

College Student Perceptions of Smart Learning in Higher Education in Korea

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1. Introduction

The sophistication of the smart learning devices has influenced the users in various ways. The growth in smart learning solutions has been fueled both by the willingness to provide smart learning in higher education institutions and by the preferences over the smart learning devices by the users. There has been a report [2] that teenagers read 7 to 8 news articles and 3,417 pieces of news articles via smart phones in Germany.

Smart learning is referred to as learning content and solutions provided in the form of device-based or application-based tools, such as smart phones, media tablets, and e-book terminals. It is different from e-learning in the sense that it provides versatile and enhanced forms of functionalities, such as learning content and solutions, location-based services, and augmented reality. On a related note, as a part of smart learning related research, the development of the mobile education service system [4] has begun being reported.

Smart learning is a type of connecting with users via mobile learning, in which students can learn with no regard to the time and place using the smart devices and social learning. Smart learning also has interpersonal communication media, collaboration, collective intelligence, sharing knowledge [1]. According to a survey [4] on the use of smart learning that sampled 173 companies in Korea, 72%, 54%, and 52% of reported cases of using smart learning in financial institutions, public institutions, and big enterprises, respectively. More than 90% of companies, which they did not start using smart learning until 2013 expressed their plans to introduce a smart learning system in the future [3]. The goal of this research is 1) to study perceptions and needs of college students in order to promote smart learning in college education, 2) to present the implications of the study, and 3) to discuss the future direction of smart learning. The remaining of this paper is organized as follows: 1) section 2 describes the background of smart learning in college education; 2) section 3 presents our results and the implementation plans; 3) section 4 provides further discussion on smart learning in higher education.

2. Smart Learning in College Education

The advent of smart education devices have influenced many aspects of learning and teaching in higher education institutions and have been suggesting new educational goals. College students in today's era who are especially used to play computer and Internet games, they have a new prerequisite for college education at their standpoints, emotions, and actions and have the needs of sensory stimulation. It is closely related to problem solving and conflict resolution. It leads to the needs to share information widely and to interchange experience freely via social network services (SNSs). In addition, the learning type based on computer and communication has great effect on the classrooms of education institutions. Both learners and teachers are required digital and media literacy.

In connection with smart learning in college education, media literacy education provides tools to help people critically analyze messages, offers opportunities for learners to broaden their experience of media, and helps them develop creative and digital media skills in making their own media contents [5]. Digital media literacy competencies, which constitute core competencies of citizenship in the digital age, have enormous practical value and should be developed.

Based on what is important in higher education using digital media, the areas of digital media competence that learners need to achieve are as follows: 1) being able to articulate how learners designed, planned, and produced the content in smart devices, 2) being cognizant of what the digital media can do, 3) being able to produce and distribute the content or the program that they have developed, 3) legal issues on privacy and information security, 4) technical learning ability that are often suggested by information technology industries.

3. Research Method and Results

In this research work, the survey was administered to 209 students who were enrolled in the Catholic University of Korea. The data were collected in the fall semester of 2013. As shown in [Table 1] and [Table 2], the survey consists of 21 items on demographic questions (e.g., major and year-in-school) and the items developed by Moon and Park [6]. The results from the survey conducted on college students with different educational background showed that 89 percent of the respondents answered they positively support the smart learning education.

On the question what needs to be prepared in higher education to provide smart education, the responses were 1) providing smart devices (37.5%), 2) publicizing and knowledge education programs on how smart learning works and the effectiveness (21.2%), 3) training programs on how smart learning devices work and the accessibility (20.5%), 4) training and education programs on smart teaching for professors (18.9%).

When asked the type of the preliminary support systems to be provided the school in actual smart education settings, the participants indicated that applications that can work well with the systems on different platforms and devices (34.6%), developing adequate learning contents (32.0%), accessibility via both the web and the mobile communication (18.6%), and whether or not the users can get applications for the purpose of learning and teaching (16.8%).

[Table 1] Description of survey questions

Items	Description of the items	Number of Items (Total: 21)
Current status on the users of smart learning	Personal characteristics and students who used electronic media or mobile devices	4
Basis for smart learning implementation	Whether or not users have smart learning experience, comments on how smart learning should be implemented in college	3
	Suggested prerequisites for smart learning in college education, the delivery of smart learning	4
Educational circumstances, education contents	Communications and social relations between learners and teachers	3
	Curriculums, educational psychology, educational administration, and educational technology	4
Link between education and employability	Industry-university cooperation,	2
	Need for educational content development	1

[Table 2] Demographic information by major and year-in-school

Test Values		Frequency (people)	Percentage (%)
Year-in-school	Freshman	63	30.1
	Sophomore	45	21.5
	Junior	46	22.0
	Senior	55	26.4
	Total	209	100.0
Major	Liberal Arts and Social Sciences	109	52.2
	Natural Sciences and Engineering	83	39.7
	Fine arts and Music	3	1.4
	General Studies	14	6.7
	Total	209	100.0

Smart learning allows professors and students to communicate in or outside the classroom. It not only fosters the communication on the learning content (58.6%), but also they can have some bonding experience via informal educational mode (48.9%). On the measure of how much in fluence was also reported that smart learning influences social and interpersonal relationships (51.2%).

In the responses on the strengths that smart learning can have, the majority of the responses expressed “being able to encourage informal learning outside the classroom(42.3%)”, “being able to promotetwo-way communication between the students and the teachers via SNS (31.7%)”, “being able to relieve stress or anxiety by closely communicating with teachers on an individual level (21.0%)” and “being able to reduce the interpersonal conflicts via active interaction between the professors and the students (5.0%)”.

4. Conclusions

The present study examined the perceptions and the needs of college students in smart learning in higher education. The results are used to propose further implementation plans. The majority of the survey participants have expressed positive views in using smart learning solutions and platforms in learning and teaching. The participants have shown great interest in the institutional level of providing the smart education devices. In terms of using smart education in lab practices and tutorials, the participants stressed the importance of 1)thesystemic use of smart learning devices in higher education, 2)the technical platforms and other support systemsequipped by their higher education institutions, 3)the smart learning community with the subsystems that enable the users’ devicesto meet the system requirements for the use of the smart education platforms, and 4)the systemic support for smart education community.

5. References

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