# THAI EDUCATION AND THE 21st CENTURY SKILLS: A PROPOSAL FOR A NEW WORLD OF WORK

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**Abstract**

In the 21st century, a high technology, information and communication industry, and a complicated service industry make up a substantial part of the economy and development of the world. Science and technology create various alterations in producing goods and services. Digital device has taken the place of analog equipment. Travelling has been made faster by technology. Almost all business transactions can be completed electronically. Communication can also be done through various devices conveniently. Machines in most manufacturing companies are computerized making manual work easier. Modern trading is the norm in business overshadowing conventions of traditional businesses. The future world of work will be beyond the present norms. It means that Thai society needs a labor force equipped with more up-to-date knowledge and skills in information and communication technology. Change is inevitable but Thai can see this as an opportunity for change. Thai academic and vocational education can take the opportunity to make a proper change accordingly. Though academic education and vocational education are different in terms of their objectives, curriculum structures, and practice, they both need to be adjusted to such change so that the Thai graduates would fit the 21st century labor force and the needs of the country.

**Keywords**: Thai education, academic education, vocational education, 21st century skills, future world of work

## Introduction

In the early days of Thai history, education was primarily provided mainly for boys by the religious and royal institutions. During the reign of King Rama V (1863-1910) there was increased recognition of the need for educated people for the country development. As a result, the Thai education system was modernized and made more accessible to the general public. With 1898 Education Proclamation, strongly influenced by the British system, 2 educational tracks were specified: the academic and the vocational (National Identity Board Office of the Prime Minister, 2000). Afterwards, public and private schools, for both boys and girls, were established in Bangkok and

provinces to meet the need of the general public, the growing bureaucracy, and private business agency. Almost at the same time but less in number, vocational schools and technical schools were also established to produce skilled labor and technician for manufacturing business. According to the National Scheme of Education 1992, the structure of the Thai education system is composed of 1 to three years of pre-primary education, six years of primary education, 3 years of lower-secondary education, and three years of upper-secondary education in the fields of both general and vocational education.

Compulsory education is 9 years. Basic education, in both general and vocational track, is provided to every Thai for free of charge since equal of opportunity is an essential issue for any Thai government. University education is also available for those who need to get higher education. Education loan is available for those who need 1. In brief, education in Thailand can be classified into 3 types: formal education, non-formal education, and informal education. Formal education is provided by both public and private institutions. Non-formal education which has more flexibility than formal education is available for those who missed school in their early ages and those who have jobs but want to get more education. Informal education can be obtained through libraries, museums, science centers, as well as mass media as radio, television, newspaper, magazines, and computer networks. In general, investment in education has been considered top priority in the last 20 years by most Thai governments (Ministry of Education, 2011). Thai education is considered satisfactory in terms of producing moderate graduate for the country development.

**Figure 1** Primary school students attending class

**1. The Current Objectives of Thai Education**

Education plan was first formulated by the Thai government in 1932. Since then several national plans have been outlined by various governments as important task in order to produce quality people for the country. Education became one of the main parts of the national economic and social development plan that has been developed and put into practice since the first plan in 1961. The 11$^{th}$ National Economic and Social Development Plan 2012-2016, encompasses 3 objectives in terms of human development in order to achieve the national goals (National Economic and Social Development Board, 2011): 1) to develop the physical and mental qualities of Thais at all ages so that they possess respect for order and discipline, cultural awareness, national pride, the opportunity and ability to engage in lifelong learning, resilience to changes, and so they become a societal force for economic and social development, 2) to improve the quality of education to meet international standards and to increase educational opportunities and alternative means of learning, and 3) to promote a stable family, community, and social environment that is conducive to the development of human resources and is consistent with future economic and social development.

In addition to the mentioned objectives, few targets have been set (NESDB, 2011) as:

1) the development of all Thais both physically and mentally to ensure appropriate productive health for all age groups;

2) the upgrading of educational quality to meet international standards, support innovation, and increase educational opportunities and alternative learning methods;

3) better access to a high quality health care system and reduce health risk factors in a holistic manner;

4) to ensure that family, religious institutions, and academic institutions play important roles by instilling moral values and public virtues in children and all Thais.

Many key words are appeared in both objectives and targets such as a societal force for social and economic development, quality of education to meet international standards, support innovation, alternative learning methods, instilling moral value and public virtues in children and all Thais.

**2. Academic and Vocational Education**

It is common to see in most countries including Thailand 2 tracks of education: academic or general education and vocational education. Those who interested in pursuing higher education would take academic track while those who

want to get job would choose vocational track (Muller & Funnell, 1991). In Thailand, both tracks provide basic education as language, mathematics, social science, science, arts and physical education. In vocational track, besides basic education mentioned, trade or career education such as civil construction, auto mechanics, machine shop mechanics, electrical engineering, electronics engineering, and welding are offered. Thus the gap is built into a structure of the educational program. Vocational education or academic education is offered by both public and private school. Vocational education is provided after primary education in vocational school like in most countries. However, most Thai people believe that vocational education does not provide enough academic exposure to students. the general perception is vocational education emphasizes more on technical subjects, machinery and shop work. Thus, the attitude towards vocational education needs to be changed (Cleesuntorn, 1991).

The core curriculum for basic education aims at developing learners to be well-balanced intellectually, morally and socially to uphold attitudes and values regarding Thai citizenship in parallel with international consciousness, and a democratic regime of government with the King as the Head of State, and to seek knowledge and basic skills necessary to further education and their career. In this curriculum, knowledge and skills have been grouped into 8 subject areas: Thai Language, Mathematics, Science, Social Studies, Career and Technology, Art, Foreign Languages, and Health and Physical Education. Activities focusing on responding to the learner's specific interests are also included (Office of the Education Council, 2015).


**Figure 2** Vocational students working on robot project for the Robotic Contest.

In Thailand, vocational education is offered to those who finish lower-secondary education and want to get into vocational track. Vocational schools and

trade schools provide basic and skills in various fields to students. In the beginning the objective was to provide well defined specialized skills for which the specializations were many. The objective was eventually extended to include prevocational training and attempts to change attitudes to manual work, to stop the people look for a job in the cities. In a third and final stage the objective has been changed to meet needs in a rapidly changing information and technology society.

Good vocational and general education programs are possible. They should, in fact, reinforce each other. General education provides the basis for understanding the theory on which the vocational courses are based. Vocational education leads many adolescents to see for the first time that mathematics, science, and language are useful and important (Hultin, 1987).

**3. The Argument**

In the late 20$^{th}$ century, schools, policy makers, and, to some extent, the public, have expressed concerns which have raised debates about the nature and direction of academic and vocational education. As part of the need to understand it better, various ideas, in the past up to the present, related to the issue are examined to perceive if they can be of any use in educational policy and practice.

According to McLean and Cowan (1983), the educational system in most countries has two major tracks: general education and vocational education. General education leads to college and university education while vocational education leads to employment or technical institutes. In the countries where a comprehensive curriculum is used, 2 tracks are generally provided-vocational education and academic education (college preparation).

If only two streams are considered-vocational education and general or academic education, one would find that although some parents want their children to take their places working on the farm or following the parent's occupation, most especially in the Third World countries, they want their children to go to college and get white collar jobs. Keller (1955) posed the question, "what about the people's desire that their children go to college, that they get "intellectual" education, and that shop work, hand work, hard work, are for the other fellow's child?"

The Paideia Proposal in the United States describes the organization of a program for "basic schooling" that Adler (1982) argued that all children are educable; education is never completed in school or higher institutions of learning, but is a lifelong process of maturity for all citizens; the primary cause of learning is the activity of the child's mind, which is not created by, but only assisted by the teacher; multiple types of learning and teaching must be utilized in education, not just teacher lecturing, or telling; a student's preparation for earning a living is not the primary objective of

schooling. In fact, it will prepare student for citizenship in a democratic society, encourage lifelong learning and personal development, and provide the skills necessary to earn a living.

In most countries, the greater portion of the resources and the means of production are dominion by upper class people, including the technocratic elite. Therefore, the dominance of the academic schooling model and its links with the power elite cannot be overestimated.

Given the disparaging coloration given to this form of education, the target population of students has often been created by "failures" in the academic selection process who then perceived vocational education simply as an alternative route to the same sort of further education as that offered to academic streams (Lillis & Hogan, 1983).

A country can train its labor force for skilled and semi-skilled occupation in many ways. However, assertions have been made regarding the relative merits of different types of vocational training. It has been argued that the more formal types of training provided by vocational secondary schools lead to better trained personnel who are more in demand in the labor market because they offer the employers greater productivity (World Bank, 2003). Others have argued that much of the training provided by formal educational method is not vocational in nature, and that in fact, workers can be provided with the training necessary to be semi-skilled or skilled craftsmen in considerably less time and at lower cost through other modes (Harbison, 1973).

Moreover, Bowman (1975) pointed out that basic general education works as an accelerator in agriculture development because it is necessary for rural people to learn to learn, rather than simply to learn to do; learning to learn is essential both for participation in and adaption to change.

One is a paper presented to the World Bank by Lockheed, Jamison, and Lau (1978), named "Farmer Education and Farmer Efficiency: A review of the literature." The authors examined 36 sets of farm data form 20 studies in low-income countries and hypothesized (a) that more formal education leads to greater farmer efficiency; (b) that there is more pay-off for farmers' education in changing or modernizing environments; and (c) that exposure to extension improves farmer productivity.

In sum, vocational education is not the direct route to a college education; its curriculum is often unclear (Benoit, 1974); in other instances, the technology is inappropriate for different reasons, i.e., equipment is far more sophisticated than that available in local industry; it has high costs and low returns compared with other types

of secondary education (Fuller, 1986). All these reasons have given vocational education the reputation of a second-class education or second-best choice (Hunt & Jackson, 1992).

Based on the arguments, it can be inferred that first, everyone should acquire strong analytic, expressive, communicative, and computational skills as well as extensive knowledge of political, economic, social, and cultural institutions. These aptitudes and knowledge are required for understanding daily experiences and for ensuring access to social opportunities. Secondly, we cannot predict in any precise sense which jobs will be available to particular persons, which jobs they will select from among those available, and what the characteristics of jobs will be over a forty year working life, it is best to provide students with a strong general education and an ability to adapt to a changing work environment. Such adaptation requires a sufficient store of information about culture, language, society and technology as well as the ability to apply that information and acquire new knowledge (Nasta, 1994). Accordingly, general academic and vocational preparation should be stressed, as opposed to specific training, especially for young students.

In Thailand, a larger group of people often look at vocational education as a second choice of education. Considering a lack of skilled and technical workers, vocational track became a favorite choice for those who want to get job when they finish their education. Statistics reveals that jobs are mostly available for vocational track students. Based on Thai National Statistical Office, in 2014, approximately, half of graduated cannot find a proper job (National Statistics Office, 2014). As mentioned earlier, the future world of work for the 21$^{st}$ Century will be beyond the present norms. It means that Thai society needs a labor force equipped with more up-to-date knowledge and skills in information and communication technology. In addition, Thai students in both tracks should be able to: communicate effectively, compile and use numerical information, use science and technology appropriately, develop effective personal and interpersonal skills, work independently and in teams, understand the world of work, solve problems, and cope positively with change. Change is inevitable but Thai can see this as an opportunity for change.

**4. The 21$^{st}$ Century Skills**

Based on 21$^{st}$ partnership framework, key subjects for all students in the 21$^{st}$ century include: English, reading or language arts, world languages, arts, mathematics, economics science, geography, history, government and civics.

In addition to the mentioned subjects, particular skills are required in order to prepare students for the future and for the new world of work that may not exist today. The skills required are listed as (P21 Partnership for 21$^{st}$ Century Learning, 2002):

4.1 Learning and innovation skills. These skills include: creativity and innovation, critical thinking and problem solving, communication and collaboration. These skills comprise of communicating ideas to others effectively, being open and responsive to new and diverse perspectives, viewing failure as an opportunity to learn, and understanding that creativity and innovation is a long-term approach.

4.2 Information, media and technology skills. Information literacy, media literacy, Information, communications and technology (ICT) literacy are included in order to understand how media can influence beliefs and behaviors, the use of technology to conduct research. Furthermore, use of digital technologies (computers, personal digital assistants: PDA, media players, global positioning systems: GPS, etc.), and social networks appropriately is essential.

4.3 Life and career skills. The 21$^{st}$ partnership concluded that today's life and work environments require far more skills than thinking skills and content knowledge. The ability to set sail to complex life and work environments in the global information age needs students to pay more attention to developing adequate life and career skills. Students need to be flexible and adaptive to change. Also, students should be self-directed learners who can go beyond school curriculum to explore and expand one's own learning as a lifelong process.

4.4 Social and cross cultural skills. They included interacting effectively with others, knowing when to listen and when to speak, conducting themselves in a respectable, professional manner, respecting cultural differences and working effectively with people from a range of social and cultural backgrounds, responding open-mindedly to different ideas and values; leveraging social and cultural differences to create new ideas and increasing both innovation and quality of work. It is an ability to work effectively in diverse team.

4.5 Productivity and accountability. Students need to be trained to set and meet goals, even in the face of obstacles and competing pressures. They should be able to prioritize, plan and manage work to achieve the intended result. In addition, they are expected to produce results, demonstrate additional attributes that will bring out high quality products and services. Moreover, they should have the ability to:

- Work positively and ethically
- Manage time and projects effectively
- Do multi-task
- Participate actively
- Be reliable and punctual
- Present oneself professionally and with proper etiquette
- Collaborate and cooperate effectively with teams

- Respect and appreciate team diversity
- Be accountable for results

4.6 Leadership and responsibility. Students for 21st century should be able to guide and lead others, use interpersonal and problem-solving skills to influence and guide others toward a goal, leverage strengths of others to accomplish a common goal, inspire others to reach their very best through example and selflessness, demonstrate integrity and ethical behavior in using influence and power, be responsible to others, and act responsibly with the interests of the larger community in mind.

In the book, 21st Century Skills: Learning for Life in Our Times, Trilling & Fadel (2009) concluded that reading, writing, and arithmetic are still important as a solid base for learning. Also, critical thinking and problem solving, communications, information, and media literacy, collaboration, teamwork and leadership, creativity and innovation, computing and ICT literacy (Vate-U-lan, 2012), career and learning self-reliance, and cross-cultural understanding are essential topics for 21st century students.

## Conclusion

In general, Thurow (1975) explained that specific job skills can best learned on the job if a worker's general background is sufficient. Furthermore, recent surveys of both the American and British employers indicate that they look for new employees with a sound education and good work habits rather than narrow vocational skills (Knight, 2013). Therefore, a solid basic education rather than narrow vocational preparation may be more important in current educational systems and in the changing world of work (Graduated Unemployment, 2015).

It can also be noted that more vocation is created by a new modern form of ICT in the 21st century. Therefore, what people did twenty or thirty years ago as old glove of education, both academic and vocational education, no longer seemed to be able to do the job (Zsebik, 2010).

Based on the required skills for 21st century coupled with unforeseen job available in the future, students need to be well-prepared in various aspects (Ornstein, et. al., 2011). Due to academic curriculum structures, it also can be inferred that students in general or academic track need to be prepared more than vocational education students in order to obtain proper job in the future.

In conclusion, world language such as English and particular skills such as information, media and technology skills, life and career skills, social and cross cultural skills, including productivity and accountability, and leadership and responsibility should be given more focus in teaching and learning. The mentioned skills have to be instilled and to be part of everyday practice. Otherwise, students in both tracks know what to do but do not know how to do it properly. And when the time comes, not

only future jobs are filled with capable graduates but more jobs can be created by graduates themselves. Consequently, both Thai people and the country could see a progressive development in education.

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