CHAPTER 1
INTRODUCTION

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1.1 PREFACE

Academic knowledge and rapid technological advancement during the era of globalization has caused tremendous changes in the national and international social and economical spheres. These changes necessitate for development of national education quality. Most countries are concerned with raising educational standards throughout compulsory schooling to meet the demands of the labour market and an active, fulfilled life. It is worldwide now increasingly recognized that educational objectives must be revised if the country wants to prepare students for life in the 21st century. In addition, to achieve the country’s goals, one dimension of primary concern is thinking skills. (Kagan, S. Gardner, H & Sylwester, R., 2003)

The expansion of information and technology has increased the need for individuals to encompass transferable skills that enable them to address different problems in different contexts at different times throughout their lives. This need requires thinking in conscious ways to achieve certain purposes, which include the process of remembering, questioning, forming concepts, planning, and reasoning, imagining, solving problems, making decisions and judgments, or translating thoughts into words. A thinking skill is a practical behaviour, which is developed through cognitive challenge, and acquired through teaching and learned through practice. Since the growth of human brains occurs in early childhood, cognitive challenge or thinking skills are best to be conveyed in the early years of children education, through both interpersonal communication and media literacy. Thus, educational institutions are considered important body to employ the thinking skills.

Thinking skills is highly value and is one of education’s most central goals and one of its most valued outcomes. In the recent years there has been growing interest across the world in ways of developing children’s thinking skills. This interest has been fed by new knowledge about how the brain works and how people learn, and evidence that specific interventions can improve children’s thinking and intelligence. The particular ways in which people apply their minds to solving problems are called “Thinking Skills”. Many researchers
suggest that thinking skills are essential to effective learning. If thinking is how children make sense of learning then developing their thinking skills will help them get more out of learning and life. (Robert Fisher, 2005)

Ministry of Education (2008) stipulates the formulation of a Basic Education Core Curriculum to foster Thai-ness, good citizenship, competency in the life skills, careers, and opportunities to further education. To achieve the ultimate goals of Basic Education Core Curriculum, 2008, Education management must emphasize the importance of knowledge thought and capability of thinking skills. The aims are to foster the well balanced development of each individual as learner is the most important. Every one is capable of learning and self-development; learners shall be encouraged to develop themselves in line with their natural inclinations, and to fully realize their own potential. Educational institutions are responsible for administering learning development which emphasizes thinking processes, management and confronting real situations and the application of knowledge for preventing and solving problems; organizing activities to enable learning from actual experience; arranging practical exercises to enhance thinking skills (i.e. critical thinking and analytical thinking) and facilitating learning processes to enable learners to be all round knowledgeable.

The present study looks at the implications of research into ways to develop thinking skills, emphasizing on analytical thinking management practices of school administrators. Therefore, the main purpose of the present study is to study the analytical thinking management of primary school administrators in order to be the reference for other schools in Thailand, so that appropriate educational implications will be suggested according to the obtained results.

1.2 STATEMENT OF THE PROBLEM

The present research studied under the problem:

“A STUDY OF ANALYTICAL THINKING MANAGEMENT PRACTICES OF PRIMARY SCHOOL ADMINISTRATORS IN THAILAND”
1.3 DEFINITION OF THE IMPORTANT TERMS

In order to avoid the misunderstanding regarding the key words, it is obligatory on the part of the researcher to define the terms which are as follows:

(1) Thinking skills

Thinking skill is the human capacities to think in conscious ways to achieve certain purposes. It involves the mental process used in cognitive functions that enable people to make meaning from and create with a significant amount of memory, leading to bodies of knowledge creation or information for judicious decision-making and problem solving regarding oneself society and environment.

Thinking skills includes creative, critical, and analytical thinking. These skills are activated when students of any age encounter unfamiliar problems, uncertainties, questions, or dilemmas. Successful applications of these skills result in explanations, decisions, performances, and products that are valid within the context of available knowledge and experience, and promote continued growth in higher order thinking, as well as other intellectual skills.

(2) Analytical thinking

Analytical thinking is the human ability to separation a whole into its constituent parts or element parts order to study the parts and their relations. It is the ability to scrutinize and break down facts and thoughts into their strengths and weaknesses. It is the process of separating and distinguishing elements of a concept, idea, problem and issue in order to understand its essential nature and inner relationships.

The analytical thinking is based on the deductive thinking. The deductive thinking is the act of reasoning which move from a whole to its part, from the general to the particular, from the universal to individual, from broader generalizations to specific observation, and from general theories to specific instance. It is based on reasoning, experience, experimentation and draws conclusions from them. There are four abilities included in analytical thinking: Analyzing relationship of the two things or more, Separation the whole into the parts, Analyzing patterns or order, and Comparison of the things.
(3) Analytical thinking management practices

Management is the act of coordinating the efforts of people in accordance with certain policies to accomplish desired goals and objectives using available resources efficiently and effectively i.e. human resources, financial resources, technological resources, and natural resources (wikipedia, 2012). Management practices is the method or technique or process of doing something which is found to be the most effective and practical means in achieving goals and objectives while making the optimum use of the firm's resources (Business Dictionary, 2012).

In the present study, management practices refers to the method or technique or process of coordinating the efforts of school members in accordance with certain policies to accomplish desired goals and objectives on analytical thinking of students using eight aspects of resources efficiently and effectively:

1. Analytical thinking management policy

Analytical thinking management policy refers to the administrative process which encourage analytical thinking skills of students. The administrators have to formulate the policy with co-operation of students, teachers, parents, communities and educational personnel in order to improve the analytical thinking of students.

2. Curriculum design and building

Curriculum design and building refers to the curriculum stipulates learning standards for learners development on analytical thinking skills. Educational institutions have to create additional subjects to form a new learning unit, or variety of intensive course for learners to select those to satisfy their inclination, interest, needs, and individual difference.

3. Personnel development

Personnel development refers to the process of refinement and development of professional instructors. Personnel development aims at creating academic leadership and competency of teachers in conducting the classroom for encouragement of the analytical thinking skills of students.
(4) Learning materials and resources support
Learning materials and resources support refers to the supporting which focus on promoting learners analytical thinking skills. The learning materials and resources must encourage the students to be self taught as well as to motivate skillful search for new knowledge.

(5) Learning management
Learning management refers to the capacity to achieve learning outcomes in all learners and is based on the notion of “design with intent”. The application of learning management occurs through a series of capabilities which are organized using the learning management schematic. The learning management must be emphasized on thinking process, management and confronting real situations and the application of knowledge for preventing and solving problems; organizing activities to enable learning from actual experience; arranging practical exercises to enhance skills in doing, analytical thinking and satisfactory achievement, the thirst and continuous search for knowledge, inculcating skills for well balanced integration of all subjects.

(6) Learning measurement and evaluation
Learning measurement and evaluation refers to the procedures to be used by instructors for learner quality development. The outcomes of these two activities are data and information concerning learners’ development on analytical thinking skills, progress and achievement, as well as data useful for promoting learner’s full development potential on analytical thinking skills.

(7) Supervision, follow-up and report
Supervision, follow-up and report refer to the process established regarding the supervision, follow-up and report. There must be jointly responsible to produce learners whose qualifications meet standards and expectation of analytical thinking skills. The instructors must be given opportunities to co-operate, assist, encourage and support planning and implementation of plans to achieve high potential on analytical thinking of students. Supervision, follow-up and report are parts of quality assurance mechanism to meet analytical thinking standards.
(8) Research for learning development

Research for learning development refers to the requirement of research procedures consist of series of actions in respective order, namely problem analysis, establishment of plans to solve problems or to create development activities, implementation of plans, data collection, research output conclusion, report and utilization of research results. The result researches on analytical thinking skills will be used for development of analytical thinking potential of students.

In the operational definition, analytical management practices refers to the scores obtained from the scale which measures the analytical thinking management practices of primary school administrators. Analytical thinking management practices scale comprise of eight aspects: (i) Analytical thinking management policy, (ii) Curriculum design and building, (iii) Personnel development, (iv) Learning materials and resources support, (v) Learning management, (vi) Learning measurement and evaluation, (vii) Supervision, follow-up and report, and (viii) Research for learning development.

1.4 OBJECTIVES OF THE STUDY

The present research intends to study analytical thinking management of primary school administrators. Likert rating scale was used to measure analytical thinking management of primary school administrators. In order to arrive the results of the study, the objectives are determined as follows:

(1) To study the level of analytical thinking management practices of primary school administrators.

(2) To compare the mean scores of analytical thinking management practices of primary school administrators classified by different variables i.e. sex, age, work experience, educational qualification, type of school, size of school, and area of school.

1.5 VARIABLES OF THE STUDY

Research scientists manipulate variables in order to test their hypotheses and learn more about the factors or conditions that are changeable during the course of an investigation. There are two types of variables in this study: independent variable and dependent variable. The independent variable is the variable that is varied or manipulated
by the researcher. The dependent variable is a variable that changes as the result of changing the independent variable. The details of these two variables in this study are as follows:

**1) Independent variables**

There are seven independent variables in this study:

(i) Sex i.e. male and female
(ii) Age i.e. 31-40 years, 41-50 years, and 51-60 years
(iii) Work experience i.e. 1-10 years, 11-20 years, and 21-30 years
(iv) Educational qualification i.e. bachelor degree and master degree
(v) Type of school i.e. state and private school
(vi) Size of school i.e. small, medium, and large school
(vii) Area of school i.e. urban and rural school

**2) Dependent variable**

Analytical thinking management practices of primary school administrators which comprise of 8 aspects:

(i) Analytical thinking management policy
(ii) Curriculum design and building
(iii) Personnel development
(iv) Learning materials and resources support
(v) Learning management
(vi) Learning measurement and evaluation
(vii) Supervision, follow-up and report
(viii) Research for learning development

**1.6 RESEARCH QUESTIONS**

Research question is one of the first methodological steps the investigator has to take when undertaking research. The significance of research questions is to generate the idea and topic of a research project individually. The research question must be accurately and clearly defined. Choosing a research question is the central element of both quantitative and qualitative research and in some cases it may precede construction of the conceptual framework of study. In this study, there were eight research questions to be answered.
(1) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development)?

(2) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by sex?

(3) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by age?

(4) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by work experience?

(5) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by educational qualification?

(6) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and
resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by type of school?

(7) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by size of school?

(8) What is the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by area of school?

1.7 HYPOTHESES OF THE STUDY

Hypothesis testing is an important activity of empirical research. A well worked up hypothesis is half the answer to the research questions. Hypothesis supports the research to find and answer to a problem. A well-thought-out and focused research questions usually leads directly into the hypotheses of the research. Strong hypotheses give insight into a research question and give a hint on what the researcher will find the answers of the research question. A hypothesis gives a priori answer to the research question and predicts the answer of the research questions. Base on the objectives of the study and the research questions, there were seven hypotheses in the study.

(1) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by sex.
(2) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by age.

(3) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by work experience.

(4) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by educational qualification.

(5) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by type of school.

(6) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by size of school.
(7) There will be no significant different between mean scores of the level of analytical thinking management practices of primary school administrators (total score and different aspects i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development) classified by area of school.

1.8 LIMITATION OF THE STUDY

Limitations are those characteristics that limit the scope and define the boundaries of the study. It provides an opportunity to demonstrate or restrict of the thought critically related to the research problem. The limitations of this study are as follows.

(1) The present study was confined to the analytical thinking management practices of primary school administrators in central part of Thailand.

(2) The study was further delimited to the data which collected in academic year 2010 - 2011.

(3) The data were collected through five point rating scale and were constructed by the researcher.

1.9 IMPORTANCE OF THE STUDY

Globalization is changing the way people work and live (Lau, 2011). One of the major challenges society faces today is to prepare individuals and organizations to deal with change and rapid proliferation of information and continually update their knowledge. The majority of valid knowledge today will be obsolete in a short period of time (Tenreiro-Vieira and Vieira, 2000). It requires from each one an enormous capacity to adapt to new situations. More creative, critical and analytical people are more able to adapt to change and cope with the challenges of present.

It is important to train individuals to adapt themselves to the changing world. Creative, critical and analytical thinking skills are valued today, on problems solve and decision making processes. More than just acquiring knowledge and information, students need to train their thinking skills, to be able to apply knowledge acquired, take decisions and acquire new knowledge (Lau, 2011). Using creative, critical and analytical thinking skills,
individuals can form an opinion about present issues, take rational and creative decisions, wide the range of possibilities and select the best amongst them.

The school administrators are responsible for administering learning development which emphasizes processes, management and confronting real situations and the application of knowledge for preventing and solving problems; organizing activities to enable learning from actual experience; arranging practical exercises to enhance thinking skills in doing, analyzing and satisfactory achievement to enable learners to be all round knowledgeable.

Educational management aims to foster everyone to be capable of learning and self-development, learners should be encouraged to develop themselves in line with their natural inclinations, and fully realize their own potential. School administrators should encourage teachers to emphasize on students’ thinking skills. They must change the roles from knowledge transferring to helping, promoting and encouraging learners to improve their thinking skills i.e. creative, critical and analytical thinking.

The finding of this study may a source of encouragement for the widespread ideas of developing the analytical thinking management practices of primary school administrators i.e. Analytical thinking management policy, Curriculum design and building, Personnel development, Learning materials and resources support, Learning management, Learning measurement and evaluation, Supervision, follow-up and report, Research for learning development. The findings of the study gave the guideline to meet the high level of analytical thinking management of primary school administrator for developing of higher standard of educational quality.

1.10. CHAPTERIZATION

The scheme of chapterization for chapters is as follows.

Chapter 1: The first chapter dealt with introductory aspect of the study, statement of the problem, definition of the important terms, objectives of the study, variables of the study, research questions, hypotheses of the study, limitation of the study, importance of the study, and chapterization.
Chapter 2: The second chapter concerned to theoretical orientation and review of the past studies done in Thailand and the researches done in foreign countries related to the analytical thinking management practices of primary school administrators.

Chapter 3: The third chapter discussed about research methodology i.e. the research method, population and sample, sampling technique, tools, techniques of data collection and method of data analysis.

Chapter 4: The fourth chapter concerned to the analysis of data and interpretation of the results in tabulated form with inferences related to the analytical thinking management practices rated by primary school administrators in Thailand. This chapter was divided into two parts. The analysis of the level of analytical thinking management practices of primary school administrators was the part one. Part two concerned to the analytical thinking management practices of primary school administrators belonging to different groups of sex, age, work experience, educational qualification, type of school, size of school, and area of school in total score and in different aspects.

Chapter 5: The last chapter gave the summary, major findings, suggestions and recommendation for further study.
REFERENCES


