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Development Strategy for Requirement of Information and Communication Technology in Business Learning of Different University

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Abstract

Information and communication technology (ICT) has affected almost all activities of education with great impact during the past 20 years. Whereas most comprehensive regional higher education institutes (CRHEIs) deploy ICT mainly to automate ordinary tasks in China. Now graduate of CRHEIs, especially Business graduate of CRHEIs, are main source of workers. Those CRHEIs should improve their quality of learning for their student being good workers. In this paper, we analyses ICT–based learning issues from Business undergraduates at Linyi University and Henan University. The methodology for carrying out the tasks mainly contains questionnaires according to normative Delphi technique. The research provides development strategy which CRHEIs authorities should take in order to properly integrate ICTs in their institutes and get their benefits.

*Keywords :*Information and communication technology (ICT); Delphi; Ability gaps; Business

1.Introduction

Information and communication technology (ICT) has affected almost all activities of education with great impact during the past 20 years. ICT has fundamentally transformed the way information is captured, processed and transmitted [1]. Higher education institutes need ICT to facilitate the exchange of ideas and information about science and technology [2]. ICT offer new methods for teachers to interact with each other and with their students [3]. ICT is used not only for administrative purposes but also for delivering teaching materials for distant and on-campus students in developed countries [4]. While internet usage in institute has become a standard, teachers will become more informed, more interactive, and more confident in the usage of various kinds of hardware and software to encourage and challenge

students. Students can also enroll and pursue their studies while still working without any need of visiting a university campus [5]. This helps students to continue their learning beyond the classroom.

Whereas in most Chinese regional higher education institutes, ICT were deployed mainly to automate ordinary tasks such as those of student records systems and administrative support services. Some teachers lag far behind the others in adopting internet innovation [6]. However, change in professional domain, internet innovation, and teaching methods is ineluctable. We should be effective and ensure the adoption of all new technologies, as they become available.

In china, many comprehensive regional higher education institutes (CRHEIs, mainly be regional university) have been founded from 2005. Students in those CRHEIs become more and more. Those CRHEIs should improve their quality of teaching. ICT-skilled teachers in CRHEIs should adopt right pedagogical tools and practices in their teaching and enable their students embrace these new technologies [3].

In this study, learning with and without the help of ICT in CRHEIs and comprehensive nationwide higher education institutes (CNHEIs) is explored. Their ability gaps in tackling and solving problems are recorded, and therefore proper strategy or mechanism can be figured out to reduce these ability gaps.

In this research, we propose Linyi University as an example on our research of CRHEIs in PRC. As the way of [7], we get the following data of School of Business in Linyi University. There are 427 undergraduates matriculated in 2008 in School of Business. They have studied for 2 years in Linyi University. According to normative Delphi technique, a questionnaire was prepared and hand-delivered to the 227 undergraduates, and 226 of the staff answered the questionnaire. Within next 2 months, these 226 members complete other questionnaires for 3 rounds. The same group was asked to devise a development strategy that CRHEIs authorities should take in order to integrate ICT in their institutes.

In this study, we propose Henan University as an example on our research of CNHEIs in PR China. As the way of [7], we get the following data of School of Business in Henan University. There are 217 undergraduates matriculated in 2008 in School of Business. According to normative Delphi technique, a questionnaire was prepared and hand-delivered to the 217 undergraduates, and 217 of the staff answered the questionnaire. Within next 2 months, these 217 members complete other questionnaires for 3 rounds.

The organization of this paper is as follows. In section Ⅰ, we propose the introduction of ICT in CRHEIs. In section II, we discuss the data analysis of Business School. In section III, we present our conclusion that development strategy for requirement of ICT proposed by panelists.

2. Data analysis

Data showing ability gaps obtained through the questionnaires from undergraduates of Linyi University is shown in Table 1. Please refer to Table 1 for issues.

Table 1   Ability gaps of Linyi University

	issues	Ability gaps
1	Learns Textbooks	2.44
2	Communication with teachers and students	1.73
3	Academic Research and Social Networks	3.26
4	Use of Common ICT tools	0.04
5	Rely on ICT tools and applications in CRHEIs	0.89
6	Get help by ICT tools and applications in CRHEIs	0.91
7	ICT Demand in CRHEIs	1.46
8	ICT Supply in CRHEIs	2.37

Data showing ability gaps obtained through the questionnaires from undergraduates of Henan University is shown in Table 2. Please refer to Table 2 for issues.

Table 2   Ability gaps of Henan University

	issues	Ability gaps
1	Learns Textbooks	1.93
2	Communication with teachers and students	1.16
3	Academic Research and Social Networks	2.33
4	Use of Common ICT tools	0.04
5	Rely on ICT tools and applications in CNHEIs	0.59
6	Get help by ICT tools and applications in CNHEIs	0.71
7	ICT Demand in CNHEIs	1.50
8	ICT Supply in CNHEIs	2.00

1. A student learns textbooks by reading online, searching information from internet after class lecture. High ability gap (2.44) for CRHEIs and ability gap (1.93) for CNHEIs are recorded which shows levels of students using ICT tools and applications for these tasks.

2. For communication between teachers and students using ICT tools and applications, ability gap for CRHEIs and for CNHEIs are 1.73 and 1.16 respectively.

3. For finding research information, communicating with researchers, quest for knowledge using learner forums, ability gap (3.26) for CRHEIs and ability gap (2.33) for CNHEIs are obtained.

4. Very small ability gap of 0.04 for both CRHEIs and CNHEIs is recorded for use of common ICT tools such as MS office, web browsers, e-mail, search engines etc.

5. Regarding how much should students faculty rely on ICT tools and applications, low ability gap (0.89) CRHEIs and low ability gap (0.59) for CNHEIs are recorded respectively.

6. Regarding how much help students faculty get while using ICT tools and applications, low ability gap (0.91) CRHEIs and low ability gap (0.71) for CNHEIs are recorded respectively.

7. Ability gap of 1.46 for CRHEIs and ability gap of 1.50 for CNHEIs are measured for the issue of demand for ICTs of PRC.

8. Ability gap of 2.37 for CRHEIs and ability gap of 2.00 for CNHEIs are recorded for ICT supply in response to its demand.

Students usually perform a number of tasks: homework, thesis, sharing material between students using ICT tools and applications. If a student is effective at communication with teachers and other students, his tasks will become much easier. There are many ICT tools and applications that a student can use while sharing material with other students.

In almost all aspects relating these learning issues about CNHEIs in PRC, small ability gaps are measured and students are mostly conversant with the use of ICT in Henan University. However, big ability gaps are measured about CRHEIs in PRC in almost all aspects relating above learning issues. Such significant gaps show different level of students in using ICT.

In this study, Email and word processing are the two learning tools that most students are quite familiar with and have high degree of experience with. Fewer students have knowledge of and experience in software presentation, multimedia and distance learning. It is not popular to establish a mutual dialogue and communication between staff and students although it is a popular tool for use between staff and other colleagues. The main causes of this difference between CNHEIs and CRHEIs are due to lack of funding, unavailability of resources and other unexplainable reasons. To-date most universities are still holding national status and heavily depend on their governments for funding. Most CRHEIs receive fewer funds than CNHEIs.

The spread of ICT tools and applications is considered as necessary in CRHEIs of developing countries; thus they can drive in pedagogical challenges coming from latest development. Few strategies have been devised to solve these issues in PRC. Accordingly we try to devise a strategy including some important measures for ICT enhancement.

3.Conclusions

Through comparing the ability gaps of Linyi University and Henan University, some development strategies for requirement of ICT in Business learning are proposed by undergraduates matriculated in 2008 in School of Business in Linyi University.

1.The higher education institutes

It is necessary for CRHEIs to enhance their ICT in order to participate effectively in the global information age. The University must assist in support for ICT adaptation using both formal and informal methods to create a learning system. Education network site populated with relevant learning resources for curriculum purposes needs to be developed. Teaching staff should be supported to use innovative methods of teaching in their routine work. ICT training centers that fulfill training needs of students needs to be established. Computer level of 3:1 students-computer ratio should be reached. Local internet needs to be developed and consummated. Management ought to improve the low bandwidth that hinders smooth Internet services.

2.The teachers

Every member of the university community, that is, management, academic staff and non-academic staff should understand the rationale behind using ICT, which is for themselves, for the faculties they serve and the University at large. Academic members of staff must be keen to collaborate with students, other colleagues in and outside the campus.

The students

Most of the students will enroll themselves with universities that offer them good ICT. University students expect to use better type of ICT. Students' attitudes, perceptions and use of ICT must be well understood by both management and staff. Students ought to be encouraged to use internet in their routine tasks. A mutual dialogue and communication needs to be established between staff and students as this for use between staff and other colleagues. An open and mutual understanding of trust between staff and students needs to be cultivated. Thus students can contact their academic and management staff promptly.

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