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Application of ICT in Career Preparation Program

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抄　　録

2007年以降から続くサブプライム問題を発端とした世界的な景気後退は，日本経済，更には大学生の就職活動にも深刻な影響を与え，就職氷河期と呼ばれる就職率の低迷に結びついた。この現状を受けて大学は，学生の就業力や社会人基礎力養成についての再認識と適切な学習機会の提供を迫られており，既にその取組みは全国レベルで展開されつつある。北翔大学生涯学習システム学部においては，平成22年度文部科学省「大学生の就業力育成支援事業」の選定を受けて，産公学連携による実学融合教育の実践を課題とした，実学的専門知識と実務に則した技能を合わせ持つ人材を輩出する就業力育成プログラムを推進することとなった。

本稿では，就業力，社会人基礎力という観点から北翔大学が提供するキャリア教育における情報通信技術（ICT）の活用に焦点を絞り，タブレット型電子端末やソーシャル・ネットワーク・サービス等による効果的な社会人基礎力の学習支援の在り方を考察したものである。北翔大学での導入には情報通信基盤の改善，現存する科目と連動した体系的なプログラム開発の必要性が課題として挙げられるが，ICT を利用した授業展開，情報収集，自己学習，教員や学生間ネットワーク構築は，就業力，社会人基礎力育成における早期のビジネスマインド形成や就職活動への実践にも大きく貢献できると考える。

Ⅰ．Introduction

The great recession triggered by the subprime mortgage crisis in 2007 had a severe impact on college graduates in Japan. The full-time employment rate of Japanese college graduates in 2010 term was 60.8%, with a significant drop of 9.1% since 2008[i]. On the contrary, the population of unemployed among the graduates was 87,000 or 16.1% of the total; the percentage has risen by 4.0% since 2009. Mass media frequently mentions the current trend in this severe employment as the “Employment Ice Age” of modern era; the worst recession period since the collapse of Japanese bubble economy in 2001.

In order to encounter with this crisis, the colleges throughout Japan have faced increasing urge to provide sufficient career education, to prepare their students with basic busi-

ness knowledge and skills necessary to survive the job-hunting competition. Japanese government is taking a variety of countermeasures to assist the colleges. For instance, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) is providing a subsidized program called "Career Preparation Education Project for the College Students" to assist the colleges developing and implementing their unique career preparation program[ii]. From outcome of this program, the students are expected to acquire skills necessary to become independent socially and professionally. The School of Lifelong Learning Support Systems at Hokusho University was selected as one of the participants in this program this year[iii]. Our program focuses on preparing the students with fundamental abilities necessary as a working member of society through a systematic implementation of actual practices that reflect the students' academic specialties ; art and academic coaching.

In 2006, the Ministry of Economy, Trade and Industry (METI) has proposed the concept of basic abilities required to be a working member of society. This concept consists of 3 major abilities that are 1) the ability to step forward by taking an "action," 2) the ability to "think" through the problems to reach a solution, and 3) the ability to perform "teamwork" with others to achieve a common goal[iv]. The survey conducted by the METI in 2009 suggested that both the recruiting companies and the college students share similar recognition in which the major skills necessary in the business world today include high communication skill, independence, and teamwork[v]. Therefore, it is my intention to discuss how the students can acquire these abilities effectively by introducing Information and Communication Technologies (ICT) in their career preparation, specifically from the application of the digital tablet devices.

Ⅱ. ICT Education at Hokusho University

The popularization of the computers and mobile phones has resulted in the acceleration of the technological growth and economical affordability. The saturation rate of the personal computer in Japanese households has reached 75.9%, and the mobile phone with 92.7% in 2009[vi]. The number of network users exceeded over 94 million people ; around 78% of the total population in Japan is now accessing internet[vii]. The rapid growth of ICT led to the introduction of the new academic subject called "Informatics" in Japanese high schools since 2003, the high school students are required to acquire the basic computer literacy systematically. As these figures suggest, the computer literacy has become an inevitable skill in our lives.

At Hokusho University, all students are required to take the basic computer literacy

courses in their first year, in which they learn the basic use of word processing, creating spreadsheets, and preparing slides for presentation. Besides these basic computer courses, each department offers further levels of computer courses that reflect their academic fields. For instance, the Department of Arts and Media Applications offers advanced computer courses in informatic ethics, linguistic communication, digital presentation, and computer graphics. Our extension center offers a series of courses outside the regular class time that are designed for students to obtain various ICT related certifications and licenses, issued by the nonprofit foundations and corporations. As for the career service, our career center provides a database for searching available job positions online, accessible from off-campus as well. The most of these computers in the classrooms are connected with high-speed networking system and free to use except occupied by the class time.

On the contrary, there are elements to be improved in both application of existing ICT system and in the career preparation. As for the application of the computers, the major problem occurs in the limited availability of the on-campus computers, in which the classes have priority using them over the students. Thus the students are able to use them only during no class time that the schedule varies everyday. There is no networking access on campus for the students to use their own laptops connecting to the school network or internet. There is also no wireless networking system on campus, resulting in the inflexibility of the computer usage. As for the career preparation, despite the fact that the students have high proficiency using the computers and mobile phones from their daily usage, the most of them are not well trained or even aware of the effective application of these devices for their career searching. Although the school offers the computer courses to provide the basic computer skills, these courses are mostly focused on the use in their academic major, not necessarily tie into the career education. The most of the problems can be solved through the implementation of adequate methods based on our academic policy of the ideal career education. Utilization of the digital tablet device such as “iPad” into the career preparation program also provide a chance to provide a solution to these problems.

Ⅲ. Possibilities of iPad in Career Preparation

1. Introduction to Apple's iPad

Since the introduction of iPad from Apple Inc. in April 2009, consumers are still enthusiastic today from its distinctive hardware features and functionality differences from previous portable devices such as laptops and netbooks. The iPad succeeded establishing a

new genre in the mobile platform. The core of the iPad consists of Apple's new iOS, which is the modified version of Mac OS X used among their desktop and laptop products. The revolutionary touch based interface of the iOS established the new standard for mobile computing. It is shared in Apple's other popular products such as iPhone and iPod Touch. One of the key successes to the iOS is its developing capability of custom applications, also known as "apps," using Apple's open-source programming language called Objective-C. This environment allows software developers to create wide variety of custom-made apps and share them with or without fee through "iTunes App Store", available through iTunes software on both Mac and PC platforms. This distribution business model by Apple boosted the sales of the iOS products and the numbers of registered apps has reached over 250,000 (25,000 apps for iPad) with 6.5 billion downloads by September 2010[viii].

2. The Benefits of using iPad in Education

The first benefit of using the iPad for both the students and the educational institutions comes from its economical cost factor. When compared with the expensive initial cost of the conventional desktops and laptops, the affordable low price of the iPad[ix] minimizes the expense. The iPad applications or "apps" are also inexpensive with the average cost range from free to less than 10,000 yen. This low price can encourage the students to purchase the iPad for their personal use. The second benefit comes from its availability of the enormous collections of application titles available to the users that are added weekly. There are over 5,000 apps just for education, over 1,000 apps for business, and over 1,400 apps for the productivity aid. There are 20 genres to the apps that cover almost all the aspects of our daily lives with the iPad[x]. The third benefit is in the iPad's thin and compact physical dimension with its lightweight that contributes to its portability. This is one of the major factors that make the digital tablet devices different from other computers. The location of the computers does not need to be fixed anymore; wherever there is a wireless internet connection, that particular place can be used as a classroom. The fourth benefit is its low maintenance that does not require the special computer technicians as in the conventional computer classroom needs in case of the hardware and software problems. Lastly, it is simply fun to use the iPad. The multi-touch gesture based interface allows the users to master the basic operation of the hardware in a short time. The users also do not need to be distressed with the operation of the hardware; they can focus directly on their task itself using the apps. Therefore, the use of the digital tablet devices such as iPad in education, provide an opportunity for both the teachers

and students with creating the new learning style.

3. Case Studies of the iPad Application in Career Preparation

In order to nurture the communication and teamwork ability, the iPad can assist the students in various ways. For instance, in the presentation course, the students can create presentation materials using the application called "Keynotes," by incorporating images, videos, and music stored in the iPad. These slides can be presented directly from the iPad or through the external output. In "Digital Presentation," which is a course offered by Department of Art and Media Application, the students were facing difficulties rehearsing their presentation with teammates due to unavailability of the computer rooms with limited time available for the group practices. These slides can be easily shared to another iPad using the network file transfer or by simple e-mail to increase their productivity. Moreover, the sites of the presentation are no longer limited to the classrooms ; the presentation can be given anywhere.

The application of digital presentation leads to the development of digital portfolio. Unlike traditional printed portfolio, the iPad allows combining the multimedia elements such as text, images, video, and music together creating the unique portfolio. The portability of the iPad also enables a student with presenting their works outside of the school. Besides the presentation, adding real-time communication apps such as "Skype," "MSN messenger," and "Yahoo Messenger" allow the students performing real-time text messaging and voice-chat sessions with distant classmates. This communication method creates a new opportunity in studying style, regardless of location. It is apparent that the distance among teachers and students become closer that helps building a stronger relationship contributing to the teamwork.

Another important role of the iPad in the "taking an action" aspect is in its capability of gathering information. For instance, the iPad can be very practical in career searching. The major Japanese recruiting corporations such as Recruit Co., Ltd., offer apps for the iPad that specialize in searching job openings in Japanese companies. This service is provided through their websites traditionally ; however, the downside was that the students are required to have an internet access and login to their database in order to access the desired information. The app version allows the users with continuous logging status as long as the users stay within the wireless network connection. The iPad is equipped with a function called "data pushing", in which the latest data is literally "pushed" or sent to the iPad by the service providers to remind the students with any updates on the area of interests to increase their chance of job acquisition. The appointments for interviews

and the schedule of career seminars can be checked through these apps as well.

There is an ongoing trend in the career searching today that utilizes the social networking services (SNS), such as "facebook.[xi]" The students with high computer literacy use the facebook to gather the information to understand the economical trend and accessing the corporations directly. The facebook is a free SNS specializes in a development of human relational network that extends our real life. The users can enter personal information and their daily experiences sharing with friends or family. Its uniqueness lies in the use of real personal profile such as name, occupation, academic background, and so on. The students can use the search function of the facebook to access other registered users around the globe, who share the common interests such as employment preferences. The major corporations are also using the SNS; building their "fan pages" in the facebook. The fan page allows the companies to share the latest updates on their businesses with the customers, and employment news for the students. These companies are also benefited from the user statistics to understand the trends and needs of the viewers. The facebook can be accessed from the official apps available for the iPad that also "pushes" the latest updates to their devices. A study shows that 49.9% of the college students in Japan are using the smart phones for career searching[xii]. This percentage indicates that the students are using the portable digital devices to take an advantage in accessing the desired information timely and conveniently that increases their chance of attaining their goals.

Ⅳ. Methods of Application

1. Establishing wireless network environment

The expected primary problem for the application of the iPad at Hokusho University comes from their hardware infrastructure. Since the iPad requires an initial connection with a desktop computer, we are planning to prepare sets of computers as the iPad docking stations. These computers serve as backup stations for the students to store data on their iPad. Our biggest challenge on the infrastructure is going to be an introduction of the wireless networking system in school campus. Currently our computer network uses the wires and cables that are set throughout the school buildings. The wireless network provides numerous solutions to the maintenance problems; however, it may cause series of network security issues. Therefore it is necessary to conduct a series of testing and create a set of guidelines for the network usage to prevent from the security breach. In our initial experiment, 3 sets of wireless routers will be placed in the second floor of

building #1 that will be connected to our existing network to examine their operation. After successful result is confirmed, more routers will be deployed in different area of the building to increase the range of network reception. However it is still uncertain that this wireless network system is to be applied in the entire campus or limited to a particular area at this moment.

2. Development of Systematic career preparation Program with iPad

In order to increase the familiarity using the iPad, a series of introductory workshops will be given to the participants prior to actual implementation of the device in their academic studies. The basic theory and operation of the iPad will be explored with enough skills and knowledge required for its use. The iPad will be used daily, and the students will be asked to explore all aspects of both hardware and software. New possible usages of the device will be experimented and shared by the teachers and students for testing. It will also be used in the regular courses as a study assistant to further familiarize with the application of the device. The career preparation seminars and workshops will be provided with a goal of taking an active role in a project through communication and teamwork using the iPad. The details are still in the process of construction, it will be based on a series of projects focusing on problem solving and attainment of the solutions.

Ⅴ. Conclusion

Introduction of the iPad is expected to bring benefits for the students' learning process; however, without a strong systematic program, it may just end up with a waste of treasure. The role of the iPad and its software should be kept as a tool or reference to assist the users. Extra caution should be taken for the students who have a tendency of depending heavily on the use of ICT that may results reducing their thinking ability in the process of constructing the ideas and decision-making. The actual implementation of the program will begin on April 2011 with estimated duration of a year. The examination of the process and results will be discussed in the next issue.

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