



TECHNOLOGY:
**Information Communications
Technologies**

How can rural areas in ASEAN benefit from educational technology?

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Technology: Information Communication Technology

1. Issue Definition

According to the Association for Educational Communications and Technology, Educational technology refers to “the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources”

Simply put, it refers to the usage of modern technology such as the computer and access to online resources to facilitate and enhance the quality of education within rural areas. In this paper, we will look at how education technology can improve learning and academic performances in rural areas in ASEAN.

2. Background

The member nations of ASEAN have always been promoting greater cooperation within the region to enhance equitable economic development among many other aspects such as social, cultural, political and regional security. As education serves as a main backbone behind a country’s economy and productivity, it has been a primary focus of many ASEAN meetings, such as the annual ASEAN Education Ministers Meeting which continues to promote regional cooperation in education, especially within the less developed country states.

As such, the issue of improving the education of rural areas with Information Communications Technologies in ASEAN has been a topic of debate ever since 2011, when the first ASEAN Rural Connectivity Conference for Education and Development was held in Vietnam. It has been an issue to ASEAN as it was gradually realised that Information Communications could be used to potentially bridge the economic and educational quality gaps between the more developed regions and rural areas of countries where previous education policies have not been as successful. An example of this gap can be seen in Laos where the major industry is a primary industry which accounts for 73% of the country’s total employment and 25% of its GDP. Increasing the standards of education within the rural areas of Laos would allow Laos to shift its focus to secondary and tertiary industries, resulting in a more skilled and productive workforce that can fuel the growth of its nation.

The issue of implementing Information Technology into education in rural areas is not a new idea and has been explored in many ASEAN countries, both through national policies and collaborations with Trans-national companies. For example, the Media Lab Asia is a research IT organization that has developed an innovative vehicle-mounted access point which offers asynchronous wireless Internet “store-and-forward connectivity” through the use of mobile broadband providers in rural areas. This programme has been introduced in India, then Cambodia and is currently being integrated into many parts of the world.

Another example would be the Smart School Initiative in Malaysia which aims to integrate cutting-edge information technologies into schools. This was done by introducing computers, related applications and various program software into schools, classrooms and the teaching and learning processes. The government also launched special training programmes to equip teachers with the knowledge required to operate notebook computers and use CD-ROMs (containing teaching materials) in class.

With many models to refer to, ASEAN has been able to make progress in improving education in rural areas as discussed in the follow section.

3. ASEAN's Progress

3.1. ASEAN Rural Connectivity Conference

The first ASEAN Rural Connectivity Conference for Education and Development was held in Vietnam in 2011, where members of the ASEAN community agreed to encourage the use of video-conferencing in two-way classrooms to teach students and a frontline SMS system through which teachers are able to receive updates and lesson plans daily. Furthermore, representatives from major global information communications companies such as Microsoft and Cisco Systems were present during the conference and brainstormed ideas to improve education and development services within the Mekong Region, mainly Cambodia, Laos, Thailand and Vietnam.

3.2. ASEAN Development Grant Programme

Following that, two projects were approved under the ASEAN Rural Connectivity for Education and Development Grant Programme on the 29th May, 2012, which aimed at supporting ASEAN-based civil society organizations and addressing some of the gaps identified during the previous year's conference. These included the training of teachers "in information and communications technology (ICT) and the development of online educational content and software applications". The two programs were the ASEAN Cyber Course Project by the Southeast Asian Ministers of Education Organization Regional Open Learning Centre (SEAMOLEC) and the Building of Capacity for ICT Enabled Learning in Laos, submitted by the Kenan Institute Asia (K.I. Asia). The Cyber Course Project is aimed at helping teachers in the Lower Mekong Region and Indonesia integrate ICT into their lessons while K.I. Asia will expand its already successful program, the One Computer Classroom Program in rural Thailand, into Laos which assists the teachers in the rural areas in learning and understand the usage of ICT to help students learn better.

3.3. The Current Situation

As of the end of 2013, ASEAN has achieved an internet penetration growth rate of 35%, up from 8% in 2000. Mobile penetration has soared from 14% in 2000 to 112%, showing the fruits of ASEAN's efforts towards the introduction of ICT into rural regions and the equipping of its people on the skills required in the usage of ICT. In addition, multiple ASEAN Broadband Corridor Projects have enhanced broadband connectivity and access among ASEAN countries, allowing students in rural areas to have greater accessibility to the information from the outer world and enhance their global knowledge and learning.

4. Challenges

While substantial progress has been made within ASEAN in the short amount of time since the first ASEAN Rural Connectivity for Education and Development Conference, many challenges still continue to hamper the efforts of introducing educational technology into rural areas and enhancing the educational standards of the people living there, such as the lack of financial reserves and resources, the lack of a basic infrastructure to support the use of ICT in rural areas, the geographical restrictions of rural areas resulting in gaps in accessibility and technological infrastructure, and the lack of an appreciation of education by students and parents alike in rural areas.

4.1. Countries lacking Financial Reserves in ASEAN

The lack of financial reserves is a major challenge for the implementation and subsequent benefaction of rural areas from educational technology as it will be the main driving force behind the introduction of educational technology in rural areas. However, the countries of the Lower Mekong Region face financial issues and do not have the capital required in developing ICT within rural areas. The average Growth Domestic Product of the Lower Mekong Region is approximately 6,600USD as of 2014 and this sum is insufficient to fully implement ICT into the education of rural areas. Although most rural areas having mobile coverage, they do not have basic internet accessibility and the cause of this can be identified in the financial constraints in implementing a fixed broadband system in rural areas as it is the “single most expensive and thus least ICT affordable service in developing countries”.

A World Bank report also reveals that many ASEAN Member States spend a large percentage, up to 90%, of their education budgets on the salaries of the staff alone. While this is not a negative feature in itself, it results in a lack of capital investments into programmes and interventions that allows ICT to be implemented, which countries of the Lower Mekong Region require. As investing in educational equipment and infrastructure is a major backbone of a country’s per capital economic growth, it results in the country being trapped in a cycle of not having the money to invest in ICT technology and at the same time not being able to grow economically due to a lack of a skilled labour force. As such, the lack of financial reserves to support the implementation of ICT in rural areas is a top priority challenge which has to be resolved before any future plans can take place.

4.2. A lack of a Basic Teaching Infrastructure in Rural Areas

The lack of a basic teaching infrastructure restricts the usage of ICT in many rural areas. For example, although having mobile coverage which allows people to make phone calls and send SMS, rural areas rarely have satellite coverage, meaning that the internet cannot be accessed and online learning materials will not be available for the students and teachers to use regardless of whether computers and laptops are introduced in the rural areas. Furthermore, the lack of teachers and basic writing materials within rural areas further hamper educators’ ability to teach efficiently, let alone an attempt to introduce ICT into lessons. This further aggravates the problem as teaches are forced to teach multiple grades, as is prominent in Thailand and Indonesia, which reduces the efficiency at which the teaches are able to teach and guide the students.

If ICT were to be infused into the educational curriculum, it is unlikely that teachers are able to introduce and use ICT productively within their lessons while focusing on the multiple grades of students at the same time. This is evident within Laos, which has a large spread of its population of 6.9 million people living in 141 districts and around 12,000 villages. The sheer mass of villages means that there is a severe shortage of teachers, where up to 4,000 villages lack primary schools. As such, the lack of a basic teaching infrastructure within rural areas in ASEAN is a major challenge in benefiting rural areas with the introduction of ICT.

4.3. Geographical Restrictions of Rural Areas in ASEAN

Another challenge would be the geographical restrictions of rural areas in ASEAN. Many rural areas in ASEAN are mostly cut off from the rest of the world due to their geographical locations and physical inaccessibility. For instance, a study conducted in 2004 on families living in rural Philippines revealed that accessibility to rural areas was extremely poor, whereby access to information, technology and government services such as healthcare and sanitation was extremely limited if not absent. Furthermore, an uneven distribution of population within the country means that several villages have a very small number of students who can be schooled, making it hard to justify the financial implications of transporting educational resources there, such as ICT and building materials, to educate a small handful of students.

The result of being unable to reach out to the villages in education (and other aspects as well) has led to around 70% of Indonesia's population living in rural areas where agriculture is still their main source of income and a relatively high population (60%) in Vietnam still being dependent on agriculture practices. The lack of education in the area and a dependence on subsistence farming has also led to a negative attitude towards education which is covered in the following paragraph.

4.4. A Lack of Appreciation for Education

The lack of an appreciation of education from the people living in the rural areas is a challenge that must be addressed for any educational program to be successful. For example, the cultural nature or community beliefs and traditions in many rural families is one that results in girls having limited opportunities to study at a school or to continue their education at the secondary or tertiary level. Furthermore, the primary lifestyle of people in rural areas is an agrarian one, resulting in the perception of education as something of little importance or relevance. Instead, parents and students alike see more

potential in devoting their time and efforts into the family trade of agriculture to support themselves. As such, the lack of appreciation of education of rural families must be rectified for rural areas to be able to benefit from educational technology.

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