

Delivering eLearning through Universal Service Obligation (USO) Telecommunication Infrastructure to Strengthen National Security in Southern Thailand

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Abstract

Over the past four years, an insurgency in the three southern provinces of Thailand, we are still failing to seriously focus on one the most fundamental security problem facing this nation which is educational opportunities. Changing national security organizations' structure alone will not solve the problem permanently. Many researches reveal that there is the powerful links between educational opportunities and national security. Therefore, to strengthen the national security, the Government need to create educational opportunities for people in the three southern provinces. This paper describes that the Government are able to implement eLearning through the Telecommunication Infrastructure in the Universal Service Obligation (USO) projects for people in the three southern provinces with fast deployment. It also describes the importance of the USO telecommunication infrastructure as an important tool to enable eLearning in rural areas. Moreover, this paper suggests key telecommunication technologies that can be used to deliver and support learning and teaching through eLearning approach for this situation. The primary goal of this paper is to encourage the utilization of existing USO telecommunication infrastructure to deliver education for people in the three southern provinces to strengthen national security.

Key words: eLearning, Universal Service Obligation (USO), Insurgency, National Security, and Telecommunication

1. Introduction to the Relationship between Education and National Security

Today, the relationship between education and national security is widely understood and accepted all around the world. Referring to the National Security Strategy of the United States of America 2006, one of the most important issues is that it includes actively expanding educational opportunities for Americans to learn about foreign languages and cultures and for foreign students and scholars to study in the United States [1].

Understanding the linkages between security and educational opportunities has become urgent in a world where insurgency, weak state capacity, and economic crisis can cross borders very easily [2]. Many researches reveal that there is the powerful links between educational opportunities and national security. In the United Kingdom, the UK's foreign and security policies focus on exploring the links between insecurity and educational inequality working through the UN, EU and other international organizations [3]. The analysis results studied by the Royal United Services Institute for Defense and Security Studies

expresses that the combination of widening educational inequality and intensified globalization over the last three decades has seen a notable worsening of internal inequalities across most of the world's regions [3].

In Thailand, the UNESCO global education survey 2004 found that education is lagging behind globally. Thailand performed poorly due to lack of qualified teachers and financial support. The Thai government spent only 5.1 % of GNP on education in 2001. Thus, the Thai government is facing a challenge to improve the education system [4]. However, a part of this paper focuses on the education status in southern Thailand.

The following section presents information related to the status of education in southern Thailand, especially for three Southern border provinces.

2. Education Status in the three Southern Border Provinces of Thailand

According to the National Statistic Office (NSO), the populations of the three southern border provinces (Pattani, Yala, and Narathiwat) in 2003 amounted to about 1.8 Million of the total population, 22 percent are Buddhists and 78 percent Muslims [5].

A survey from [5] conducted in nine districts of the three southern provinces identifies various problems that local Muslim communities face. These include poverty, unemployment, lack of education, substandard infrastructure, inadequate supplies of land and capital, low quality of living standards, and other economic related problems. The survey also indicates that most Muslim people in the three border provinces lack educational opportunities. Muslims in the deep South are more disadvantaged than their Buddhist counterparts in educational attainment, despite their status as the majority population in the region, and their strong background in religious education.

Despite being the majority population in the three provinces, Muslims are seriously underrepresented in educational attainment. Furthermore, attempts to implement a variety of programs of socioeconomic growth and development seem to have made much improvement at the macro-level and in service and public sectors, but this has not translated into jobs nor substantially improved standards of living for the great majority of the Muslim population.

For Muslims in the southern border provinces to compare themselves to those living elsewhere in Thailand given their level of educational achievement is much lower comparatively than the rest of Thailand. One the biggest problem for the Government is that the more insurgency crisis there is, the less investment and educational opportunities there will be.

The urgent mission of the Government is to conquer the insurgency. But the long term goal is educating all Thais to study and understand the real and accurate situation. Specifically, the Government must make education reform a priority in the three Southern Border Provinces of Thailand.

3. Educational Opportunities for Rural Community in southern Thailand

The convergence of telecommunications, information technologies, and electronic media has made possible new forms of study that are becoming characterized as the electronic learning (eLearning). Telecommunication infrastructure can be used as a pipeline for education to the rural areas. Therefore, the accessibility to information and communications technologies is one of the most important keys of success in today's education.

As far as education gap is concerned, improving connectivity has been high on priority of rural areas. However, access to information and communications technologies remains much more limited in

southern Thailand. Especially, the three Southern Border Provinces are not sharing in the communications revolution, since, in the past, they lack policies that promote equitable public participation in the information society.

In supporting the rural services, the USO telecommunication infrastructure is being utilized to promote development of rural communication and education. While USO is not always commercially viable, it is very much socially desirable. In the following section, the paper describes essential information related to the USO.

4. Universal Service Obligation (USO) in Thailand

In many countries, a variety of strategies and policies have been adopted to provide community access to telecommunications and, more recently, to the Internet [6]. In Thailand, since the establishment of the National Telecommunications Commission (NTC) in 2004 as independent telecommunications regulator, the NTC now has the sole power to grant licenses or vary existing licenses to operate telecommunications activities or services [7].

The Section 17 of the Telecommunication Business Act B.E 2544 (2001) states that the Commission shall have the duty to administer Universal Service Obligation (USO) for basic telecommunications service and shall have the power to prescribe that the license shall provide the following telecommunications services [8]:

(1) telecommunications services in rural areas, or low return-on-investment areas, or any area where there is no or insufficient service providers or where there is insufficient service to meet the user demand;

(2) telecommunications services for educational institutions, religious institutions, medical institutions and other social assistance agencies;

(3) particular natures or types of public telecommunications services for the low-income people as prescribed by the Commission;

(4) facilitating services for the use of public telecommunications services for the disabled, children, senior citizen and under-privileged.

The criteria, procedures and conditions pertaining to universal services obligation of the license under paragraph one shall be prescribed by the Commission.

Clearly, based on The Section 17 of the Telecommunication Business Act B.E 2544 (2001), the USO telecommunication projects can be utilized to promote development of rural communication and education in the three Southern Border Provinces of Thailand.

In the next section, various telecommunication technologies that can help open doors to educational opportunities for people in the three Southern Border Provinces of Thailand are discussed.

5. Telecommunication Technologies for Extending Access in eLearning for Insurgency Situation

Due to urgent situation to open educational opportunities through eLearning for people in the three Southern Border Provinces, this paper suggests that the telecommunication technologies should meet basic requirements such as fast deployment and high-speed capacity. Basically, telecommunication infrastructure is one of main targets of insurgency attack. Therefore, based on the requirements, wireless communication technologies should be the best choice. Existing wireless communication technologies in Thailand that can help to achieve this goal include:

- Wireless Local Loop (WLL): Wireless local loop systems can be used to extend local telephone services to rural people without laying cable or stringing copper wire. WLL costs have declined, making it competitive with copper; wireless allows faster deployment to people than extending wire or cable, so that the eLearning systems can be served more quickly [9]. In Thailand, GSM and CDMA can be applied to the WLL systems because both of them are existing technologies today;
- Very Small Aperture Terminals (VSATs): Small satellite earth stations operating with geosynchronous (GEO) satellites can be used for interactive voice and data, for data broadcasting, and for broadcasting. In combination with its platform's ability to provide an immediately available, high-capacity ground network with affordable bandwidth, allows for rapid deployment and flexible service locations within its footprint [10].

6. Discussion and Concluding Remarks

While the lack of educational opportunities is one of critical insurgency problems in the three Southern Border Provinces of Thailand, the new innovative telecommunication technologies create new challenges for far-thinking educators and national policy leaders. The question remains, what kinds of technology and strategies can be properly used to open educational opportunities and to reach people effectively when they are dispersed over distances and regions, sometimes without access to telecommunication services with fast deployment.

The primary objective of this paper is to encourage the utilization of existing USO telecommunication infrastructure to deliver education through eLearning for people in

the three southern provinces to strengthen national security.

This paper points out that the most important requirements of the telecommunication technologies for this case are fast deployment and high-speed capacity. To meet the basic requirements, fast deployment and high-speed capacity, the use of Wireless Local Loop (WLL) and Very Small Aperture Terminals (VSATs) technologies are suggested as the solutions.

For the future research, the model of eLearning for the three Southern Border Provinces of Thailand will be proposed and studied.

The author believes that the paper will be a valuable contribution towards national security policy and eLearning research community.

The views and opinions expressed in this paper are solely of the author and do not represent the views of the Royal Thai Armed Forces.

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