

Information, Communication and Technology and Higher Education in Cambodia

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Abstract

This research is a review of literature concerning the development information, communication and technology (ICT) and its relationship with higher education in Cambodia. There is a concern that there is a lack of research materials linking ICT and the Cambodian higher education system. This study will explore challenges faced by the Ministry of Education, Youth and Sport, higher education in Cambodia, critique ICT in Cambodia, and discuss the level of ICT usage.

Introduction

The Kingdom of Cambodia, in 2014, has a population of approximately 15 million. However, for many years Cambodia has faced difficulty in maintaining growth and climbing the income ladder. An effect of such would be the development of educational systems and services. Cambodia's development discourse largely centers on catching up with the developed world, economically and technologically (Supreme National Economic Council of Cambodia (SNEC) 2010). The Internet is a case in point in this development discourse and policy orientation, with governmental, non-governmental and private institutions promoting the uptake of the Internet. However, critical inputs to balance this current optimism regarding the diffusion of (ICT) and the Internet in Cambodian development discourse have been missing.

Albirini (2008) pointed out that the hasty diffusion and inattentive absorption of the Internet in developing countries often amounts to a form of economic, cultural and political domination, made possible through technological consumerism as well as disproportionate access and content development compared to the developed world. In the Cambodian higher educational sector which, according to the World Bank is largely understaffed and poorly resourced, the promotion of the diffusion of ICTs and the Internet has also been met with great optimism. At the policy level, the Policy and Strategies on Information and Communication Technology in Education in Cambodia, formulated in 2004 by the Ministry of Education, Youth and Sport (MoEYS 2004), is explicit in promoting ICTs and the Internet in higher education. Most noticeable from this policy articulation is the prioritization of digital literacy and the vision of a new educational paradigm characterized by life-long learning and distance learning.

At the institutional level, such policy-level targets are moderated by sensible challenges, including financial and human resources. Cambodian universities, both public and private, may not necessarily share such policy-level vision due to pragmatism and challenges, yet their students' access to the Internet is strongly prioritized. Universities feel compelled to provide Internet access at varying levels. Realizing these issues, this paper aims to present an overview regarding the area of ICT in relation to higher education in Cambodia.

Current Level of ICT Access and Use in Cambodia

According to an Association of Southeast Asian Nations (ASEAN) Readiness Assessment conducted in 2001, Cambodia ranked eighth out of the 10 ASEAN countries in terms of e-infrastructure, e-society, e-commerce and e-government (See Figure1). As such, it was classified as an "emerging" readiness country, characterised by the need to build basic ICT infrastructure and ICT literate workforce. Public access to computers and the Internet are limited. An increasing number of Internet cafes have appeared in recent years in urban centers and tourist destinations. There are currently over 100 in Phnom Penh and several in the Siem Reap and

Sihanoukville. Computer courses are popular in the major towns. However, with more than 80 per cent of the population living in rural areas, the majority has little or no access to the computers or the Internet. The rural people rely heavily on radio and television for information.

Internet Technology

Cambodia has one of the lowest Internet penetration rates in the region and the world, although the number of Internet users has grown in the last few years. The International Telecommunication Union (ITU) estimated the number of Cambodian Internet users at 78,000. In 2009 (with a penetration rate of 0.53 per inhabitant; however, the Cambodian Ministry of Post and Telecommunications estimated the number to be about 291,000 by 2010), and that of broadband subscribers at 30,000, with a penetration rate of 0.12 (Department of Media and Communication (DMC) 2010).

According to data from the Ministry of Post and Telecommunications (MPTC), by 2010, 34 Internet Service Providers (ISPs) provided Internet service to some 50,000 subscribers, only a relatively small number of which were private households, while mobile access has been increasing (DMC 2010). According to data from the National Census 2008, only 0.11 percent of all Cambodian households (and 0.43% of all urban households) had access to the Internet at home, and only 0.85 per cent of all Cambodian households (and 3.64% of all urban households) had access to the Internet outside home (NIS 2009). Therefore, though official figures are unavailable, public Internet access venues play a significant role in providing Internet to Cambodian users. Among these public access venues are some 300 Internet cafés (over 100 in Phnom Penh, according to MPTC's records (DMC 2010)), locally known as 'Internet shops', which charge low rates for Internet access. A survey at 23 Internet cafés in Phnom Penh in 2010 by Peou and Chea (2010) showed that the patrons at these cafés were mostly male (close to 80%), mostly young (76% below 26 years old), and dominated by university students (47%, the largest group compared to others). Internet cafés remain the most crucial access point for users. For the Cambodian university students, Internet cafés were the most used (50% at least once a week) and most strongly associated with all Internet uses: information seeking, entertainment, socialization and, most crucially, academic utilization. This is in parallel with findings on Cambodian Facebook users, who have increasingly integrated Facebook into divergent aspects of their lives, including fun seeking, socializing and friendship maintenance (Saray, Chea & Peou 2010). In terms of the students' attitudes, the Internet appeared to be readily embraced by the students. However, even if these new opportunities in Cambodia as of yet are extremely limited and unevenly divided, information technology has the potential of breaking part of the isolation that has had such fundamental impact on the Cambodian society. There are also a few examples of IT projects in Cambodian schools. In a Japanese supported project called Village Leap in Preah Vihear province in northern Cambodia, the students learn to work with computers and internet, and the organization Future Light Orphanage gives children and youth they work with the ability to go online.

It must be noted, though, that Internet regulations remain dubious at present. The Ministry of Post and Telecommunications (MPTC) is technically the sole regulator of the Internet in Cambodia. However, issues arising around the Internet usually involve other authorities. Despite occasional concerns, formalized censorship is non-existent, although the Ministry of Information and MPTC are rumored to be working on an Internet law. The Internet has become an important aspect of Cambodia's development policy, with the National Information Communication Technology Development Authority (NiDA, established in 2000) entrusted to develop IT and Internet infrastructure and policies. The Authority's current tasks are focused on infrastructure expansion and e-government, including connecting governmental institutions for data exchange and e-governance such as online registration of vehicles, residency and real estate.

Ministry of Education, Youth and Sport (MoEYS)

The long-term vision of Education for All in Cambodia is to ensure equal access to quality basic education for all citizens and to prepare its citizens to play an active role in reconstructing the country as well as integrating Cambodia to the knowledge-based global community. The Ministry of Education, Youth and Sport (MoEYS) is introducing various initiatives to facilitate greater integration of information and communication technology (ICT) to improve the effectiveness of education at all levels and to produce the technologically literate, productive and critically thinking workforce for the country. The Ministry has outlined three goals, which are:

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- Increased access to basic education for all, both formal and non formal, using ICT as one of the major tools for learning, teaching, searching and sharing information.
 - Improved quality of basic education and promote independent and lifelong learning, especially for post-primary education,
 - Availability of workforce with the ICT skills needed for employment and use in a knowledge-based society; to ensure that Cambodia can compete and cooperate in an increasingly interconnected world

Benefits of ICT Use in Cambodian Universities

Since Cambodia is experiencing a shortage of well-trained university lecturers and professors, it is essential that the universities think of creative ways of connecting learners to virtual learning resources worldwide. The Ministry had proposed the promotion of use of ICT in teaching and learning process, research and administration by creating a cyber campus consortium and linking this to other virtual universities in other countries. This move will also promote the digitizing of the Khmer language books and translating of foreign core books into Khmer (Policy and Strategies on Information and Communication Technology in Education in Cambodia). Moreover, the potential of the Internet as offering a new learning tool and environment has been well argued by many, for instance, its liberating capacity for independent and goal-orienting learning experience (Knight, Knight & Teghe 2006) and its flexibility for the methods, goals and physical environment for learning (Oliver, 2002). Therefore, constructive adoption of the Internet as well as other applications in higher education will need to focus on the pedagogical potential of the technologies and rational and pragmatic adjustment on the part of educators and learners. If the potentials of ICT are fully realized, higher education in Cambodia will reap the following benefits:

Convenience for students

Technology aids Cambodian students' expression. Because of technology, especially the Internet, Cambodian students can use much more than just pen and paper to express themselves or present what they have learned. They can use software to make presentations and projects. This makes them more interested in the subject and leads to better retention of information. With technological aids, they can make easy-to-remember notes and a creative presentation of the information they have acquired. In addition, according to the Association for Progressive Communication (2010), Cambodian students and youth, especially universities students are learning how to use Facebook and Twitter over the internet to address the issue of violence against women. Through information-sharing activities, they will teach each other and engage in discussions about gender-based violence; some of which will elaborate strategic plans and suggestions for the national action plan on violence against women.

Accessibility of information

By increasing the numbers of Internet shops both in the city and country sides, many Cambodian students can access the internet and allow them to search information they want much more easily. University students find internet very useful for helping them to do their assignments, projects and other tasks. The Internet is a huge information base. It can be used as an effective tool for acquiring knowledge. All a web user needs to do is to key in queries to search engines. Users are presented with thousands of search results. There are several websites and web directories that offer information on literally everything in the world. And all this is just a few clicks away. Both Cambodian teachers and students can benefit from this.

The Elimination of space and time constraints

With Internet, Cambodian universities are able to offer online education and distance learning has given a new dimension to education and higher learning. Even if students are geographically far away from the university that they want to study, they can be a part of one classroom. Many Cambodian educational institutes which are linked to universities abroad offer online courses, which eliminate time and space constraints in acquiring education. Cambodian Universities offer online educational programs wherein students can interact with their teachers over the Internet, access reference material from the University website and earn degrees online. With the help of technology and the internet, the education in Cambodia

has been growing significantly in the last decade. As the growth of the country depends on the students and youth and so they should be supported and nurtured in the best educational environment. Education is one of the prioritized sectors of the Cambodia. There are many scholarships and grants available for Cambodian students to pursue higher education. There are many aids and scholarships accessible for students who wish to study undergraduate, graduate, master and research programs. This blog is created to give an overview of the different scholarships available for the natives of Cambodia.

Shared Teaching

The teaching and learning, especially in higher education level now can be shared. Because of the application of technology, Cambodian education has become more collaborative in nature. Furthermore, with a plethora of information so easily available to students, they can be a part of the sharing process; they do not need to remain at the receiving end. Owing to the use of technology, subject experts can come together to formulate courses, design assessments and better the process of teaching. This will cater to different learning needs and varying abilities and interests of students.

Communication

As mentioned above, communication is one of the biggest advantages of the Internet in Cambodian higher education. Many Cambodian students now can contact other students or their teachers via E-mail if they have queries about any information. Sharing of information, discussions on a particular subject, etc. can be easily carried out using the Internet. At the same time, teachers can also contact the parents and guardians easily using Internet. In addition to that, many Cambodian universities find internet very useful in term of promoting the school via website world widely. University can communicate with administrators, professors, teachers, and student the information just by posting them on the university's website or the intranet.

Projects

The Internet can be most useful for completing projects in Cambodian schools and colleges. As the Internet is an ocean of information, covering nearly all subjects known to man, one can literally find information, research work, etc. required for one's projects. Going through the information on the Internet is definitely faster than reading an entire book on the subject. Homework is also made easier with the help of the Internet which is also one of the important uses of computers in education. Many of Cambodian students and teachers realize that much more easily in their learning and teaching when dealing with assignments, researches, and projects with the help from the internet. According to You V (2007), optimism in regards to the Internet and other ICTs as being able to offer 'quality' higher education is pervasive in the country.

Conclusion

Today, computer education has become an integral part of school and college curricula. Considering the wide range of applications of computer technology, it is necessary for Cambodia to be computer-friendly. It is important for each student to gain basic knowledge of Internet access and web research. We live in a technology-age and hence, it is important for us to be abreast with the latest inventions in the field. With education, we acquire knowledge of the functioning and use of different pieces of technology. And with the application of technology, Cambodians now can educate themselves better. This is the impact technology and education has on each other. Cambodia higher education boosts use of technology and technology aids education in Cambodia.

The importance of technology, mainly with the internet in Cambodian higher education cannot be stressed enough. The introduction of technology in the educational field has made the process of learning and knowledge sharing, a more interactive and pleasurable experience. Perhaps, the greatest impact of technology on education is the change in perspective. The paradigm shift in thinking of Cambodian students from local to global can be attributed to technology. Indeed technology is one of God's greatest gifts to mankind. The growth of the internet in Cambodia has changed significantly the way universities teach and students learn. With these points, we find that the importance of Internet in Cambodia education cannot be denied and therefore, every Cambodian student should be given access to the Internet for deeper understanding and knowledge of a subject for their study and the improvement of the Cambodia higher education. However,

lots and lots of information can be termed as both, advantages and disadvantages of the Internet as students can also have an access to unwanted or unethical information and sites. Therefore, universities, teachers, students, especially the Ministry of Education, Youth and Sport should be more active in motivating and educating the students of how internet should be used for. Additional to this, Cambodia higher education should be more responsible to provide all the technological needs including the accessibility of the internet for the universities and students. The Internet is the worldwide network of computers. Internet host computers, or servers, are usually owned by universities, governments or large companies.

The future of Cambodian higher education looks bright. The ICT programs have a lot to contribute to the development of Cambodia education system, but they have to be more provided. There has to be policies, human resources and fruitful workshops in order for teachers to want to adopt for their teaching and students in their learning. In order to take fully advantage of ICT, Cambodia needs to improve practical and essential matters. One of them is the infrastructure. It needs to be improved both in the cities and out in the country although priorities must be taken since many villages do not have electricity. For internet applications to be used, people need access to it. The once that will use it must also receives a proper knowledge and training about it.

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