A DEVELOPMENT OF TOOLS ENHANCING 21st CENTURY SKILLS
FOR THAI CHILDREN AND YOUTHS’ ASEAN PREPARATION

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ABSTRACT

It is found in our research project, “A Development of Tools Enhancing 21st Century Skills for Thai Youths’ ASEAN Preparation,” that learning management to develop Thailand’s education in the new century must move toward cooperative learning and teaching process. “Learning process rather than knowledge” and “answer-finding process rather than answers” are proposed, both of which are based on three 21st century skills: 1) learning and innovation, 2) life and career, and 3) information, media, and technology.

This project is now in its third phase. In the first phase, the 21st century skill enhancing tools are developed by adopting the framework extracted from the lessons in the ASEAN Curriculum Source Book and the brainstorming discussion of 40 representatives of best teaching awarded teachers nationwide. To enable the learners to obtain the 21st century skills, the framework of learning from real practice, group work, and team work to create the learning process called “Learn How to Learn” is proposed. The important tools for school administrators and teachers are the 8-step 21st century learning process. This project makes use of a toolkit containing the following learning supporting tools:

1. Academic administration strategies for school administrators,
2. Tools for 21st century learning management, including:

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The toolkits are distributed to administrators and teachers from 40 pioneer schools, including those listed in the Quality Learning Foundation (QLF)’s “best teaching” database and those voluntarily participating in the project with an intention to change their schools’ ways of teaching and learning. These participants have been trained how to manage the 21st century learning and are ready to use and introduce them to their schools. The second phase of this project is conducted to examine the results of the tool application and expand the application network in each region of the country, beginning from pioneer schools and 100 additional interested schools. It is found, on completion of both phases, that the administrators, teachers, and students well accept the new teaching and learning model. The tools make the students more interested and happier in learning, and gain more 21st century skills. This leads to the third phase of the project, the tools’ follow-up and evaluation. This phase aims to improve the learning tools’ quality and efficiency and to design means to evaluate the learnt skills. To pursue our expansion policy, the tools are introduced to more schools adjacent to the pioneer ones, whose administrators and teachers are continuously developed to further train new participants in order to meet the project’s intention meant in the first phase.

BACKGROUND

To prepare for the approaching ASEAN (The Association of Southeast Asian Nations) community officially launching in 2015, all ASEAN countries are focusing on human development. To accomplish the goal, education is seen as a central tool in such development. However, it has been reported that Thailand’s educational system is in a critical situation, especially, the learners’ quality. Several reports and studied have indicated that in the past 30 years, Thailand’s education quality and
competiveness have been decreasing constantly. To cite a few, IMD World Competitiveness Yearbook 2012 found that Thailand’s competitiveness and education quality plunged to 30th and 52nd out of 59 countries, respectively. Three private sectors’ joint committee found that it is education that has caused their institutions to drop. World Economic Forum (WEF) 2012 reported the 11-level drop in Thailand’s education quality, standing at 77th out of 142 countries. Besides, the country’s competitiveness committee referred to the 2012 World Bank’ report, indicating that it was essential for Thailand to take immediate action in developing its human resources in terms of knowledge and innovation in order to move its economy forward. Thailand’s Knowledge Economy Index: KEI has decreased in the past 10 years from 54th in 2000 to 63th in 2009 out of 132 countries. According to studies by IMD, WEF, and World Bank, the main causes have been pointed to education, information technology, and communication factors. Panit (2012) stated that “the right education for the new century” is to learn in order to master skills; that is, to use the skills learned in real life. Education has to shift focus to learning by doing. Skill development is a lifelong process.

Therefore, learning management to develop Thailand’s education in this century must aim to move towards collaborative learning between teacher and students by focusing on “learning process rather than knowledge” and “answer-finding process rather than answers.” In order to achieve the goal, we propose the Partnership for 21st Skills: P21.org’s “21st century skills” framework, which includes three important skills, as follows:

1. Learning and Innovation Skills: These skills focus on the development of abilities in critical thinking, communication problem solving, cooperation building, creative thinking, and innovation.

2. Life and Career Skills: These skills focus on the development of the following qualities: flexibility and adjustment, life goal planning, determination, society understanding, cultural difference recognition, production potential, checks and balances acceptance, leadership, and responsibility.

3. Information, Media, and Technology Skills: These skills focus on abilities in accessing various information and media appropriately, managing, linking, evaluating, and creating information as well as applying morals and laws in information technology.
Therefore, the tools to enhance the 21st century skills are needed to develop the collaborative learning among Thai administrators, teachers, and students on the basis of “learning process rather than knowledge” and “answer-finding process rather than answers.” It is important that the development be carried out immediately in order to beat the official beginning of ASEAN at the end of 2015. Among the first areas to carry out are the experimentation of the potential for concepts and strategies in using the 21st century skills in increasing education achievement and the encouragement of human resource development potential to meet world economy’s competition. In order to sustainably enter the ASEAN community successfully, both areas of development are suggested to be formed on the basis of Thainess and sufficiency economy concepts.

OBJECTIVES

The purposes of this study are two-fold:

1. To develop tools enhancing the 21st century skills in order to support learning activities for Thai children and youths so that they will become quality ASEAN citizens, corresponding to the contexts and national curriculum intended by the Ministry of Education, and catch up with learning changes in the future

2. To pilot, follow up, and evaluate the 21st century skill enhancing tools used in model schools

RESEARCH METHODOLOGY

One aim of the study is to develop tools that enhance the 21st century skills to prepare Thai children and youths for ASEAN community. The following steps show how these tools are developed:

1. Forty teacher representatives from all regions of Thailand were selected to join a brainstorming discussion to create an appropriate conceptual framework for the 21st century learning process.

2. The conceptual framework was synthesized to work in Thai context and meet the Minister of Education’s central curriculum.

3. The 21st century skill learning process was introduced to sixty “best teaching” awarded teachers from all regions of Thailand, who designed the tools enhancing the 21st century learning process together.
4. The tools were created to help the learners develop their 21st century learning skills and prepare them for the ASEAN community.

5. The tools were experimented by sixty pilot school administrators and teachers from all regions of Thailand. These participants had been introduced to the tools and formally trained how to use them.

6. The 21st century learning process tools were trialed, followed up, and evaluated.

RESULTS

The initial brainstorming discussion by forty teacher representatives from all regions of the country yielded the conceptual framework for developing the 21st century skills toolkit for Thai children and youths’ preparation for ASEAN community. To train the learners to become quality ASEAN citizens they need to change the way they learn, teachers need to change the way they teach, and school need to change their administrative strategies so as to house the group and team learning, focusing on practical learning generally known as learning by doing. Such practices would allow the learners to create their own body of knowledge. Then, the ASEAN Curriculum Source Book (ACS) was analyzed and synthesized. The lessons or contents matching the 2008 central curriculum of Thailand’s Ministry of Education were extracted. “The new skills of the future,” meaning the 21st Century Skills, were developed by the Partnership for 21st Skills: P21.org. The value and attitude for the 21st century learning cited in the works of the partnership were developed by Howard Gardner (2008), which is generally known as Five Minds for the Future, including the Disciplined Mind, the Synthesizing Mind, the Creating Mind, the Respectful Mind, and the Ethical Mind. It is proposed that people in the nation possess these minds and incorporate them with His Majesty the King’s concept of sufficiency economy to suit the Thainess context.

The 8-step learning process was created from the framework mentioned above. In this model, teachers function as the facilitators for students who in turn participate in various learning activities of their interests to create a new body of knowledge for themselves. This 8-step process corresponds to the 5-step learning process proposed by Thailand’s Office of the Basic Education Commission by, as illustrated below:
Table 1: Comparing the Office of the Basic Education Commission’s 5-step learning process and the 8-step 21st century learning process

<table>
<thead>
<tr>
<th>Office of the Basic Education Commission’s 5-step learning process (QSCCS)</th>
<th>Our proposed 8-step learning process to support the 21st century learning</th>
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</table>
| **Q = Learning to Question**  
Before carrying out a work project, the students are trained to find problems, ask questions, think, and brainstorm together about the topic of their mutual interests or topic in question. | **Step 1**  
Teacher preparation |
| **S = Learning to search**  
In order to begin the work project, they students need to search for more information about the subject matters. The problem-based project learning allows them to learn, find answers, solve problems, and complete all processes together. | **Step 2**  
Community survey |
| **C = Learning to construct**  
Integrated learning allows students to incorporate the new knowledge to other subjects and apply them in real life appropriately. | **Step 3**  
Brainstorming |
| **C = Learning to communicate**  
In Backward design learning, a product-based teaching, when students finish the lesson or during a lesson, they are required to have work or product as a result of their study to exchange with others. | **Step 4**  
Data analysis and classification |
| **S = Learning to serve**  
Upon completion of each lesson, students are able to present and improve their knowledge for the benefit of their own and others. Again, forms of presentation is dependent on the students. | **Step 5**  
Learning design |
| **Step 6**  
Doing | **Step 7**  
Data conclusion |
| **Step 8**  
Knowledge extension |
After various conceptual frameworks were synthesized, suggestions from sixty “best teaching” awarded teachers were sought. They designed and built tools to enhance the 21st century skills for Thai children and youths. The product (referred to as the toolkit), which helped the teachers design their teaching, contains the following items:

1. Instructional media, such as, teacher’s manual, which contains the 21st century learning framework for Thai children and youths to prepare for ASEAN community; a sample lesson management on “language and culture;” and a VDO of the 21st century learning and teaching management.

2. Media to facilitate various learning managements, such as, learning management template which details each step, survey forms, mind-mapping forms, group conclusion form, and self-evaluation form.

3. Digital media to promote the project-based learning, such as, electronic books and Scratch program, a program that helps them create interactive stories, mind maps, games, and animations and share the creations with public.

The use of the tools was evaluated by group conversation and data from the researcher-constructed questionnaire. The mean of the 21st century skill enhancing tools’ achievement was 4.05, with the SD = 0.67., which indicated that the tools helped the teachers to change and find more ways in teaching as well as
to encourage students to learn new knowledge by themselves and extend it to others. Furthermore, it also helped schools to think of new strategies to revise their learning and teaching policy.

CONCLUSION

It may be concluded here that a better learning is not a result of tools themselves but from teachers who give opportunities to learners to act. The jointly constructed tools contain the 8-step learning process, which continuously enhances the learners’ 21st century skills and motivates the learners to acquire new knowledge by themselves.

SUGGESTIONS

1. It is important that a follow-up and evaluation of the 21st century skill enhancing tools be conducted in order to improve them. Network of the teachers who use the tools is also important. Getting more powerful, the tools will have a great contribution to the country’s education quality.

2. An extension of the user network is proposed.

3. A tool to evaluate the 21st century skills needs to be developed.

REFERENCES


