Project's participants have no monitoring or evaluation system in place. Few institutions have computer monitoring systems that electronically save the identity of the network users, their log-in and log-out times, specific menu usage, and interaction times.

Impact

While the Virtual University Trial Project is still on going and no concrete impact has yet been observed, it seems to be creating some systemic changes in Korean higher education. ***First, the project has caused colleges, universities and companies to collaborate*** in instituting technologies for higher education and training and to explore various ways of operating future virtual universities. In addition, some institutions have established formal relationships with well-established foreign virtual universities such as the National Technological University and the Western Governor's University. However, not much substantial cooperation has taken place, such as course exchange, because of language differences and lack of experience in academic collaboration.

Perhaps one of the most significant effects is that the Virtual University Trial Project has encouraged Korean companies to develop software. Several companies have successfully created virtual education platforms or distributed learning systems for authoring, implementing and managing virtual courses. At least six virtual education platforms developed by Korean companies are now available on the market. In addition, companies have begun to develop Web-based training programs to be delivered through one of the Trial Project participants.