

The study of learning skills in the 21st century, high school students from year 4-6  
in basic education schools under the Office of Educational Service Area, Chonburi 18

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**Abstract**

The purposes of research were to: 1) to study the 21st century learning skills of high school students at 4-6 in basic education institutions Under the Office of Secondary Educational Service Area, ChonBuri District 18 2) to compare learning skills in the 21st century 21 of the high school students that year 4-6 in basic education institutions Under the Secondary Educational Service Area Office, ChonBuri District 18, classified by gender and study plan and 3) to study guidelines Enhancing learning skills in the last century 21 of the high school students that year 4-6 in basic education institutions Under the Office of Secondary Educational Service Area, ChonBuri District 18 4-6 in basic education institutions Under the Office of Secondary Educational Service Area, ChonBuri District 18, semester 2, academic year 2017, 379 persons Namely frequency, percentage, mean, standard deviation, t-test and content analysis (Content analysis) The results showed that 1) learning skills in the last century 21 of the high school students that year 4-6 in basic education institutions Under the Office of Secondary Educational Service Area, ChonBuri District 18, overall, at a high level ( $\bar{x}$ = 3.85) 2) Students with different gender have skills

Learning is not different at the statistical significance level .05 3) Students who study different study plans have learning skills in the last century. 21 Differences in statistical significance at .05 levels 4) Guidelines for enhancing learning skills in the 21st century is a learning management that focuses on theory and practice, creativity and fever. Problems should be provided for training or competitions related to learning skills in the 21st century. 21 and allow students to take action

**Keywords:** learning skills, 21st century and high school

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## Introduction

Thai education management according to the National Education Act 1999, amended (No. 2) 2002, which is the Master Law in 2001, adheres to the unity of policy and diversity in practice, that is, the core curriculum of countries with flexible core structures is defined Destination and quality of learners according to the grade level, which is considered a standard for learning, each group is divided into 3 years per class in a total of 12 years. At the image of life, being a Thai citizen, being a good citizen of the country, living and working as well as for further education Society, local wisdom, desirable properties for good members of the family, community, society and nation, as well as aligning with the ability Aptitude and interest of each target group in the subject of learning in the amount of 8 learning strands in each subject area, consisting of knowledge, skills or learning process and characteristics or moral values The ethics of learners which students must have the quality as the basic education curriculum is expected when completing 12 years of basic education.

Policy of educational reform in the process of learning The objective of the course is to set Students learn from real experiences and perform activities as much as possible, studying from the environment, community, learning profession from the media, creating a community, practicing skills, facing situations, unnecessary education that is monopolized in the classroom. Things that surround the students are teachers as well (Prawet Wasi, 1998) and according to the National Education Act of 1999, there are some provisions. Relating to the management of education to be consistent with the localities as shown in Chapter 4 on the educational management guidelines, Section 24, Article 5, discusses the process of learning that "Providing educational institutions to encourage and support the instructors to be able to organize the atmosphere Learning media environment and fa-

cilitation for learners to learn and have knowledge Including being able to use research as part of the learning process "And in Section 24, Article 6 has said that" learning management can occur at any time, every place, with coordination with parents, parents and people in every community in order to jointly develop learners according to their potential ". In this section 29 Stated that "Providing educational institutions together with individuals, families, communities, community organizations Local government organizations, private organizations, private organizations, professional organizations, religious institutions, business establishments and other social institutions, promote community strength by organizing learning processes within the community so that the community has educational management, training, seeking knowledge, information, and knowing, choosing wisdom. And various science to develop the community in accordance with the problems and needs Including finding ways to support the exchange of experiences and development between communities "(Office of the National Education Commission, NCC, referred to in Ladda SilaNoi and Faculty 2002) Participation in educational management in Section 57 says that the education agencies mobilize human resources in the community to participate in educational management by bringing experience, knowledge, expertise and local wisdom of people to use. For educational benefits

The world in the 21st century Is the era in which knowledge and information are constantly changing, especially in information technology, due to the use of technology to connect various information of all regions of the world together, resulting in a variety of tools to access the body Know various In both academic and entertainment purposes, the development of tools for accessing such content results in young people living in their educational age, changing their way of life and learning on a daily basis,

which is very different from the youth of the previous generation. [1] Developing the country to balance and sustainability must pay attention to the development of people in the country to be strong and ready for the changes of the world in the era of 21 education needs to be changed to meet changing fast learner. [2] If education is still stuck with the same things that have worked in the old age, it will result in the learner's learning not being consistent with the real world, both now and in the future that will become more intense. [3] Students must therefore have learning skills consisting of Learning and innovation skills Information skills Media and technology and life and work skills Therefore, preparing people to be able to learn and live in the midst of change is important. That all parties adjust themselves appropriately

Adaptation of learners to enter the 21st century is an important issue and is widely studied, especially the United States, which is a country with scientific progress. Technology and education and being the world's leading awareness of the importance of future skills, therefore creating partnerships to develop 21st century learning skills (Network P21) (Partnership for 21st Century Skills). Learning and Innovation Skills: Creativity and Innovation Critical thinking and Problems Solving Communication and Collaboration Work (Communication and Collaboration) skills, information, media and technology (Information, Media and Technology Skills) include Fundamentals of Information (Information. Literacy) Information Technology Fundamentals (Information and Communications Literacy; ICT Literacy) Media Fundamentals (Media Literacy and Life and Career Skills: Flexibility and Adaptability, Initiative and Self-Direction, Social Skills and Cross-cultural learning, productivity and accountability, leadership and responsibility, information technology skills (Information, Media, and Technology Skills) to be a framework and model for teaching and learning in schools [4]

For the secondary education office area, Chonburi District 18 Changes according to trends affect many aspects of the education society in Thailand, especially in education, which the government of Thailand has given great importance to, but there are still few problems. The quality of education is still at a low level. Develop more quantity than quality The content of teaching and learning methods is not up-to-date. There is no connection with real life and work has not motivated the students to have creativity or practical skills. [5] The government of Thailand has seen the problems and importance. Of skills for learners, therefore, is improving education to promote new skills to more learners in the new curriculum draft, outlined the Outcome standard, with clearly identifying that educational reform aims to develop Ability and quality of students, changing teaching methods to be innovative, modern, in line with the content of students and Becket each institution develops its commitment to the initiative and creativity of the students. Follow the guidelines of "teach less, learn more", revise the traditional teaching, and emphasize teaching as a way to encourage students to study on their own as a basis for lifelong education. In addition, there are three groups of skills that must be born in the students. Self-control and development skills include self-learning skills, problem-solving skills and creativity, self-management skills, skills groups Social relationships Consists of communication skills and collaboration skills, tools for using skills, including information technology (ICT) skills, language skills and calculation skills [6]

Level of high school students, Year 4-6, in basic schools Under the Secondary Educational Service Area Office, Chonburi District 18 Is a continuing education from the lower secondary level to meet the various needs of high school graduates, so there are many schools. Such as schools for normal students, specialized schools, schools for talented people (Gift-

ed Student) This level of students is a teenager who is in the middle of childhood and adulthood, with a number of changes in physical, mental, emotional, social, intellectual and ethical aspects that are about to complete basic education Choose a path in the future to study in higher education or pursue a career that will affect success and failure. The liquefaction of human beings is therefore very high. Secondary education under the Office of Secondary Educational Service Area, ChonBuri District 18 Therefore aims to focus on learning and communication skills provide the necessary knowledge and develop personality for creative people with enthusiasm, prepare for advancement to higher education institutions or engage in career and prepare people to society [6]

As a result of these reasons, skills in the 21st century are of interest to organizations that see the concept of a collaborative enterprise network for learning skills in the 21st century. Is a concept that covers what is needed to learn and has a clear support system for education that reflects the possibilities of various aspects of learning management in the 21st century and many countries have studied This concept for developing their own education in Vietnam is one of them, which in the form of a new curriculum that will be used in 2018 is defined as a skill group that requires In their students based on the concept of the network as well today. A study of 21st century learning skills of high school students in Year 4-6 in basic education schools under the Office of Secondary Educational Service Area, ChonBuri District 18 the researcher therefore is interested in studying the 21st century learning skills of high school students in Year 4-6 in basic schools. Under the Secondary Educational Service Area Office, Chonburi District 18 In order to know each student's learning skills that will be useful for improving, promoting or developing learning skills for students to be more

### Research objectives

1. To study learning skills in the last century 21 of high school students, Year 4-6, in basic education schools under the Office of Secondary Educational Service Area, Chonburi District 18
2. To compare the learning skills in the 21st century of upper secondary school students, Year 4-6, in basic education schools under the Office of Secondary Educational Service Area, Chonburi District 18 Classified by gender and study plan
3. To study the guidelines for enhancing the learning skills in the 21st century of upper secondary school students, Year 4-6, in basic schools Under the Secondary Educational Service Area Office, Chonburi District 18

### Research methods

This research is a survey research on the study of 21st century learning skills of upper secondary school students in the year 4-6. In basic education institutions Under the Secondary Educational Service Area Office, Chonburi District 18 The research is divided into 2 Steps include step 1 Study of skills Learn in the 21st century and step 2 Study of guidelines for enhancing learning skills in the 21st century

#### Step 1 Study of learning skills in the 21st century

##### Population and sample

1.1 The population used in this research was high school students, second semester, academic year 2017, under the Office of Secondary Educational Service Area, Chon Buri District 18, calculated 32,419 people from 50 schools

1.2 The sample group used in this research was the upper secondary school students, semester 2, academic year 2017 Under the Office of Secondary Educational Service Area, ChonBuri District 18, calculated 379 persons which determined the sample size by using the Krejcie and Morgan sample size table and acquired by multi-stage random sampling

### Tools used for data collection

The tools used to collect data are questionnaires about learning skills in the 21st century. Of high school students from year 4-6 In basic education institutions under the Office of Secondary Educational Service Area, Chonburi District 18 Divided into 2 parts:

Part 1 General status of respondents regarding sex and study plans Looks like a checklist and part 2 21st century learning skills of high school students, Year 4-6 In basic education institutions under the Office of Secondary Educational Service Area, ChonBuri District 18, consists of 3 aspects: learning skills and innovation in information technology, media and technology skills and life skills and work. Are 5 the level is the most practical, very moderate, minimal and minimal. The whole belief is 0.95 and the confidence value is the skills. Learn and innovate in information technology, media and technology and life and work skills with a belief value of 0.87. 0.89 and 0.90 respectively

### Data collection and analysis

Data collection was conducted using the survey method. The questionnaire was used to query the sample group by collecting sample data from high school students from Year 4-6 in basic education schools under the Office of Secondary Educational Service Area, ChonBuri District 18, amount 379 sets The number of 50 schools in which the researcher conducted the data collection by themselves received 100% return questionnaires and analyzed the data using a computer. The program uses quantitative data analysis by using statistics to analyze data such as mean ( $\bar{x}$ ) and standard deviation (SD) and compare learning skills in the 21st century by gender and study plans using statistics t Independent groups (t-test for independent samples)

### Step 2: Study of guidelines for enhancing learn-

### ing skills in the 21st century

#### 1. Expert

Qualified person used to respond to interview forms to find ways to enhance learning skills in the 21st century. Of high school students from year 4-6 In basic education institutions under the Office of Secondary Educational Service Area, Chonburi District 18 Is knowledgeable Ability and experience in education, including educators (those who are responsible for educational management in education agencies and Training of under the Office of Secondary Educational Service Area, Chonburi Region 18) School Director (who has at least 10 management experience Year) and teachers (teachers who have teaching performance by receiving outstanding provincial teacher awards), 2 people per group

#### 2. Tools used for data collection

The tools used in this step are structured interviews. Interview) is a question about ways to enhance learning skills in the 21st century. The question arises from the results of the data analysis in step 1, namely, learning skills with the lowest level of practice level 3 on each side.

#### 3. Collecting and analyzing data

Collect data using self-interview method and use the information obtained from interviews to analyze content (Content Analysis)

### Research result

1. General information of the respondents found that most respondents were female, 298 people (78.62 percent) and studied general education plans. 221 people (58.31 percent)

2. The results of the study of 21st century learning skills of upper secondary school students, years 4-6 In basic education institutions Under the Secondary Educational Service Area Office, Chonburi District 18 The overall picture is at a high level ( $\bar{x}$  =

3.85) when considered individually, with the highest mean value is life skills and work ( $\bar{x} = 3.84$ ), followed by skills Information technology ( $\bar{x} = 3.64$ ) and learning and innovation skills ( $\bar{x} = 3.47$ ), respectively.

1. The learning skills and innovation as a whole were at the medium level ( $\bar{x} = 3.45$ ). Communication and collaboration ( $\bar{x} = 3.89$ ), followed by Critical thinking and problem solving ( $\bar{x} = 3.51$ ) and creativity and innovation ( $\bar{x} = 2.92$ ) respectively

2. Information, media and technology skills in the overall picture were at a high level ( $\bar{x} = 3.58$ ). When considered as a sub-aspect, it was found that the highest mean value was information literacy ( $\bar{x} = 3.68$ ) followed by knowledge Information and communication technology ( $\bar{x} = 3.58$ ) and media knowledge ( $\bar{x} = 3.36$ ) respectively

3. The overall life and work skills were at a high level ( $\bar{x} = 3.84$ ). Considering the sub-aspects, it

was found that the highest mean value was flexibility and adaptability ( $\bar{x} = 3.93$ ), followed by Communication and social skills and cross-cultural learning ( $\bar{x} = 3.76$ ) initiative and self-direction ( $\bar{x} = 3.88$ ) increase productivity and knowledge of liability ( $\bar{x} = 3.69$ ) and leadership and responsibility ( $\bar{x} = 3.67$ ) respectively

4. Comparison results of learning skills of high school students, Year 4-6 In basic education institutions Under the Office of Secondary Educational Service Area, ChonBuri District 18, classified by gender. Overall, it was found that students with different sexes had different learning skills at statistical significance level .05. Information literacy Information and communication technology knowledge, flexibility and adaptability and leadership and responsibility are significantly different at the level of .05

**Table 1** Comparison of learning skills of high school students in Year 4-6 in basic education institutions under the Office of Secondary Educational Service Area, Chon Buri District 18 Classified by gender, overall and individual

No	21st century learning skills	male (N = 81)		female (N = 298)		t	p
		$\bar{x}$	S.D.	$\bar{x}$	S.D.		
1	Learning and innovation skills	3.44	0.68	3.49	0.62	0.750	0.482
2	Information, media and technology skills	3.68	0.71	3.65	0.64	-0.413	0.677
3	Learning and innovation skills	3.67	0.57	3.88	0.58	1.868	0.081
Total		3.63	0.57	3.67	0.54	0.769	0.464

Comparative results of learning skills of upper secondary school students, Year 4-6 in basic education institutions under the Office of Secondary Educational Service Area, Chon Buri District 18, classify the overall study plan. It was found that students studying different study plans had learning skills in the 21st century. Differing with statistical significance at the level of .05 and when considering each item, it was found that flexibility and adaptability and self-directed initiative were not significantly different at the statistical significance level of .05. While the other items are different with statistical significance at the level of .05

From the survey, it was found that the high school students from year 4-6 in basic education institutions under the Office of Secondary Educational Service Area, Chonburi, District 18, most of them do

not have the skills to learn. Teachers teach students to sit and listen only. The student's initiative is still limited. Many students do not dare to express their teaching; emphasizing theoretical knowledge is learning management that emphasizes theory and practice for students to practice creativity and problem solving Organizing competitions and training on various skills, allowing students to take action. Teachers should change the traditional teaching methods to be new, should open-ended questions. Give more ideas than memory for students to practice thinking and practice analysis for students to develop themselves

**Table 2** Comparison of learning skills in the 21st century of high school students from year 4-6 in basic education institutions under the Office of Secondary Educational Service Area, Chon Buri District 18, classified according to the overall and individual study plans

No	21st century learning skills	male (N = 81)		female (N = 298)		t	p
		$\bar{x}$	S.D.	$\bar{x}$	S.D.		
1	Learning and innovation skills	3.67	0.66	3.38	0.63	3.325*	0.001
2	Information, media and technology skills	3.88	0.66	3.48	0.64	5.465*	0.000
3	Learning and innovation skills	3.88	0.59	3.69	0.57	2.677*	0.003
Total		3.75	0.56	3.47	0.53	4.574*	0.000

## Discussions

From the study of learning skills in the 21st century Of high school students in Year 4-6 in basic education schools under the Office of Secondary Educational Service Area, Chon Buri District 18 Have brought to discuss the results as follows

1. Learning skills in the 21st century Of high school students from year 4-6 In basic education institutions under the Office of Secondary Educational Service Area, Chonburi District 18 Overall, it is at a high level, but there is still a lot of learning skills and innovations at a particular level, especially making people involved in producing new things, following new ideas, thinking of new things, many ideas during At the same time and new initiatives are always at the lowest level. This may be due to classroom learning. Teachers also use lecture methods or lectures. Explain that there is still a lack of real action which is consistent with the results of interviews with educators, school directors and teachers who have suggested that learning should be focused on both theory and practice. Opportunities for students to take action should use innovation in teaching and learning that results in students practicing creativity that is in line with Bearell's concept. Learning from problems is the best way to develop the skills of the 21st century. The way in which teachers are able to change the curriculum from one teaching method to teaching is open to students to participate in problem solving And asking questions, searching for problems, can be applied to students of all ages, all levels of ability And which have problems in all forms of study and still correspond to the research of Punya Chantamat [10] studied the study of teaching skills of social studies teachers for learning in the 21st century in international secondary schools and summarizes management approaches. Learning for learning in the 21st century organizes learning activities that emphasize analytical thinking processes and allow students

to participate more in information, media and technology skills as a whole at a high level, but there are still some sub-issues. At a moderate level, especially for solving problems using computers or information technology tools by themselves, searching for knowledge and ability to solve problems related to want to information technology, media production capacity to suit the task at minimal levels may be due to the context of the Office of Secondary Educational Service Area 18 Chonburi area. Is a province located in the east near Bangkok, causing students to not pay attention to information about information technology Education, school director and teacher who suggested that schools should provide support for those who to receive news about information technology and should be regularly. Improve computer teaching and learning management For students to take action which is consistent with the research of Punya Chantamat [10] studied the study of teaching skills of social studies teachers for learning in the 21st century in schools International standards for secondary education and summarizing the approaches to learning management for learning in the 21st century

2. The overall life skills and work performance are at a high level, but there are still some issues that are at a high level, especially being a team leader in the work. The ability to work in a limited time to achieve the least level of effectiveness may be due to the management of teaching and learning in schools is not conducive to the learning skills in 21st century, such as problem solving skills, thinking skills, teachers also use traditional teaching methods for students to sit and listen only, thus affecting the enthusiasm of students of most students are minorities and the occupation of parents is Farmers, the opportunity for students to experience a variety of societies is relatively small, so many students do not dare to express themselves with the results of the interview. The director of the school and the teach-



er who gave the suggestion that the school should invite the lecturer to train the leadership for the students and teachers should give the opportunity for students to practice and express in front of every class which is consistent with the research of Nicole Leach [11] studied research on school psychology, social science and culture in the 21st century. Found that teachers have a relationship with community development and community cooperation, community awareness, communication, credibility, decision-making, respect and working together, including consciousness and social responsibility.

3. In addition, there are results of research comparing learning skills in the 21st century. Classified by gender and study plan, it was found that students with different gender had different learning skills, which may be due to both males and females in the range Age 15-18 years old is the age of friends. Learning will always be learned from friends. It also receives the same learning experience, making it no different. But students who study different plans are science learning plans and general education plans with different learning skills. This may be due to students who choose a science program plan, usually students with good grades This student is a student with interest in learning, unlike students studying general study plans, which students in this group have On the level Which is in line with the research results of Thanawat Arunsookawang and Narin Sungrajak In the 21st century Of secondary school students in the secondary education area, Bangkok Metropolitan Region 2, to support the entry into the ASEAN community. It was found that students with different gender had the ability to use English according to their learning skills in the 21st century. And students with different study plans have the ability to use English according to their learning skills in the 21st century. The statistical level of .05.

## Suggestion

From the study of learning skills in the 21st century Of high school students in Year 4-6 in basic schools Under the Secondary Educational Service Area Office, Chonburi District 18 There are suggestions on various issues as follows.

### 1. Suggestions from this research

1.1 In this research, the researcher used questionnaires about learning skills in the 21st century. The estimation section should also use other types of tools such as Observation form, interview form, skill measurement, etc. in order to obtain more complete and complete information

1.2 Target groups in the study may ask relevant people, such as teachers, parents about the behavior of the learners according to their learning skills in order to obtain additional information in all aspects

1.3 In terms of creativity and innovation, teachers should use innovation in teaching and learning management. Students have practiced creativity. Is a developing individual thinking ability to encourage Students have a habit of thinking, searching for knowledge.

1.4 In terms of media knowledge, students should regularly update news about various media and technologies and use a variety of media in teaching and learning.

1.5 In terms of leadership and responsibility, the school should invite speakers to train students about leadership in the group. Teachers should allow all students to switch to be a group leader to encourage students to discipline themselves. Be responsible, assertive

### 2. Suggestions for further research

2.1 should study learning skills in the 21st century Classified by other early variables such as academic performance, location of the school

2.2 should study learning skills in the 21st century is an experimental research. By learning management methods according to the learning management approach, such as problem based learning methods, simulated teaching methods (Simulation) Cooperative learning, teaching based on research based learning, etc.

2.3 Study about the main subject matter and the education management support system according to the concept of the organization network for collaboration in learning skills in the 21st century.

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