

HIGHER-LIFELONG CYBER LEARNING IN KOREA: PROBLEMS AND POTENTIALS

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ABSTRACT

As with many other parts of the world, the development of information communication technology (ICT) has caused many changes in Korean society. Among these, are the changes to what we call 'higher-lifelong education'. This term refers to the lifelong learning opportunities that exist at the higher education level. Closely associated with these changes has been the development of 'cyber education', which has become widely-used due to the remarkable opportunities it offers. In this paper, we will try to examine the relatively short history of higher-lifelong education and look at its current situation in Korea. We will examine the backgrounds, types, features, and primary factors of its adaptations and diffusion. Needless to say, there are some problems associated with the rapid changes and expansion of the new technology – one being the limited forms of training for designers of web-based (or 'cyber') courses for the higher education sector. One of the major issues to be considered in the design of these cyber courses is culture. The other is the promotion of a unified and standardized form of education. Regardless of these problems, the new technology will play an important role in the renovation of higher-lifelong education and be the major driving force behind these changes. In considering the problems and the potential of higher-lifelong education in Korea, we will discuss the effects of ICT on all participants in education, such as learners, instructors, and educational administrators, as well as the industry sectors, and governments. We will also state our case that more active investment in research and development of this technology should be conducted for the advantage of the technical-infrastructure and support systems that are referred to in this paper.

INTRODUCTION

Cyber education has been regarded as both an alternative delivery system and as a burden imposed by the technology, without any distinct validation of its adoption. In this paper, cyber education means instruction that is based on the Web. This paper will attempt to contribute to current discussions about cyber education in South Korea, especially focused on higher-lifelong education.

The cyber education in Korea has a relatively short history. As in other countries, it evolved over three stages. During the first stage (1972-1990), the Korean National Open University (KNOU) was the only institute that offered higher education using a variety of delivery methods, such as printed materials, radio, audiotapes and videotapes. In the second stage (1991-1997), Industrial Human Resource Development Institutes established by some of Korea's corporations offered their employees cyber educational courses in order to upgrade and develop their competencies. In the third stage (1998-present), the Korean Government revealed its plan for establishing cyber universities (in 1998). The cyber universities in the format of a consortium were formed and

other newly developed institutes followed them causing keen competition.

With the rapid establishment of these forms of cyber education in Korea from 1997 to the present, problems have arisen. There has been a limited systematic approach to course design, and little training or guidance in cyber education. Other problems are associated with historical backgrounds, and adoption difficulties.

THE DEVELOPMENT OF CYBER EDUCATION IN KOREA

The history of adapting higher-lifelong education to the cyber education environment goes back to 1990s when private personal computers began to be provided to individuals at moderate prices in Korea. In 1995, the Internet service consisted of a number of small private personal computer communication institutes offering web-based classes, at a pilot level, as a service for their customers. For many people, this was their first introduction to cyber education. In 1997, with support from the Ministry of Education, KNOU actively researched the possibilities of a cyber university as an alternative instructional delivery system (KNOU, 1998).

The Association of Korean Virtual Universities (<http://cyber.chonnam.ac.kr>) was established in the form of a consortium in 1997. In this consortium, the member universities jointly developed courses and conducted research, and shared facilities and resources, such as instructors and learning materials. The Ministry of Education supported the operation of 15 model cyber universities from March 1998 to February 2000. A total of 71 universities (14 independently and 57 in the consortium) participated in the operation of cyber universities in 1998, and 68 universities (13 independently and 55 in the consortium) in 1999. Subsequently, two more institutions are offering web-based classes, Korea Cyber University (KCU, <http://www.kcu.or.kr>) and Open Cyber University (OCU, <http://www.ocu.ac.kr>). While KCU actually consists of 38 conventional universities and 3 firms, OCU consists of 12 conventional universities and 2 firms.

'The Lifelong Education Law and Regulations' were established in August, 1999, to support lifelong learning and cyber education in South Korean universities. Of these, 13 universities provide B. A. courses from a 4-year program, and three specialist courses from a 2-year program. 15,800 students were allowed to register with one among 81 departments in total. In 2001 these cyber universities were endowed with the authority to provide 'Graduate Courses of Special Purposes' and award B. A. and M. A. degrees through the Web.

The main changes in the higher-lifelong educational system in Korea are currently found in the following four types of cyber education. First, courses are offered through the Internet by the traditional universities. Second, courses are operated by the conventional universities both in face-to-face classes and through the Internet at the same time for the same course. Third, new cyber universities are being developed. The Korean Government has established and revised the Higher Education Law and Lifelong Education Law to promote the growth of cyber education institutes. Fourth, the established distance education institute, the KNOU, will change its name to Virtual University, and its curriculum and policies will be totally changed for cyber education.

While these four types of cyber education are developing very rapidly in Korea, five major reasons for the changes have been identified. First, and the most important of these, is the Korean Government's support for reforms to the higher education system. Second, the rapid rise of the highly influential global information society has the potential to change the whole education system, and the establishment of the Lifelong Education Law has set a legal foundation for the development of cyber education. Third, Korean high-tech industries were able to provide schools with already-developed software as well as hardware systems. Fourth, learners in the information society are seeking a better quality of institutional and lifelong education. They also want more opportunities to be educated whenever and wherever they choose (Kang, 1997). Finally, Korean universities had to change their education system for their survival (Shin, 1998). In particular, the high need to be educated in Korea enabled educational institutes abroad to think of Korea as a potentially big and valuable market.

THE CURRENT SITUATION

We conducted an investigation into cyber education in Korea in order to find out the problems and possibilities of this aspect of higher-lifelong education, and to suggest what might be done to ensure its success.

We investigated the current situation of the web-based higher-lifelong educational institutes, using Internet search engines. Among them, we studied mainly the cyber educational institutes approved by the Ministry of Education and Human Resources Development. We surveyed industrial educational institutes that provide courses approved by the Ministry of Labor and which have lower costs to employees, and also the Central Training Center for people in government service (this is the leading governmental training institute developing web-based training programs). This survey will show the overall current situation of cyber education in Korea. The results were analyzed within the framework (Table 1) created for this study.

1. System	Hardware	Number and kind of server, level of networking, production facilities, other.
	Software	Authoring tools.
2. Management	Organization management	Forms of management, structure of the organization, other.
	Educational matters management	Semesters, curriculum, courses, student limit, registration fees, other.
3. Contents	Teaching-learning process	Teaching strategies, evaluation, tutors, interfaces, interactions, other.
	Administrative support	Content update, feedback, public information, course guide, incentives for instructors, other.
4. Other	Problems and potentials	

Table 1. The framework for the analysis.

In 2001, the rate of enrollment in 9 newly established cyber universities was 84.2% on average (5,235 enrolled/ 6,220 required), ranging from 41.8% to 100%. The results showed that 64% of the freshmen were male, and 36% were female. The registration fee is 60,000~100,000 won per unit (Kwak, 2001), while the average rate of competition is 2.44. Higher rates of competition were found in ICT-related departments, graphic-animation-related departments, and certificate-related departments, while lower rates existed in the social science departments such as those of Law, Politics, and Public Administration (Ministry of Education & KERIS, 2001).

Meanwhile, the existing universities such as Hanyang University, Sookmyung University, Sogang University, Kookmin University, and Seoul National University began to operate their own cyber universities outside of the consortium of cyber universities that they were participating in at the same time. They provide lifelong learning courses to non-students, the object of which is mainly to prepare the learners for certificate tests or job applications.

In higher-lifelong cyber education, there are also three kinds of cyber education providers: existing lifelong education centers operated by the press, higher educational institutes or universities, and those operated by the publishing industry. With relatively better hardware systems and software than those in other educational sectors, their rate of development of programs is higher than that in other educational sectors i.e., elementary, middle, and high school education, and company and government employee education (Kwon & You, 2001).

In the higher-lifelong cyber education sector, there is a large variance in the drop-out rate. This is between 3 percent and 70 percent. There are clearly a range of reasons as to why this should be the case. We found the following problems:

- although they have tutor systems, the practical rate and level of tutor use is still low;
- there is a lack of pedagogy for cyber education, with a very limited number of established models for cyber education in Korea as yet;
- there is a lack of experts in the area of course development and implementation. Cyber education needs team teaching to be incorporated with the work of instructional designers, but there are not enough qualified instructional designers to meet demand in cyber education;
- there is also a lack of well-developed support systems in cyber educational courses. Most support systems are not properly structured and managed to meet the needs of students and staff;
- there is a lack of scrupulous consideration about unique properties of Korean culture. Korean culture is collectivistic, not individualistic, so a significant issue is how to effectively implement interactions between instructor and learner and between learner and learner in the context of these cultural considerations;
- the lack of a proper framework for the Korean education system is another problem. It may result in cyber education

becoming just one alternative option for supporting traditional instruction;

- there is dysfunction in adapting information for distribution to the current society. This problem includes the distribution of inappropriate information, and the spreading of computer viruses through the communication networks (Ministry of Education & KERIS, 2001).

For the future development of cyber education in Korea, we would like to make recommendations in the following areas.

1. System-organizational management:

- have user-oriented systems for the effective management of courses;
- standardize the cyber education system;
- manage course schedules flexibly to take advantage of cyber education.

2. Administration:

- develop professional human resources for cyber education;
- manage the quality of instructors and guarantee their positions;
- devise effective ways of marketing the educational courses;
- create a positive understanding of cyber education;
- provide enough investment.

3. The teaching-learning process:

- design and manage multi-sided interactive courses;
- develop a variety of educational content;
- develop high quality educational content;
- provide preliminary training for managers, instructors, and learners;
- use more active motivational strategies;
- provide more and better complementary content;
- develop methods and standards for systematic evaluation;
- develop effective teaching-learning methods;
- promote the necessity for and effects of tutors;
- control the quality of cyber educational content.

CONCLUSION

The balance between hardware and software, and policy, is essential for successful cyber education (Cho, 2001). In this paper, 'hardware' means all the necessary computer related

facilities in running a cyber education system, while 'software' includes instructional design, program management strategies, and training programs for staff. 'Policy' includes the philosophical background in running an educational institute, and a sense of direction in managing budgets, personnel, and resources. The potential success of cyber education can be achieved only when these factors are coordinated and are in harmony. However, the current practice of cyber education in Korea shows a heavy dependence on technological development with little consideration on these management factors.

One problem related to software is the difficulty in changing management skills for the successful operation of a cyber program. There are also insufficient training programs for subject matter experts, media experts, instructors, and cyber course tutors or teaching assistants. There is little understanding or acceptance among the instructors that their roles in a cyber education system should be different to those in the traditional education system. There has been no clear role specification made for them, and, moreover, a very low number of cyber education institutes train the instructors in what their roles should be.

The high drop-out rate of students is also related to the management of cyber education programs, and is another serious problem that needs to be solved. However, there are few measures that have been developed to lower the rate. The ineffective feedback system for providing timely responses to the students is another barrier to be resolved for a successful cyber education system.

Regarding policy, the cyber education system is not seen as different from that of a traditional one. For example, few differences are made between the cyber class and the traditional one regarding the instructional methods used, as well as the course content. An insufficient understanding of the cyber education program is another reason why an appropriate policy for the cyber education needs to be developed. The class or course management aspects of cyber education programs hardly exist. Instead, the focus is on 'consumers' rather than on assisting learners with their learning.

Finally, most of the infrastructure for cyber education has not been established properly. The universities in the consortia have made little effort in developing good courses or optimally effective educational materials. Most of the

cyber courses have been developed to make a profit, leaving the instructor or a subject matter expert to take full responsibility for developing courses with whatever instructional material is available. Also the student to staff ratio in most courses is too high.

To solve the problems discussed above, we have to establish a system that enables learners to improve their abilities in learning in the cyber-learning environment. The cyber educational institutes should provide learning material as well as human support. They should also develop effective strategies in regards to running their programs in a cost effective way. These are closely related to the necessity of introducing a quality management system to cyber education systems in Korea.

The standardization of a cyber education system is another task to be promoted. The globalization of cyber education makes it necessary to develop a standard that will be accepted world-wide. An effort to standardize the cyber education system in Korea has been under development, based on the American Instruction Management System (IMS) industrial standards and the IEEE1484 protocol which specifies features of cyber education systems.

The suggestions discussed in this paper represent the strategies required to cultivate the human resources required for a new society. Hopefully, this paper has shown that cyber education in higher education is only at a fledgling stage in Korea. The future development of Korean cyber universities will require more research on an ongoing basis: from a macro perspective, into administration, organization, and management of virtual universities; and from a micro perspective, into strategies for training instructors and assistant instructors, and into issues associated with material development for cyber education.

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