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ประถมศึกษาโดยใช้แนวคิดการกำกับตนเอง:กรณีศึกษาประเทศกัมพูชา



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จุฬาลงกรณ์มหาวิทยาลัย

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ปีการศึกษา 2557

ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

LEARNING ACTIVITY DESIGN TO ENHANCE PERSONAL HEALTH HABITS  
OF ELEMENTARY SCHOOL STUDENTS USING SELF-REGULATION  
CONCEPT: A CASE STUDY OF CAMBODIA

Miss Keo Panha Soeung



A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Education Program in Health and Physical Education  
Department of Curriculum and Instruction  
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แก้ปัญหาลือ : การออกแบบกิจกรรมการเรียนรู้เพื่อเสริมสร้างสุขนิสัยส่วนบุคคลสำหรับนักเรียนระดับประถมศึกษาโดยใช้แนวคิดการกำกับตนเอง:กรณีศึกษาประเทศกัมพูชา (LEARNING ACTIVITY DESIGN TO ENHANCE PERSONAL HEALTH HABITS OF ELEMENTARY SCHOOL STUDENTS USING SELF-REGULATION CONCEPT: A CASE STUDY OF CAMBODIA) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร.เอมอชฌา วัฒนบูรานนท์, 160 หน้า.

การวิจัยครั้งนี้เป็นการวิจัยกึ่งทดลอง มีวัตถุประสงค์เพื่อ 1)เปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลก่อนการทดลองและหลังการทดลองของกลุ่มทดลองและกลุ่มควบคุม 2)เปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลก่อนการทดลองและหลังการทดลองระหว่างกลุ่มทดลองและกลุ่มควบคุม 3) เปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลก่อนการทดลอง หลังการทดลองและระยะติดตามผล 1 เดือนหลังทดลองของกลุ่มทดลอง กลุ่มตัวอย่างที่ใช้ในการวิจัยครั้งนี้เป็นนักเรียนชั้นประถมศึกษาปีที่ 3 ของโรงเรียนปีตะนุ จังหวัดพะตะบอง ประเทศกัมพูชา จำนวน 60 คน โดยแบ่งเป็น กลุ่มทดลอง จำนวน 30 คนและกลุ่มควบคุม จำนวน 30 คน ใช้การเลือกแบบเจาะจง(Purposive Selection) สำหรับเครื่องมือที่ใช้ในการวิจัยได้แก่ แผนการจัดกิจกรรมการเรียนรู้โดยใช้แนวคิดการกำกับตนเอง จำนวน 14 แผน และ แบบวัดการปฏิบัติสุขนิสัยส่วนบุคคลมีความเที่ยงเท่ากับ 0.70 ซึ่งผู้วิจัยดำเนินการสอนกลุ่มทดลองด้วยตัวเอง ส่วนกลุ่มควบคุมให้ครูประจำชั้นสอนตามปกติ วิเคราะห์ข้อมูลโดยใช้ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ทดสอบความแตกต่างด้วยค่าที (t-test) วิเคราะห์ความแปรปรวนทางเดียวแบบวัดซ้ำ (one way ANOVA repeated measure )และเปรียบเทียบความแตกต่างรายคู่โดยใช้ Scheffe

ผลการวิจัยพบว่า

1.เมื่อเปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลหลังการทดลองของกลุ่มทดลองพบว่ามีค่าสูงกว่าก่อนการทดลองอย่างมีนัยสำคัญทางสถิติที่ระดับ .05 แต่ในกลุ่มควบคุมค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลก่อนการทดลองและหลังการทดลอง ไม่มีความแตกต่างกัน

2.เมื่อเปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลก่อนทดลอง ระหว่างกลุ่มทดลองและกลุ่มควบคุม พบว่าไม่มีความแตกต่างกัน แต่หลังทดลองค่าเฉลี่ยของการปฏิบัติสุขนิสัยส่วนบุคคลของทั้งสองกลุ่มมีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

3.เมื่อเปรียบเทียบค่าเฉลี่ยของคะแนนการปฏิบัติสุขนิสัยส่วนบุคคลของกลุ่มทดลอง หลังทดลองและระยะติดตามผลพบว่าไม่มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติที่ระดับ .05

คำสำคัญ : สุขนิสัยส่วนบุคคล แนวคิดการกำกับตนเอง การจัดกิจกรรมการเรียนรู้

ภาควิชา หลักสูตรและการสอน

ลายมือชื่อนิสิต .....

สาขาวิชา สุขศึกษาและพลศึกษา

ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

ปีการศึกษา 2557

# # 5683456127 : MAJOR HEALTH AND PHYSICAL EDUCATION

KEYWORDS: PERSONAL HEALTH HABITS / LEARNING ACTIVITY PLAN / SELF-REGULATION

KEO PANHA SOEUNG: LEARNING ACTIVITY DESIGN TO ENHANCE PERSONAL HEALTH HABITS OF ELEMENTARY SCHOOL STUDENTS USING SELF-REGULATION CONCEPT: A CASE STUDY OF CAMBODIA. ADVISOR: ASSOC.PROF.AIMUTCHA WATTANABURANON, Ed.D., 160 pp.

The purposes of the study were 1) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self- regulation concept on the experimental and control groups 2) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept between the experimental and control groups 3) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before experiment, after experiment and one month follow-up using self-regulation concept on the experimental group. This study was a quasi-experimental research, 30 students were classified as the experimental group and the other 30 students were the control group. Students in class 3A and 3B which were in grade three of Pi Thnou Primary School were selected as the experimental and control groups by purposive selection. Two instruments were used in this study. The first one was the 14 learning activity plans, which implemented within seven weeks. The learning activity management was conducted half and hour every Wednesday and Thursday. The second one was the practice questionnaires on personal health. The content validity (IOC) of the learning activity plans equaled to 0.90 and the reliability of the questionnaire was 0.70. The mean scores, standard deviation and t-test were used for data analysis. F-test (one way ANOVA) was also used to compare the mean scores of pre-test, post-test and one month follow-up test of the experimental group. Finally, Scheffé was employed to test the differences of pair wise comparisons with the statistically significant at the .05 level. This study had been approved by National Ethic Committee for Health Research in Cambodia. The study findings were as follows:

1. After experiment, the mean scores of health practices of the experimental group (2.62) were found statistically higher significances than before experiment (2.48) at the .05 level. However the mean scores of health practices of the control group were found no statistically significant differences between before and after experiment.

2. Before experiment, the mean scores of health practices between the experimental group (2.48) and control group (2.46) were found no statistically significant differences at the .05 level. On the other hand, after experiment, the mean scores of health practices on personal health between the experimental group (2.62) and control group (2.50) were found statistically significant differences at the .05 level.

3. The mean scores of the health practices on personal health in the experimental group after experiment and one month follow-up were found statistically higher significances than before experiment. On the other hand, the mean scores between one month follow- up and after experiment were found no statistically significant differences at the .05 level.

Department: Curriculum and Instruction

Student's Signature .....

Field of Study: Health and Physical Education

Advisor's Signature .....

Academic Year: 2014

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# Chapter I

## Introduction

### Background and Significance of the Study

To ensure the better health is the main goal of sanitation and hygiene. According to World Health Organization (WHO), hygiene refers to the conditions and practices which can help maintain good health and prevent the spread of diseases, for example, hand hygiene. Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and feces.

Basically, personal health refers to cleanness of individual body from head to toe in order to prevent the body from the pathogens. The importance of personal health is to prevent from any diseases and not to be a source of spreading diseases. There are many diseases related to poor hygiene conditions or poor personal hygiene such as diarrheal, skin, respiratory, intestinal parasitism disease...etc. Poor hygiene practices and inadequate sanitary conditions play major role in the increase burden of communicable diseases.

As WHO (2010) stated that globally, there are two billion cases of diarrhea diseases every year. Diarrhea is a syndrome of an intestinal tract which can be caused by variety of bacterial, viral and parasitic organisms. In addition, the most severe threat posed by diarrhea is dehydration (loss of fluid and electrolyte phenomena), then the patients will be shocked and death. Diarrhea is a kind of both preventable and treatable disease. One of the main causes of this disease is poor personal hygiene that can allow the disease to spread from person to person. The effective way to prevent this kind of disease is to wash the hands before handling food and after using toilet. WHO (2013b) states that “diarrhea continue to be the second leading cause of death among children in East Asia”. Children missed around 272 million school day due to diarrhea. If this case still remains or continues increasing; it will be affected the child performance achievement. The influence of good hygiene (Unicef, 2010) can be seen as the cycle that children will have good health and then boost the school attendance and school achievement. One study showed that more than 40% of diarrhea cases in children resulted from transmission in school rather than home.

In Cambodia, one of the developing countries, Unicef (2011) revealed that there are many problems and issues related to child health such as malnutrition, risk on HIV/AIDS, accessing to the basic health care, education, clean water and sanitation, dental cares, hygiene related diseases, and intestinal worm. Due to lack of sanitation and poor hygiene practices, approximately, there are 10,000 overall deaths annually for the target group of child aged five and under- five in Cambodia. The finding from the 2010 national sanitation and hygiene survey indicated that 31.8% of Cambodian used latrines, and only 16.7% had fixed hand washing place in their home. Based on the data (Battambang Provincial Health Department 2013) showed about health statistic that there are four diseases recorded from 79 health centers. Diarrhea, ARI, and skin disease were the most common illness among children age five years old. The numbers of diarrheal cases increased from 1,066 in 2009 to 1,857 in 2013. As well as ARI cases increased year by year from 20,340 to 30,341 and skin infection cases rose up from 2,416 to 13,226 in 2013. These diseases are remarkably increased every year.

Cambodia school curriculum focusing on health education is still limited. Follow by MoEYS (Ministry of Education, Youth and Sport, 2006a) mentions that “the purpose of primary curriculum focus on the training of good hygiene characteristics to all Cambodian children, ensuring that every child catch up the basic skill of knowledge, have good health and ideas on the problem solving, share with others, and have willing to learn”. The curriculum from grade one to grade three includes Khmer literature, Mathematics, Health Development, Physical Appearance, Moral Understanding, Learning skill and Life skill. In the curriculum, there are five main subjects for grade one to grade three: Khmer literature, Mathematics, Social Science, Physical and Local life skill. Understanding about health education and the contents are integrated under Social Science which consists of three hours per week, and they are also divided into two subjects: Social and Science. In Science, there are two subjects: Biology and Earth Environment. There is only one subject under Social, which is Moral. In the part of biology study, the essential content is urging students to have understanding behaviors toward health education and well-being by getting educated about the basic skill of hygiene, health and safety.

In the grade one, the contents in biology major (Ministry of Education, Youth and Sport,2006b) are me and my body, body hygiene, prevention from danger at home

and along the road. The achievement of the study is that students are able to understand the steps for hand washing, describe about body clean, and explain the importance of using toilet. In grade two, the content in biology major are clean food, my skin without wound and my strong teeth, I care my school and my safety in travelling. The achievement of this study is that students will be able to describe how to look after skin, prevent caries dental disease, explain about hygiene in eating, describe about prevention and treatment of diseases (diarrhea, dental and light wound). The contents in grade three are Body Washing, Prevention from other Disease, Clean Food (safety food), and Road safety. The achievement of this level is that students are able to observe and identify function of body, describe about the advantage of clean water and food, provide information about prevention and treatment of non-serious diseases such as flu, diarrhea, and measles. After finishing grade three, students will be able to use this knowledge to apply in daily hygiene.

As mentioned above, the education for health to children is still limited because there is only teaching in the theory without the activities for children to enjoy their learning. The researcher would like to apply the activity which based on Thai National Health Recommendation for Cambodian students.

Thai National Health Recommendation stated in Health Education Division (2012) that it is a set of health practices to encourage the desired health behaviors of children, youth and adult. Then these target groups would be able to practices the rules as regularly and they will have good health habit. Following strictly on the recommendation, the citizens will have good physical, mental and social health. Ten rules are mentioned in Thai National Health Recommendation: first rule is to take care your body and your personal belonging to be proper, second rule is to take care your teeth and brush them properly every day, third rule is to wash your hand before eating and after toilet, fourth rule is to eat well- cooked food, clean food, and avoid eating food with dangerous substances, extremely flavor and artificial color. The next rule is fifth rule: do not smoke, drink alcohol, use addicted substances (drug), play gambling, have multi-sexual partners. Sixth rule in National Health Recommendation is to build warm relationship among family members, and seventh rule is to prevent any types of accident without careless; in home and out of home. The last three rules are the eighth rule (Do exercise regularly and checkup health yearly) the ninth rule (Be careful and

happy – minded) and the tenth rule (Become socially responsible person). As stated in Thai students' text books (Ministry of Education, 2008a, 2008b), this set of the health recommendation is taught in the grade one and five in the learning area of health and physical education.

To respond with the problem of diarrhea and skin disease in Cambodia, especially in Battambang Province, hygiene is thought to be strongly promoted by using the three rules selected from the Thai National Health Recommendation. Rule number one is to take care the body and personal belonging to be proper, rule number two is to wash hand before eating and after toilet and rule number three is to eat well- cooked food, clean food, and avoid eating food with dangerous substances, extremely flavor and artificial color.

Even though, problems related hygiene have been taught in the class room, the researcher considered that it was not enough to change behaviors or to promote health practices. Therefore, the concepts of changing behaviors need to be considered. Self-regulation is one of the concepts in changing behaviors to suit with this issue. This concept is a method that can help people to change their behaviors and adhere to improve behaviors. One study published at Mahidol University (Limrunangrong, 2011), the finding indicated that self-regulation program was effective in helping participant changing behaviors and the another study published at Chulalongkorn University (Markjaroen, 2011), the result illustrated about students who received self-regulation program had attitude, practices and number of time on fast food consumption better than students without self-regulation program.

Self-regulation (Bandura, 1986) is a process in which people control and direct their behaviors through being goal directed and developing functional partner of thinking and behaving in respond to environment condition in order to attain personal goals. The process of this concept consists of three-thing: self-observation, judgment process and self-reaction. Bandura (1991) mentioned that self-observation is the way people must first determine how they are doing in order to motivate themselves. They are provided feedback by having record and then setting goals to change behaviors. Judgment process guide people the way to judge the adequacy of their performance against personal standard and peer professional. If behaviors are important and they think it must be done, each individual will make decision. Self-reaction involves

reacting cognitive and emotionally to the result of the outcome. If the outcome is positive, it leads to have a confident growth in a person and improve their capability of performing behaviors. However, if the outcome is negative, they will persevere until performance matches the standard in order to avoid self- punishment.

Wattanaburanon (2013) expressed that the characteristics of the learners need to be considered as well. Taking in to account of psychological learners, knowledge, attitude and practices are the main points in the teaching about health behaviors. It is necessary points that need to be taking attention on readiness, ability and need of different levels for the children. In this study focus on grade three students in elementary school, thus practices is the most suitable for elementary school student in order to guide and teach them on behavioral and personal hygiene.

Therefore, the researcher highly expects that “Learning Activity Design to enhance Personal Health Habits of Elementary School Students using Self-Regulation Concept: A Case Study in Cambodia” could provide the means to reduce the problems related with hygiene and to have good health habits. When the pupils are administered this activities which based on Thai National Health Recommendation and Self-regulation, they will have appropriate health practices, decrease the health risk problems which occurred by poor hygiene and introduce the activity for preventing other health risk behaviors. If the pupil always practices the points related with the recommendation therefore good habits to get better health will be occurs.

### **Research question**

Will the learning activity design on personal health according to Thai National Health Recommendation by using self-regulation concept be able to enhance health habits among grade three students?

### **Purposes of the Research**

The purposes of the research are as follows:

1. To compare the mean scores of the health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept on the experimental and control groups



2. To compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept between the experimental and control groups.

3. To compare the mean scores of health practices on personal health according to Thai National Health Recommendation before, after and one month follow-up experiment using self- regulation concept on the experimental group.

### **Hypothesis**

1. Mean scores of health practices on personal health according to Thai National Health Recommendation before experiment using self-regulation concept on the experimental group were not significant differences from the control group.

2. Mean scores of health practices on personal health according to Thai National Health Recommendation after experiment using self-regulation concept on the experimental group were higher significances than the control group.

3. Mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept on the experimental group were significant differences from the control group, and the mean scores after one month follow-up were not significant differences within the experimental group.

### **Scope of the Study**

This study was a quasi- experimental research and the population of this study was students in grade three at the elementary school in Battambang Province, Cambodia. The purposive selection was used to select 60-sample students from two classes: one class as the experimental group and the other one was the control group. The learning activity plans were built up based on self-regulation concept and three rules of Thai National Health Recommendation: 1) to take care your body and your personal belonging to be proper, 2) to wash your hand before eating and after toilet, 3) to eat well-cooked food, clean food and avoid eating food with dangerous substance, extremely flavor and artificial color.

## Term Definition

**Self- Regulation** referred to self-control in doing something in curiously all the time in order to achieve the goal setting.

**Self-Regulation Concept** referred to the concept that developed from Bandura's self- regulation. This concept used to teach, monitor and build activity on participants on how to regulate themselves in controlling their behaviors in promoting health practices. There are three processes: self- observation, judgment process, and self-reaction.

**Personal Health Habits** referred to practice on health until it will become as the habit that lead to have good health according to Thai National Health Recommendation: to take care the body and personal belonging to be proper, to wash hand before eating and after toilet and to eat well- cooked food, clean food, and avoid eating food with dangerous substances, extremely flavor and artificial color.

**Health Practices** referred to the subjects would be able to practices appropriately and regularly as the following points: Clean body (taking bath properly, washing head very often, Shorting hand and leg nail), Clean stuffs (Cloth, prepare the bed, ...etc.), look after daily sanitation (eat fruit and vegetable, defecate), washing hand before holding something to eat and after back from toilet, understand about 5 categories of food, choosing food to buy and how to cook safety.

**Learning Activity Design** referred to activities that organized by the researcher based on the three processes of self- regulation. All the activity provides participants the chance to involve joyfully and actively and the main goal is providing the practices, knowledge and attitude.

**Elementary School Student** referred to students in a grade three at elementary school. They are in the age rank from eight to ten years old at primary school in Battambang Province, Cambodia.

## Research Outcome

1. To build up the activities for promoting health practices and then enhancing personal health habits among grade three students in the elementary school, Cambodia
2. To decrease the health risk problems which occurred by poor hygiene among students

3. To introduce the activities for preventing other health risk problem or risk behaviors at school.



# **Chapter II**

## **Literature Review**

### **1. Personal Health**

#### **1.1 Overview of Personal Health**

Having a rich healthy is the precise value which everyone wishes to achieve in their life. Goal of hygiene and sanitation is ensuring the better health. What is the different point between hygiene and sanitation? World Health Organization (WHO) stated that hygiene is defined as conditions and practices which can help maintain good health and prevent the spread of diseases, and sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and feces.

In everyday life, hygiene practices are used as preventive measure to reduce the incidence and spread diseases. Keeping the body clean and helping prevent the spread of germ are followed by practicing good personal hygiene such as taking bath, having hair care, nail care and foot care. Personal health (Chaichan, 1999; Hossain, 2012) refers to cleanness of individual body from head to toe in order to prevent your body from the pathogens. The importance of personal health is to prevent from any diseases and prevent not to be a source of spreading diseases. It is important thing that students need to learn and understand about taking care of their health. Body hygiene cover on hair care, skin care, teeth care, hand hygiene, nail and foot care. The following practices need to be understood related with body hygiene

##### **1. Hair care**

- Wash your hair at least once a week by using soap or mild shampoo then dry hair after bathroom

- Brush your hair three or four times per day with the soft comb.

##### **2. Skin care**

- Take bath for keeping skin clean by soap

- Take bath once or twice daily with bath spring for scrubbing

- Genital and anus need to be clean

- No sharing towel or soap

- Wash off well after soaping
- After bathing, wear a clean underwear.

### 3. Teeth care

- Brush teeth twice daily
- Rinse well after meal
- Brush teeth before go to bed
- Use bristle brush and after used it left it dry
- Pay attention on tongue and inner surface of teeth as well
- Change brush within three month.

### 4. Hand care

- Hand washing with soap or water
- Understanding about the hand washing process
- Soaping and rinsing should cover the area between fingers, nails and back of the hands.

- Hands should be dried with clean towel that wash and change regularly
- Hands need to be washed before and after meal, after toilet, before cooking and before holding food.

### 5. Nail care

- Brittle or discolored nails show up deficiencies or diseases condition
- Do not keep painting nail
- Manicure hand and nail once time every three weeks.
- The steps of manicure are including 10 minutes in warm water to make soaking hand, message your hands, cleaning and shaping nail by using manicure kit

### 6. Feet care

- Wear cotton socks
- Wear a clean pair of shoes every day and keep at least one more pair for changing

## **1.2 Benefit of Personal Hygiene**

Good personal hygiene (Hossain, 2012) is the most important aspect of maintaining good health, and it presents the action for protecting, addressing health problems and preventing many diseases. Keeping body clean (Hon, 2013) means that keeping you healthy and helping you to feel good about yourself, and caring about the

way you look is important to yourself- esteem. In addition, Hossain (2012) stated that healthy hair, skin and nail were the signs of good well-balance and self-confidence in everyday life. In order to remove soil, dirty and microorganism from hand, hand washing is the essential action that can clean the hand by using liquid, soap with water.

### **1.3 Consequence of Poor Personal Hygiene**

There are many consequences related with poor personal hygiene (Hossain, 2012) such as:

- Increased risk of getting infection or illness.
- Affected on social and psychological aspects
- Body order comes from poor personal habits
- Bad breath is occurred by not brushing regularly and flossing teeth
- Social embarrassment, it is hard to tell them about their bad personal hygiene, so many people act like alienate to those who are with bad personal hygiene.
- Impact on job application, job success and chance to be promoted

## **2. Diseases Related Hygiene**

Poor hygiene practices and inadequate sanitary conditions play a major role in the increase burden of communicable diseases. There are many diseases caused by poor hygiene such as diarrhea, acute respiratory infection (ARI) and worm intestinal infection. Diarrhea and worm infection (Unicef, 2010) are related to inadequate water, sanitation and hygiene. In 2010, World Health Organization stated that diarrhea continue to be the second leading cause of death among children in East Asia, and children lose around 272 million school day due to this disease. If this case still remain or continue increasing, it will be affected on the child performance achievement. The influence of good hygiene can be seen as the cycle that children will have good health and then boost the school attendance and school achievement. One study showed that more than 40% of diarrhea cases in children resulted from transmission in school rather than home.

### **2.1 Diarrheal Disease**

Diarrhea (Hon, 2013) is a major killer among the poor and especially in developing countries. In 1998, it was estimated to kill 2.2 million children under five years old. According to World Health Organization in 2000, each year there were about

four billion cases of diseases worldwide. There were estimated 5.5 million death associate with ARI and diarrhea occurred in children from resource limited countries.

Diarrhea, (Talaat et al., 2011; WHO, 2013a) which is usually a symptom of an infection in the intestinal tract, is the passage of usually lose or watery stools at least three time in 24 hours period. The most severe threat posed by diarrhea is dehydration (lost fluid and electrolyte phenomena, then the patient swill be shocked and death). The clinical types of diarrhea are acute watery diarrhea, acute bloody diarrhea, diarrhea with severe malnutrition, and persistent diarrhea last 14 days or longer. WHO (2010) mentioned that the infection are caused and spread through contaminated food, unhygienic food condition, drinking water, or from person to person as a result of poor hygiene. The fever, conclusion, vitamin A deficiency are the problems association with diarrheal occurrence. Diarrhea is a kind of both preventable and treatable disease. Focusing on the way to prevent this disease, there are two important points for prevention measurement: hand washing and food safety. First point is hand washing- all diarrhea disease agents can be spread by improper hand or contaminated hand; therefore hand washing can reduce the risk of diarrhea. All family members should wash their hands with soap or local substitute (ashes or soil) after defecation, before preparing food, before eating. Second point is food safety- food can be contaminated by diarrheal agents at all stage of production and preparation food. Some key messages related with food safety: do not eat raw food, wash hand with soap, cook food until it is hot through, eat food while it is hot/ reheat it through before eating, wash and thoroughly dry all cooking and serving utensils after use, keep cooked food and clean utensils separate from uncooked food, protect food from flies. If diarrhea persist (Ejemot-Nwadiaro, Ehiri, Meremikwu, & Critchley, 2008), it contributes to malnutrition, impair growth and development. Germ causing diarrhea can be transmitted feces to people from food, water, person to person contact. To reduce the risk of this disease, hand washing after defecation and before eating food need to be applied.

## **2.2 Worm Intestinal Disease**

Over 3.5 billion people (Luong, 2003) are infected with intestinal worm and a large proportion of this disease about 400 million are found in the East Asia region and the intestinal worm infection transmitted through soil. Among school children (Hellen,

2010; Leng, Pen, Kim, & Aminuzzaman, 2010; Luong, 2003) in the age of 5-15 years old who suffered the highest infection rate and worm burden that attributed by poor sanitation and poor hygiene. Worm infection disease causes many syndromes of intestinal diseases: diarrhea, abdominal pain, malaise and weakness which affected on working and physical growth. Moreover, it could lead to have malnutrition problems which affected on children's growths, slower mental development, reduce the school attendance and performance, and later on decreased productivity as adult. In sever case, soil transmitted worm infection can be developed to death. This kind of disease is easy to re-infection even use De-worming drug. De-worming alone is not enough to control and prevent the worm disease; therefore the control measures need to be considered on improving sanitation hygiene and de-worming in order to prevent and re-infection. There are some practices to prevent and control intestinal worm as follows: washing hand after defecating, washing hand with soap before preparing food, washing vegetable well before eating, eating well cook food, drinking boiled water, wearing shoes, not sharing cloth, cutting nail regularly, playing clean area, and taking de-worming table.

### **3. Thai National Health Recommendation**

#### **3.1 History of Thai National Health Recommendation**

As Health Education Division (2012) stated that to prevent or avoid any health problems, individual need to be take care their own health by following the National Health Recommendation which built up by government. Government encourages all people to follow this recommendation that is considered as basic instruction and it is served as standard for promoting good health behaviors.

Stated in Health Education Division (1998) that in 1933, there were 12 rules of health convention were established by Siam Red Cross for serving as the rule using it among their member. Twelve rules were stated as following:

1. Wash your hands before eating
2. Wash your hands after eating
3. Clean and cut your nail regularly
4. Brush your teeth before going to bed and after wake up
5. Take a bath, wash your body at least 2 times per day



6. Cover your mouth when you sneeze or spit up phlegm
7. Do not spit everywhere
8. Be in a straight position even standing or sitting
9. Drink a lot of water, do not drink coffee or tea
10. Consume fruit and vegetable as much as you can, do not consume only the meat
11. Stay at lighting place
12. Sleep in the room that have enough air flow and sleep at least 10 hours per day

After that, the health convention was changed to health recommendation which composed 10 rules and it was used in core contents for elementary curriculum in 1960.

The 10 rules were as below:

1. Take a bath at least once time a day
2. Brush teeth at least twice daily
3. Sleep in the room that have enough air flow
4. Drink clean water, do not drink coffee and tea
5. Consume the group of food such as meat, milk, egg, fresh fruit and vegetable everyday
6. Wash your hands every times before eating, and after toilet
7. Defecate regularly
8. Exercise regularly
9. Avoid other communicable diseases
10. Be happy: enjoy life

In 1978, ministry of education reformed the curriculum of elementary level. By combining health education, social study, geography, history, role of population, science in to one subject called: “life experimental promotion”. The word health habit was created to replace health recommendation.

In 1988, strategically meeting on health was set up to revise the content of health education in order to deal with currently health problems among the target group. Children and youth need to be practice following the health recommendation as regularly, and this habit will provide good health.

Department of Health created a group of temporal committee for reviewing health recommendation or health convention from starting time until that time. The content of health recommendation was set under the theme of the behaviors groups: personal hygiene, food consumption, physical activity, mental health, drug and accidental prevention.

In 1989-1992, health recommendation was revised again and again in order to fit with current situation. Promoting health practices, many related-organizations: education, religion, public health, politic and mass media need to be involved. There were six groups of health practices behaviors. First one was personal health hygiene, second one was food and nutrition then the third one was physical activity. Mental health, accidental prevention and environmental hygiene were classified as the fourth, fifth and sixth of the group behaviors.

In 1993, basically practical indicators for National Health Recommendation was built and it was promoted by organizing the seminar event in order to send out the health recommendation to children and youth who were in school and out of school.

In 1994, National Health Recommendations were put in to pilot study at Nan and Chunbori province. It was set as a policy in promoting health behaviors.

In 1995-1996, the National Health Recommendation committee was formed by the councils of ministers that make agreement to announce as public on health recommendation became a National Health Recommendation. This National Health Recommendation needed to be emission in to the target group. The councils of ministers approved on this recommendation as a National Health Recommendation policy on May 18th, 1996. Therefore, May28th, for every year is considered as an event of National Health Recommendation day.

### **3.2 Ten Rules Practices in Thai National Health Recommendation**

National Health Recommendation consists of 10 rules (Health Education Division, 2012) with some detail as below:

1. Take care your body and your personal belonging to be proper
  - Take a shower at least one time per day
  - Wash your hair with shampoo at least 2 times per week
  - Cut nail and keep it short regularly
  - Designate your bowel movement in time for your daily

- Wear clean cloth to keep your body warm enough
  - Keep your belonging in order by well organizing
2. Take care your teeth and brush them properly everyday
- Brush your teeth and tongue at least two times per day: after get up and before go to bed
  - Rinse out the mouth after eating
  - Wash your toothbrush after use and place it in ventilated area to make it dry
  - Eat fruit and vegetable that help strengthen your teeth
  - Avoid eating candy
  - Do not use your teeth to bit hard objects
3. Wash your hands before eating and after toilet
- Wash your hands in appropriate steps
  - Wash your hands with water and soap before eating and after toilet every times
  - Wash your hands before and after preparing food or after touching animal or ill people.
  - Wash your hands after back from school, Wash your hand as daily habit.
  - Avoid touching your face with dirty hand
4. Eat well- cooked food, clean food. Avoid eating food with dangerous substances, extremely flavor and artificial color
- Choose to buy fresh and clean food. Away from uncooked food
  - Eat well- prepared food that put on clean utensil
  - Eat fresh- cooked food
  - Eat food on time
  - Eat five groups of nutritional food
  - Eat fruit and vegetable regularly
  - Drink clean water at least 8 glasses and drink milk around 2 or 3 glasses in children and one to two glass in adult
  - Avoid eating food with extremely flavor (salty, sweetly), artificial colorful, preservative substances and dangerous substances
5. Do not smoke, drink alcohol, use addicted substances ( drug), play gambling, have multi-sexual partners

- Prevent yourself from cigarette, alcohol, additive substances by using medication carefully, using your free time in effectively, limiting your curiosity in appropriate way and finding good friends

- Prevent yourself from gambling by do not play, do not being friend with someone who is addicted gambling

- Prevent yourself from multi- sexual partners by do not early involve in sexual intercourse, enhance the honest values in love, keep your virginity

#### 6. Build warm relationship among family members

- Share household chore among family member

- Create opportunities to do many activities together in family

- Spend time together especially in special occasion

- Be a part of family

- Advice or discuss on some issues in family since problem occurs

- Be sympatric within family member

#### 7. Prevent any types of accident without careless; in home and out of home

- Keep toys, equipment in order

- Be sure that lighting is enough in the house

- Be careful about some risky areas in the house such as stairways, balconies and wet floor and some risky areas out he house such as road, construction site, river and canal...etc.

- Keep some items: drug, flammable, knife, toxic substances out of the reach of children

- Unplug and switch off all kinds of electrical appliances after using

- Turn off the gas after cooking

- Follow strictly the traffic law

- Be careful in travelling

- Learn basic self- care skill, for example, swimming and how to escape from firer

#### 8. Do exercise regularly and checkup health yearly

- Do exercise regularly around 30 minutes per time, at least 3 times per week

- Do exercise appropriate with your body and age condition

- Some activity like doing household chores and walking up and down the stair are recommended as 30 minutes daily exercise

- For children, doing exercise around 60minutes per day. There is 3 steps in doing exercise: 5 minutes for warm up, 50 minutes for exercise and 5 more minutes for release muscle

- Go to health check-up with physician at least once time per year

9. Be careful and happy – minded

- Have a positive thinking, put your heart in to other heart and learn to forget

- Take a rest and a good time management

- Control your tempers

- Be organize your environment place especially your house, your bedroom or your work place to become the attractive place

- Find out the trust counselor to talk about your problem

- Participate in activities that help you to feel fresh and recharge energy as well

- Prevent the depress disease and suicide among family in risk

- Apply moral principle of Buddha to your life

10. Become socially responsible person

- Help each other to look after school, home, work environment and public areas as well

- Use economical resources and avoid using material such as foam, plastic or spay that release substances polluted in to environment

- Sort the trash in order to make recycle process and involve in prevention the spread of disease

- Wear a surgical mask when you have flu

- Participate in some activities

### **3.3 Advantages of Thai National Health Recommendation**

A country development is depending on healthy citizens, and if the citizens in the country are unhealthy so the driving force of the country will be insufficient. National Health Recommendation is a set of instruction to encourage the adaption of desired health behaviors by children, youth people and general population. The advantages of National Health Recommendation as listed below:

1. The citizens are able to abandon some risky behaviors and adopt some desired health behaviors in which they can practice it correctly and appropriately
2. The citizens are able to apply this recommendation in daily life, therefore they not only have good physical health but their families and countries will be in good physical health also
3. The citizens build up the responsibility for their own health

These rules in National Health Recommendation encourage both gender and all age group to continue their learning about health issue. The spread of disease will be protected by the appropriate behaviors which exist in ten rules.

## **4. Self-Regulation Concept**

### **4.1 Theoretical Framework**

Social cognitive theory (Schunk & Zimmerman, 2008) makes several assumptions about learning and performance of behaviors. The framework of this study is based on the Bandura' Social Cognitive Theory. A human behavior is explained in term of triadic reciprocal model which involve personal, behavioral and environmental factor. These factors are influent to each other. Personal factor is the cognitive process of learning such as self-perception, self-efficacy and self-regulation which give shape and direction to behaviors. The environment includes social influences and physical structures within the environment that develop and modify an individual's expectation, belief, and cognitive competencies. Environment can be personal, physical, social, culture or political. The interaction among personal factor, behavior and environment contend that people are both products and producers of their environment. An individual' behavior will determine the aspects of the environment to which they are exposed, and his or her behavior is modified by that environment. Individuals select interactions and activity from a vast range of possibilities based on their own preferences and competencies. The influence of these factors varies based on the situations and tasks which performers are involved.

### **4.2 Overview of Self- Regulation**

Self- regulation (Schunk, 1990; Zimmerman, 2002) is a theory framework of social cognitive, it is one of the concepts changing behaviors. This concept is a method that can help people to change their behaviors and adhere to improve behaviors. Self-

regulation is a process in which people control and direct their behaviors through being goal directed and developing functional patterns of thinking and behaving in response to environmental condition in order to attain personal goals. Self-regulation is a self's capacity for changing behaviors of human to override or alter their response. It probably is created the flexibility and adaptability of human behaviors by encouraging people to adjust their action in to society. Self- regulation is an important basic concept for conception of free will as same as socially desirable behaviors. Self- regulation (Limrunangrong, 2011; Markjaroen, 2011) is the process of planning, controlling, monitoring on one's self behaviors, the process in which people control and direct their behaviors through being goal directed and developing functional patterns of thinking and behaving in response to environmental condition in order to attain personal goal. Moreover, self- regulation process (Zimmerman, 2002) is everyone try to constrain unwanted urge in order to gain control of the incipient respond. Self- regulation concept (Limrunangrong, 2011) has been used to provide guidance on implementation of behavior change intervention and improve adherence to health promotion behaviors.

#### **4.3 Process of Self-Regulation**

The process of self-regulation (Bandura, 1986) comprises of three-self: Self-observation, Self-judgment and Self-reaction.

##### *4.3.1 Self-Observation*

Self-observation (Bandura, 1986; Zimmerman, 2002) is the way people must first determine how they are doing in order to motivate themselves. They are provided feedback by having record and then setting goals to change behaviors. Self-observation refers to self-record on personal events or self-experience to find out the causes of these events. It is the first important step because it helps to collect basic information by observing on you yourself then get this information to change some behaviors.

Goal setting and self-monitoring are used to observe and assess on self-behaviors for helping us to balance our action. The goal setting is used as the standard to evaluate the currently behaviors. Set a goal need to have clear direction, short challenging and able to achieve. These points will be a motivation factors that urge people to attain goal. The goal is set by yourself or other helper. The self-monitoring is resulted by individual observation and self-record on the behaviors that already set. The record is used to monitor on self-practices in order to revise the goal.

Self-regulation stated in Limrunangrong (2011) that it is used as a mirror to provide visual feedback by using recorder, diary and then set goal to change behaviors.

#### *4.3.2 Self- Judgment*

Self-judgment (Bandura, 1986; Baumeister & Vohs, 2007; Schunk, 1990; Zimmerman, 2002) involves between comparing one's perform with the standard. The result of the comparison shows about the progress of the goal. It is also an indicator for motivate one's perform when the goal is progressing. Accessing the behavioral achievement need to compare with the standard and to know that currently behaviors need to be improved or not. The ability, effort, task and luck are the factors that involve in outcome achievement and peer judgment is used as the determiner to help in evaluation.

#### *4.3.3 Self- Reaction*

Self-reaction (Bandura, 1986; Schunk, 1990; Zimmerman, 2002) involves feeling of self-satisfaction and positive affect regarding one's performance. If self-satisfaction increases, it will be enhancing motivation and in the other hand motivation will be destroyed since self-satisfaction decreasing. Self- reaction includes behavioral evaluation in term of possibility to succeed. The evaluation toward one's self attitude in negative or positive way need to be revealed then reward or punishment need to be provided as the response.

The special form of the self- reaction is adaptive and defensive response. The adaptive response means that adjustment were designed to increase the effectiveness of learning method, and the defensive response means that offering to protect one's self or avoiding opportunities to learn are notified. Self-reaction to the goal progressing is a reward for motivating behaviors and behaviors is affected by goal which consist many aspects of goals: specificity, proximity, difficulty. Reaching a goal with satisfaction result is showing about one's progress. People will increase the motivation when they belief that they are able to improve their behaviors to reach the goal, and resulting from evaluation in positive or negative will increased the motivation. Without motivation and belief, the negative evaluation will be a factor for people to abidance the good behaviors. Self-reaction involve reacting cognitive and emotionally to the result of the outcome. If the outcome positive, it leads to have a confidence grow in a person and



are capable of performing behaviors. However, if the outcome is in negative, they will persevere until performs match standard in order to avoid self- punishment.

#### **4.4 Advantages of Self-Regulation Concept:**

Markjaroen (2011) stated that changing behaviors by using self- regulation has many advantages such as:

- This concept is easy to follow
- It is not costly to maintain standard in self -behaviors practices
- Changing behaviors by using self- regulation is more effective than changing behaviors by controlling on extrinsic factors
- Changing behaviors is an effective result if one person practices this behaviors regularly.
- In this process of this concept, you will be able to control and monitor about your attitude toward other in positive way. Moreover, you will know how to reward yourself with satisfaction when you attempt goal, or you can take step back to look over the problems to find the good solution.

### **5. Principle of Health Education**

#### **5.1. Health Education Instruction**

Somprayoon and Wattanaburanon (2010) expressed that Health education instruction at school would help students to learn and get the appropriate experience from the teachers. The aim of the health education instruction are three main points: good health knowledge, good health attitude and good health practice. The concept and all the learning activities in the school health education are focusing about the prevention from disease as the slogan that “Prevent better than cure”.

#### **5.2. Teaching Method**

Teaching method (Somprayoon & Wattanaburanon, 2010) is the method which help students learn about how to change behaviors via the learning experience. Learning activities are also included in the teaching method as well.

There are two methods of teaching: teacher-centered method and student-centered method. In teacher-centered method, teachers play an important role in the teaching process. The technical teaching of this method are lecture, question-answer, homework, note, and memory. The consequences of this method are 1) the students not

allow to participate in the teaching process and 2) this method do not help students to develop the health attitude and health practice. However, in the student- centered method, students are actively participate in the teaching process. Moreover, the role of the teachers are decreased. Discussion, demonstration and research in group are the technical teaching of student-centered method.

The other popular teaching method in health education are: lecture, discussion, report, survey, guest speaker, demonstration, storytelling, role playing, dramatization, stimulation, brainstorming, debate...etc. In addition, the learning activities are listed as: question-answer, self-testing, self-evaluation interview, box questions, and peer-education...etc.

### 5.3. Health Behaviors with Level of Learners

Refer to Wattanaburanon (2013) the management of health education curriculum need to be considered on many points: curriculum aim, national educational plan, educational philosophy and especially learner developmental characteristic. The other important points beside these points are learner interested and learner needed on their health problems. Take in to account on psychological learners, knowledge, attitude and practices are the main points in health behavioral teaching, and the learners need to be taking attention on readiness, abilities and need in difference level. As the table below, learners in grade one to three, practices are the most consideration among health behaviors teaching. From learners in grade four to nine, attitude is the most considering. Knowledge is the most considering for the learners in grade nine to twelve.

*Table2.1: Health behaviors of learner level*

Grade level of the student	First considering	Second considering	Third considering
Primary school (1-3)	Practices	Attitude	Knowledge
Primary school (4-6)	Attitude	Practices	Knowledge
Secondary school (7-9)	Attitude	Knowledge	Practices
Secondary school (10-12)	Knowledge	Attitude	Practices

## 6. Cambodia Overview

### 6.1 Cambodia Profile

#### 6.1.1 Geography

As National Institute of Statistics (2011) mentioned that Cambodia is categorized as an agricultural country which located in Southeast- Asia. It borders with Thailand to the west, Lao, North Thailand, and gulf of Thailand to the Southwest and Vietnam to the East and South. The total of land areas of Cambodia is 181,035 square kilometer. In 2012, Cambodia is one of developing countries (World Bank) with 14.86 million population. This country is considered as a low income country and Gross national income per capita is \$2,330.

#### 6.1.2 Cambodia Health statistic

In 2013, the life expectancy (WHO) for men and women are 70 and 75 years old, and in 2011, total expenditure on health per capita in Cambodia is \$135. According to census (Chhay Than, 2010) there are 14.7 million population of Cambodian within difference age groups: 33.37% of people in the age between 0-14 years old, 62.62% of people in the age between 15-64 years old and 40.1% in the age upper 65 years old.

- Data related with health indicators are showed as list below:
- Child under one year mortality rate is 55 child in 100 live birth
- Child under 5 mortality rate is 70 child in 100 live birth
- Maternal health mortality rate is 300 mother in 100,000
- Rate of delivery by health staff is 85%
- Malaria rate in 100,000 population is 0.9%
- All form of tuberculosis prevalence is 502 cases in 100,000 population
- HIV prevalence among general population is 0.6%
- Modern use of contraceptive rate is 49%
- Rate of the clean water used in urban area is 60% in population

Child health problems states in CDHS such as acute respiratory infection, fever, diarrhea, feeding practices and knowledge on ORS. ARI mostly affected on child under five especially 24 months with 8% in 1,610 children, and diarrhea among 12-23 month is 26%. As the finding from a survey (Ith Samheng, 2011) provided the diseases information align with CDHS about health problem facing on child under five. Some

statistic of the diseases that indicate in the survey are upper respiratory infection with 25,098 child, lower respiratory infection with 15,964 child, fever with 9,443 child and diarrhea with 5,551 child. In addition, Hellen (2010) said that over 70 % of Cambodian children infected with soil- transmitted helminthes or intestinal worm. Reported from Klaus (2013), there were more than half of the children whom entering school infected intestinal worm and dental carries. All the problems issues (Unicef, 2011) related to child health: mal nutrition, risk on HIV/AIDS, accessing the basic health care, education, clean water and sanitation, dental caries, hygiene related diseases, intestinal worm. Hand washing behaviors (Hellen, 2010) is one of the activities that can reduce the chance of infection STH, and can prevent diarrhea. Consequence of deny to access basic right to safe water and simple hand washing (Unicef, 2011) child are infected with some diseases such as diarrhea, skin disease, respiratory illness and water born disease. Due to lack sanitation and poor hygiene practices, in the estimation, there are 10,000 overall deaths annually for the target group of child age five and under- five in Cambodia.

## **6.2. Cambodia Education**

### *6.2.1 Cambodia General Education*

Ministry of Education, Youth and Sport (2004) stated that for general education the aim of the school curriculum is to develop fully the talents and capacities of all students in order to help them to become people with parallel and balanced intellectual, spiritual, mental and physical growth and development. When students leave schools they should:

- Develop a love of learning that will enable them to pursue employment and continue life-long learning;
- Have attained a foundation knowledge of Khmer language, Khmer literature and Mathematics;
- Have the knowledge, skills and attitudes necessary to improve and maintain their own physical and mental health and to contribute to the improvement and maintenance of the health of their families and wider society;
- Have the capacity to manage and take responsibility for their own actions, decisions and self-reliant.

- Appreciate the value and importance of science, technology, innovation and creativity.

### *6.2.2 Basic Education*

Basic Education is divided into the following three stages: Primary Grades one to three, Primary Grades four to six, and Lower Secondary Grades seven to nine.

The purpose of the basic education (Grades one-three) curriculum is to ensure that every child has a strong foundation in literacy and Mathematics and that they develop their health, physical appearance, moral understanding, learning skills and life skills. The National curriculum in Grades one-three comprises of the following subjects with the indicated amount of time allocated to each subject in which there are 40 minutes per period. Cambodia school curriculum related with health education is still limited. The purposes of primary curriculum (Ministry of Education, Youth and Sport., 2006a) are training good characteristic of all Cambodian child, ensuring that every child catch up the basic skill of knowledge, having good health, having ideas on problem solving, sharing with other and liking to learn. For curriculum in grade one to grade three with the purpose as mentioned that every child have founded in Khmer literature, math and they are developed their health, physical appearance, moral understanding, learning skill and life skill. Refer to curriculum; there are five main major subjects for grade one to grade three levels: Khmer, Mathematic, Social Science, Physical and Local life skill. The meaning and content related to health education are integrated under social science subject that consist of three hours per week, and it is also divided in sub subject of science (biology, earth environment) and in sub subject social (moral). In the part of biology major, the essential content is urging students to have behaviors toward health education and well-being thought out receiving the knowledge the basic skill of hygiene, health and safety.

In grade one (Ministry of Education, Youth and Sport., 2006b) the contents in biology major are “Me and My body, Body Hygiene, Prevention from Danger at Home and along the Road”. The achievement of the level is that students are able to understand the steps for hand washing, describe about body clean, and explain the importance of using toilet. In addition, in grade two, the content in biology major are “Clean Food, My Skin without Wound, My Strong Teeth, I Care My School, and My Safety in Travelling”. The achievement of this level is that students will be able to describe how

to look after skin, prevent caries dental disease, explain about hygiene in eating, describe about prevention and treatment of diseases (diarrhea, dental and light wound).The contents in grade three are “Body Washing, Prevention from other Diseases, Clean Food (safety food), and Road Safety”. The achievement of this level is that students are able to observe and identify function of body, describe about the advantage of clean water and food, provide information about Prevention and treatment of non-serious diseases (flu, diarrhea, and measles). After finishing grade three, students will be able to use this knowledge to apply in daily hygiene.

### *6.2.3 Educational Strategic Plan*

The vision of Ministry of Education, Youth and Sport (Im Sethy, 2010) is to establish and develop human resource of very highest quality and ethics in order to develop a knowledge-based society within Cambodia. The mission of MoEYS is leading, managing and developing the education youth and sport sector in Cambodia. There are two objectives to respond the mission. Long term objective of is to achieve the holistic development of Cambodia’s young people for all sectors, and immediate objective is to ensure all Cambodian children and youth have equal opportunity to access the quality of education.

There are three main priority policies of this ministry to meet these objectives and vision as follows: first one is to ensure equitable access to education services, second one is to improve the quality and efficacy of education services, and last one is to develop the institutions and capacity for educational staff in decentralization system. As showing in the Educational Strategic Plan 2009-2013, in the part of program and sub program in ESP 2009-2013, there are many programs existing. One of the programs named “Development of General Education and Non Formal Education” consist of sub program which responded by department of school health. This sub program “Strengthen and Expansion the School Health Promotion Program” is stated that some the main objective of this sub program is to improve the health status of education stuff and students. To reach this objective, department of health enhances the awareness of school based health education, sanitation, communicable disease and non-communicable disease prevention, food safety and nutrition, and improve basic health care service and physical hygiene facilities including health check-up, first aid, vaccination, emergency intervention in case of outbreak. Some indicators and targets

are raised in the program such as 15% of school will be implemented school based health education program and based on budget to run on, 60% of educational institution will be implemented life skill program on HIV, 15% of educational institution will be implemented first aid and receive first aid kit and 70% of educational institution will be implemented sanitation and water supply.

#### *6.2.4 National Policy*

Stated in National Policy (Ministry of Education, Youth and Sport, 2011) that in Cambodia, youth are considered as the core value resource for economical social, cultural, environmental development in present and future time as well. Khmer Royal government set out that education is a strong basic foundation in economic and social development in order to suitable increasing economy toward poverty decreasing. The objective of national policy on Cambodian youth development is stated that all youth are developed to be a good physical, intellectual, spiritual, moral characteristic, and they are ready to be a good citizen in society. To achieve this objective, one of the strategy to deal with is enhancing educational system and health education and health services.

#### *6.2.5 School Health Policy*

Kol Pheng (2006) stated in school health policy that goals of the health education are to train all Cambodian people all aspects of the lives including intellectual, spirit, physical body and morality, to obtain professional experience and to inspire a sense of national lover and responsible commitment respectful citizen. Contributing to the improvement of education quality at all level of education, MoEYS provides some statements: improving the health status of school children, improving capacity and needing skill for school children, encouraging and providing chance for all relevant stakeholders to get involve in school health promotion and enhancing equitable access to all stakeholders in health education services are needed to consider.

There are four important points in school health program. First point is providing basic health care services to school children and education equitable access to physical, mental, spiritual and social development. Second point is to provide health education and focus emphasis on the communication which brings out the behavior change and this is the most important attribute to providing information, knowledge, skills and the change in attitude of accountability to attain well-being and health safety.

Third point is improving learning environment and physical health facilities to ensure the effectiveness and quality of education. The last point is enhancing involvement from many stakeholders on school health.

#### *6.2.6 Child Friendly School*

Child friendly school (Unicef, 2012) approach enables Cambodia to adjust traditional teaching method to more child-centered, child-friendly teaching. Children are stimulated and equipped with the necessary critical thinking skill that influent on their future potential. Child-friendly school model in school is promoted on six dimensions: 1) all child access to schools, 2) effective teaching and learning, 3) health, safety and protection of children, 4) gender responsiveness, 5) children, families and communication participant involving their local school, and 6) nationally educational system support and encouraged school to become more child-friendly.

### **6.3. Battambang Province: Study Area**

#### *6.3.1 Overview of Study Area*

Battambang is one of the province in Cambodia, which is located in the far northwest and bordered with Banteay Meanchey to the North, Pursat to the East and South, Siem Ream to the Northeast and Pailin to the West. In 2014, there are 1,175,822 populations with difference age groups: 0-4 years old with 126,283, 4-14 years old with 226,658, 15-49 years old with 649,641 and upper 50 years old with 173,316.

#### *6.3.2 Battambang Health Statistic:*

According to CDHS 2010 (National Institute of Statistics, 2011), In Battambang there are some diseases statistic related with child under five year old. Acute respiratory disease infected 15.8% and diarrheal disease infected 17.2% in 545 children.

Based on health statistic (Battambang Provincial Health Department,2013), there are four diseases recorded from 79 health centers ( Table 2)



*Table 2.2: Health statistic in Battambang province from year 2009-2013*

Diseases types	2009	2010	2011	2012	2013
Diarrhea	1,066	1,800	1,986	1,951	1,857
Upper ARI	14,999	21,353	21,719	24,554	25,206
Lower ARI	5,341	5,735	5,419	5,788	5,135
Skin infection	2,416	3,343	3,068	3,285	3,226

Source: Health coverage plan, Battambang provincial health departments

Diarrhea, ARI, and skin disease are the most common illness among children age 5 years old. The numbers of diarrheal cases increase from 1066 in 2009 to 1857 in 2013. As well as ARI cases increase year by year from 20340 to 30341 and skin infection cases rise up from 2416 to 13226 in 2013. These diseases are remarkably increased every year.

### *6.3.2 Battambang Education Statistic*

According to Hang Choun Naron (2014) the number of school in whole kingdom is 11,865 including 6,993 primary schools. In Battambang, there are 980 schools in whole province and 607 schools are primary school. Mentioned about the students, the number of students' enrollment is 178,092 and since the students in grade three enrollment are 29,243. For the school condition in this province, primary school exist 242 pupils per school with around seven teachers in charge and there are five classrooms per one school.

## **7. Related Researches**

Makornsen (1995) conducted a study about "Factors influent on health behaviors according to National Health Recommendation among grad six students at Suphan Buri Province". The result showed that three points of factors influencing: predisposing, enabling, and reinforcing factors. In the predisposing factors stated that sex of students was not associated with health behaviors whereas knowledge, attitude

and value were associated with health behaviors according to National Health Recommendation. In the enabling factors stated that parents' profession was not associated with behavioral health on National Health Recommendation. However, level of parents' education, school health services management in curriculum and teacher methodologies were statistically significant associated. In the reinforcing factors stated that taking care from parents was associated with health behaviors according to National Health Recommendation but motivating from teachers were not associated. Besides that, the study revealed that level of practical health behaviors was the lowest especially personal hygiene.

Provincial Public Health Department (2000) in Sukhothai Province conducted a study on "Model and appropriate health education method for diffusing the National Health Recommendation among elementary school, Sukhothai Province". The result showed that first model school which used the students as diffuser the National Health Recommendation, the average scores of students' belief related with knowledge between before and after implementation were statistically significant difference, and average scores of self- practices regarding to National Health Recommendation were statistically significant difference as well. Second model school which used the school health teachers as diffuser the National Health Recommendation, the scores before and after implementation related with knowledge and self-practices were statistically significant difference. Third model schools which considered as normal school. The result showed that before and after implementation, the scores related with knowledge and self- practices were not statistically significant difference.

Moungnam (2001) studied on "The effect of activity for personal health development according to National Health Recommendation". The result showed 3 important points. Firstly, students, who involved in personal health activity which organized in activity plan, got higher knowledge and understanding related with personal health than before implementation with .01 statistically significant. Secondly, after implementation, self- belief of the students on their capacities in personal health behaviors practices was higher than before implementation with .01 statistically significant. Thirdly, after implementation, taking care of personal health behaviors among student was better than before implementation with .01 statistically significant.

Therefore, recommendations from the study were stated that the activity should be continually applied for developing students' personal health.

Thongdee (2002) studied on "Factors associated with self-care behaviors regard to National Health Recommendation among grade 6 students under local government Nonthaburi Province". The result indicated that predisposing factors such as students' knowledge and attitude toward health were not significantly associated with self-care behaviors, in the other hand, enabling factors ( school and home environment) and reinforcement factors( teacher and parent with self-care behaviors) were significantly associated with self-care behaviors regard to National Health Recommendation.

Witipradit (2004) studied about "Health behaviors modification with regard to National Health Recommendation by self-monitoring, social support and health belief model among grade four students in Parinayok Kindergarten School, Bangkok". The result showed that students in the experimental group had better scores of knowledge concerning self-care behaviors; perceive severity of diseases or accident and self-care behaviors regard to National Health Recommendation than those of the control group. And refer to this knowledge concerning, mothers' education have significantly correlated with self-care behaviors with regard to National Health Recommendation.

Vinpounakpass (2006) studied on "Knowledge, Attitude and Practices according to National Health Recommendation among grade 6 students, Theun District, Lampang Province". The result showed that the sample of the study included boy and girl students mostly stayed with their parents with 64.3%, and the profession of their parents was employee with 61.8%. The result revealed the students' knowledge was in the modify level regarding to National Health Recommendation, students attitude was in appropriate level and students practices were in the reasonable level. To compare about the KAP according to National Health Recommendation found that students in the health promotion schools: gold level, silver level and copper level had significantly differences at the .05 level on knowledge and practices, but for the attitude, there were no significant differences. Boy and girl students had knowledge, attitude and practices according to National Health Recommendation significant differences at the .05 level, and girl students have better knowledge, attitude and practices than boys.

Tepkeo (2006) studied about "Self-practicing according to National Health Recommendation among low secondary students in Seum Ngam District, Lampang

Province”. The result indicated that mostly of the participants had better practices according to National Health Recommendation in each items: Take care your body and your personal belonging to be proper, Wash your hand before eating and after toilet, eat well- cooked food, clean food. Avoid eating food with dangerous substances, extremely flavor and artificial color, Do not smoke, drink alcohol, use addicted substances (drug), play gambling, have multi-sexual partners, Build warm relationship among family members, Prevent any types of accident without careless; in home and out of home, Do exercise regularly and checkup health yearly, Be careful and happy – minded, Become socially responsible person. In the other hand, Take care your teeth and brush them properly- one of the items in National Health Recommendations was considered in fair level of behavioral practices. The result could be able used as the basic evident for the stakeholder to conduct the school promotion in order to enhance the appropriate self-practices. And it was also introduced as the data for creating school health strategy.

Chanchay (2006) conducted a research about “A self- regulation program on decreasing junk-food consumption among students in Bumrungwittha, Thonburi Primary School, Bangkok”. The purpose of the study was to look on the effectiveness of health education program on changing junk food consumption behaviors of primary school in grad four-six. It was a quasi-experimental one group pre-test and post-test research. The study group was composed of 116 students and health education program consisted of 11 weeks in which the organizing health education activity in eight weeks and developing in curriculum in three weeks. The tool for data collection were used questionnaire, observation and in-depth interview. The result showed that after participant in the health education program, students’ junk food knowledge was significant increased. It was found that knowledge had been mostly changed and there was a better self- regulation on junk food consumption. Students had increased self-regulation in all three aspects and the self-reaction was the highest increased. During the follow up period, after program completed, the decreased junk food consumption behaviors were mentioned and also sustainable decreased. The program revealed the effectiveness of the application of self-regulation concept and participation learning on decreasing the junk food consumption behaviors.

Franks et al. (2007) conducted a research about “School-based programs: Lessons learned from CATCH, planet health, and not-on-tobacco”. This program

focused on changing behaviors of the elementary school students both in and out of the school. CATH was an elementary school program supported the positive environmental influent to increase physical activity and improve healthy eating behaviors. The activity of the intervention program occurred in the classroom and the teacher prepared the curriculum to fit with the age of the students. The students need to attended class regularly in order to practice new skill design: fun physical activity and healthy low fat food in the school cafeteria. The result showed that students increased time spending in physical activity and decreased consumption fat in school.

Schmidt, Wloch, Biran, Curtis, and Mangtani (2009) studied on “Formative researches on the feasibility of hygiene interventions for influenza control in UK primary schools”. The purpose of the researches was to find the barriers that enhanced hand washing. It was a pilot study in four primary schools East London, by using the key interview and question in essay among children. The result indicated that there has been a personal hygienic teaching since in the younger age. For the barriers, there were some points mentioned such as time constraint, completing health issue and teacher motivation.

Vivas et al. (2010) conducted a research on “Knowledge, Attitudes, and Practices (KAP) of hygiene among school children in Angolela, Ethiopia”. The study evaluated the knowledge, attitude and practices of hygiene among rural school children in Ethiopia and assessed the extension to which proper knowledge of hygiene was associated with personal hygiene characteristics. Trained staffs interviewed 669 students on the hygiene and hand washing practices, knowledge about sanitation, personal characteristic and presence of gastrointestinal parasite infection. The result showed that 52% of students were classified as having good knowledge of proper hygiene, 99% of them reported washing hand before meal and 76.7% of students reported that washing hand after defecation was considered as important but only 14.8% reported they followed the proper practices of hand washing.

Limrunangrong (2011) conducted a study on “A Self-regulation program on diet and exercise behaviors in pregnant women with gestational Diabetes Mellitus”. The purpose of the study was to test the effectiveness of a self-regulation program on diet control, exercise and two hours postprandial blood glucose in pregnant women with gestational Diabetes mellitus. Ninety pregnant women were recruited as the participants

who divided in two groups: the experimental and control groups. Both groups were tough dietary control and yoga exercise. The experimental group was trained on self-regulation skill whereas the control group received only routine care. Questionnaires on personal information, daily diet record sheet, daily exercise record sheet and two hours postprandial blood glucose level were used as the instrument for data collection. Before initial program, these data was collected then it collected again at second, fourth and sixth week after program. The result revealed that the experimental group could control diet, exercise and two hours postprandial blood glucose were significant greater than control group notable in fourth week.

Talaat et al. (2011) conducted a research on “Effects of hand hygiene campaigns on incidence of laboratory-confirmed influenza and absenteeism in schoolchildren, Cairo, Egypt”. The objective of this study was to evaluate the effectiveness of hand hygiene intervention comparing on reducing absenteeism caused by the influenza- like illness, diarrhea and laboratory confirmed. The intervention program consisted of 12 weeks and the content was related with raising awareness on how importance of hand hygiene and student wash hand. Washing hand twice time during school day, spending around 45 seconds then rinsing hand with clean water and drying hand by towel were included in the program in order to encourage students in washing hand. The knowledge about how important of hand hygiene was diffused by using some materials: posters in the washing place and giving short message about the appropriate time for washing hand. These materials were a mean to provide knowledge and some activities such as game and funny activity were included as well. This study was motivated by campaign, song and drawing contest which related with hand hygiene. The result indicated that absenteeism was caused by diarrhea, which reduced 30%, and influenza- like illness, which reduced 40%. Therefore, intervention on hand washing was effective to reduce absenteeism that caused by diarrhea and influenza- like illness.

Markjaroen (2011) studied on “The Effects of health education learning management using a self- regulation program on fast food consumption behaviors of second school students”. The purpose of the study was to compare the average scores achievement of health education before and after implementation in the experimental and control group. The sample in the study was 50 students and they were divided in two groups: experimental group received health education learning by using self-

regulation, and control group received routine health education. The intervention included three days a week and 30 minutes a day. There were two instruments used for data collection such as activity plans and test on KAP. The result showed that students received self-regulation program had attitude and practices on fast food behavioral consumption better than student did not receive self-program intervention.

Le Thi Thanh Xuan (2013) conducted a research about “Hand washing among schoolchildren in an ethnically diverse population in northern rural Vietnam”. The research was to investigate the response to teacher- centered participatory hand washing with soap intervention in multiple ethics. There were two phases of study design: one phase was study formative researches and other phase was action research using hand washing intervention. The intervention based on the knowledge from formative researches. The material uses in the study were visual aids, colorful posters, and leaflets. During intervention, the qualitative were used to evaluate the response and action of intervention from teacher, student and family. The result of the study revealed that students visibly excited and pleased to join with hand washing with soap session. In that time the rewards; games and hand washing demonstration were used as teacher methodology. The point of view from children, schoolteachers and parent toward hand washing with soap were in positive and feasible attitude. The barriers related with how to sustain and transfer the student behavioral practices at home were indicated as the statements: Limited emphasis on hygiene in the standard of school curriculum, Low priority and lack of time in practical teaching methodology and lack of guided and remained on regularly practices at home.

Sibiya and Gumbo (2013) studied on “Knowledge, Attitude and Practices (KAP) survey on water, sanitation and hygiene in selected schools in Vhembe District, Limpopo, South Africa”. The purpose of the study was to asses KAP of learner on WASH by using questionnaire, inspection and discussion with school authorities. The result showed that knowledge on water born disease was high but knowledge related water-based disease and prevention were not mentioned. Attitude and practices on hygiene were high level because of the presentation of hand washing facilities, whereas soap was not available.

Tandukar et al. (2013) conducted a study about “Intestinal parasitosis in school children of Lalitpur District of Nepal”. The objective of the study was to estimate the

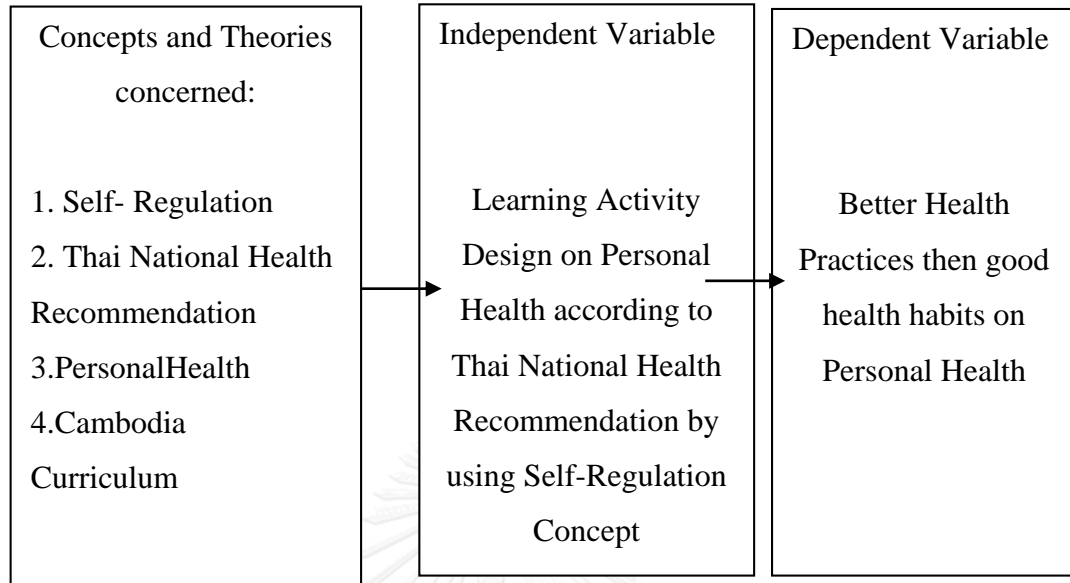
prevalence and risk factors of intestinal parasite. Stool examination was used as the method of data collection. The result revealed that the prevalence of intestinal parasitosis were 16.7% and children in the age of 11-15 years old who live in agricultural family were the most affected. Hand washing and type of drinking water showed the significant difference in the study. Thus, the causes of parasite infection were considered as predisposing factors including poverty, lack of awareness, and failure in proper hand washing practices after defecation.





## 8. Conceptual Framework

Figure 2.1: Conceptual framework



## **Chapter III**

### **Research Methodology**

This study was a quasi-experimental research, therefore the sample need to have experimental group and control group for making a comparison after and before implement the treatment. The researchers must be well planned and managed their study by following these processes:

#### **Before Experiment**

##### **1. Study on Documents and Related Researches**

Searched on many documents, reports, researches, journals and articles which related with personal health , Thai National Health Recommendation, self-regulation concept, health practices and Cambodia curriculum, Cambodia child health...etc.

##### **2 .Select of Sample**

Thirty students were classified as the experimental group and the other 30 students were the control group. Students in class 3A and 3B which were in grade three of Pi Thnou Primary School were selected as the experimental and control groups by purposive selection. The criteria to get the school was: cooperation from school director, same level of resources with other schools in the area, and the school arrange the students to attend class in homogeneity.

##### **3. Prepare Instruments Used in the Study**

There were two instruments used as follows:

###### *3.1. Instrument for Processing Experiment: Activity Plan*

This instruments was developed from Thai National Health Recommendation by extracting only three rules from 10 rules, and three main processes of self-regulation concept.

The learning activity plans were checked by five experts. Five experts were invited to review on content validity (IOC) between the content and objectives of this study. After receiving the comments from experts, the learning activity plans were revised.

The IOC of the 14 activity plans equaled to 0.90. All these plans were carried out on the students in grade 3A: experimental group.

There were 14 learning activity plans which covered on: 1) Take care your body and your personal belonging to be proper, 2) Hand washing and 3) Eat well- cooked food, clean food. Avoid eating food with dangerous substances, extremely flavor and artificial color. (Table3.1)

*Table 3.1: Contents of 14 activities*

Week	Hour	Topic of the content
1	1/2	Proper Way for Self-Taking Bath
	1/2	Proper Way for Self-Washing Hair
2	1/2	Keeping Short Clean Nail
	1/2	How to Organize and Clean the Personal Belonging or Toys
3	1/2	Let Wearing Clean Clothes
	1/2	Proper Steps of Washing Hands
4	1/2	When You Need to Wash Your Hands
	1/2	Let Practice to be a Clean Hands
5	1/2	Regular Consume Fruits and Vegetables
	1/2	Consuming Variety of Food
6	1/2	Let Taste the Food
	1/2	Avoid Junk Snack
7	1/2	What I Do Need to Choose/What I Do Not Need to Choose
	1/2	What I Have Done

### *3.2 Instrument for Collecting Data*

The instrument for collecting data was health practices questionnaires which developed from three rules of Thai National Recommendation.

The researcher studied on many research documents which related with Thai National Health Recommendation. All the questionnaires were built up in three level of rating scale: **Every times** means Students practice this action as regularly = practices 100%, **Sometimes** means Students mostly practice this action but not regularly = At least practices 50% and **Never** means Students never ever practice this action= practices

0%. The advisor checked and revised these questionnaires then health practices questionnaires were tested on the grade three students who were not the sample of this study. The reliability of these questionnaire was 0.70.

## **During Experiment**

### **1. Study Design**

This study was a quasi -experimental research. There were two groups of sample: the experimental group (applied learning activity plans) and control group (without learning activity plans). These two groups were administered with pre-test and post-test. One month follow-up test was carried out on the experimental group only. The process of experiment as showed in table 3.2

*Table 4.2: Process of study*

E	O <sub>1</sub>	X	O <sub>2</sub>	O <sub>3</sub>
C	O <sub>4</sub>		O <sub>5</sub>	

E: Experimental Group

C: Control Group

O<sub>1</sub> O<sub>4</sub>: Mean Scores of Health Practices on Personal Health of Experimental and Control Groups, Before Experiment

O<sub>2</sub> O<sub>5</sub> : Mean Scores of Health Practices on Personal Health of Experimental and Control Groups, After Experiment

O<sub>3</sub>: Mean Scores of Health Practices on Personal Health of Experimental Group, One month Follow-up

X: 14 Learning Activity Plans

### **2. School Contacted to Get Permission**

School director was contacted, and the objective and also step of the study need to be mentioned to all level of staffs in the school.

### **3. Data Collection**

The experimental and control groups were assigned in different groups. The experimental group applied 14 learning activity plans within seven weeks, two days per week (Wednesday and Thursday) and half hour per day and in the other hand, the

control group received the normal health education teaching. The researcher taught the experimental class while the class teacher were in charge the control class.

Two groups of the sample were taken a pre-test about students' personal health practices by health practices behaviors test in which these questionnaires developed from three rules of Thai National Recommendation. These questionnaires were measured in rating scale. The test was done one week before implementation the learning activity management on personal health according to Thai National Health Recommendation by using self-regulation concepts

Post-test was taken on two groups with the same procedure as pre-test.

One month follow-up, after finish implement the activities, only the students in experimental group was taken the health practices questionnaire again.

## **After Experiment**

### **1. Data Analysis**

Entry all the data in program SPSS and this data was used to analyze to find out mean scores and standard deviation.

a. To compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept on the experimental group and the control group by using dependent t-test at the .05 level of significant

b. To compare the mean scores of health practices on personal health according to Thai National Health Recommendation after experiment using self-regulation concept between the experimental and control groups by using independent t-test at the .05 level of significant.

c. To compare the mean scores of health practices on personal health according to Thai National Health Recommendation before, after and one month follow-up implementation using self-regulation concept on the experimental group by using F-test at the .05 level of significant.

### **2. Statistical Usage**

Basic information of the sample was showed to describe the characteristic of the participants by suing the percentage. Reliability of the question was found by using Cronbach's Alpha. To compare, pre-test and post-test within two groups used dependent

t-test. To compare, pre-test and post-test between two groups used, independent t-test. F-test (One way ANOVA repeated measure) was used to compare pre-test, post-test and one month follow-up test in experimental group. Finally, Scheffé was employed to test the differences of pair wise comparisons with the statistical significant at the .05 level.

### **Ethical Consideration**

This study had been approved by National Ethic Committee for Health Research (NECHR), Cambodia with the code number 144 NECHR



## **Chapter IV**

### **Analysis Result**

After data analysis, the result of the study were found as follow:

Part I: Basic information of the participants

Part II: Compare the mean scores of health practices on personal health before and after experiment on experimental and control groups.

Part III: Compare the mean scores of health practices on personal health before and after experiment between the experimental and control groups.

Part IV: Compare the mean scores of health practices on personal health before experiment, after experiment and one month follow-up on the experimental group.



## Part I: Basic information of the participants

*Table 5.1: Characteristics of the experimental and control groups*

Information	Experimental Group	Control Group
	n=30	n=30
Sex (%)	Boy 50%, Girl 50%	Boy 46.70%, Girl 53.3%
Age rank(Year-old)	Eight to Twelve	Eight to Fourthly
Living with (%)	Parent (86.70%)	Parent (60%)
Job of parent (%)	Seller (63.30%)	Seller (63.30%)

The table showed that the participants of the study were 60 students in grade three: 30-student in a class were assigned as the experimental group and the other 30 students as the control group. In the group of experimental, there were 50% of the students were girls and the age rank of this group were between eight to twelve years old. 86.70% of them were living with their parents who had job as sellers. In the control group, 53.3% of students were girls and the age rank of the students were between eight to fourthly years old. 60% of them were living with parents who had job as sellers



**Part II: Comparison the mean scores of health practices on personal health before and after experiment on the experimental and control groups**

*Table 6.2: Mean scores of health practices on personal health before and after experiment on the experimental and control groups*

Health Practices on Personal Health	Pre-Test		Post-Test		<i>t</i>
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	
Experimental Group	.48	.21	2.62	.17	4.91*
Control Group	2.46	.23	2.50	.24	1.60

\*  $p < .05$

The table illustrated that after experiment, the mean scores of health practices of the experimental group (2.62) were found statistically higher significances than before experiment (2.48) at the .05 level. However the mean scores of health practices of the control group were found no statistically significant differences between before and after experiment.

**Part III: Comparison the mean scores of health practices on personal health before and after experiment between the experimental and control groups**

*Table 7.3: Mean scores of health practices on personal health before and after experiment between the experimental and control groups*

Health Practices On Personal Health	Experimental Group n=30		Control Group n=30		<i>t</i>
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	
	Pre-Test	2.48	.21	2.46	
Post-Test	2.62	.17	2.50	.24	2.18*

\*  $p < .05$

The table indicated that before experiment, the mean scores of health practices between the experimental group (2.48) and control group (2.46) were found no statistically significant differences at the .05 level. On the other hand, after experiment, the mean scores of health practices on personal health between the experimental group (2.62) and control group (2.50) were found statistically significant differences at the .05 level.

**Part IV: Comparison the mean scores of health practices on personal health before experiment, after experiment and one month follow- up on the experimental group**

*Table 8.4: Mean scores of health practices on personal health before experiment, after experiment and one month follow- up on the experimental group by using One Way Analysis of Variance with the Repeated Measure (One Way ANOVA)*

Source of Variation	SS	df	MS	F
Between Groups	.416	2	.20	5.79*
Within Groups	3.12	87	.03	
Total	3.54	89		

\*  $p < .05$

The table indicated that *F-test* equaled to 5.95\* pointed about the mean scores of health practices on personal health before experiment, after experiment and one month follow-up on the experimental group were found statistically significant differences at the .05 level. It means that there was at least one group different from the other groups.

*Table 9.5: Pair Wise Comparisons of mean scores of the health practices on personal health in the experimental group by using Scheffé*

Test	Pre-Test	Post-Test	Follow-up Test
	<i>M</i>	2.48	2.62
Pre-Test	2.48	.14*	.14*
Post-Test	2.62		.00
Follow up –Test	2.62		

\*  $p < .05$

The table showed that the mean scores of the health practices on personal health in the experimental group after experiment and one month follow up were found statistically higher significances than before experiment. On the other hand, the mean scores between one month follow- up and after experiment were found no statistically significant differences at the .05 level. It means that the mean scores from pre- test was found difference from post-test and follow-up test, but the mean scores from post- test was remained the same as follow-up test.

## Chapter V

### Conclusion Discussion Recommendation

The purposes of the study “Learning Activity Design to Enhance Personal Health of Elementary School Students using Self-Regulation Concept: A Case Study of Cambodia” were 1) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept on the experimental and control groups. 2) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before and after experiment using self-regulation concept between the experimental and control groups and 3) to compare the mean scores of health practices on personal health according to Thai National Health Recommendation before, after and one month follow-up experiment using self-regulation concept on the experimental group.

This study was a quasi-experimental research, there were two group of samples: 30 students were classified as the experimental group and the other 30 students were the control group. Pi Thnou Primary School and 3A and 3B classrooms in grade three were selected by purposive selection. Two instruments were used in this study. First one was the instrument for experiment: Learning Activity Plan. 14 activity plans was implemented in seven weeks, two times per week. The activities conducted in the half and hour on every Wednesday and Thursday. Secondly, the instrument for data collection was practices test questionnaires on personal health. Pre-test, post-test and follow-up test used the practices test questionnaires to find the mean score ( $M$ ) and standard deviation ( $SD$ ). *Dependent t-test* was used to compare the mean scores of pre-test and post-test within groups and *independent t-test* was used to compare the mean scores of pre-test and post-test between groups. *F-test* was used to compare the mean scores of pre-test, post-test and one month follow-up test of the experimental group.

## Conclusion

The findings from this study stated as following:

1. After experiment, the mean scores of health practices of the experimental group (2.62) were found statistically higher significances than before experiment (2.48) at the .05 level. However the mean scores of health practices of the control group were found no statistically significant differences between before and after experiment.

2. Before experiment, the mean scores of health practices between the experimental group (2.48) and control group (2.46) were found no statistically significant differences at level .05. After experiment, the mean scores of health practices on personal health between the experimental group (2.62) and control group (2.50) were found statistically significant differences at the .05 level.

3. The mean scores of the health practices on personal health in the experimental group after experiment and one month follow-up were found statistically higher significances than before experiment at the .05 level. On the other hand, the mean scores between one month follow-up was found no statistically significant differences from after experiment at the .05 level.

The result could be made a conclusion that learning activity design using the self-regulation concept be able to enhance the personal health habits among grade three students.

## Discussion

1. The finding showed that before experiment, the mean scores of health practices on personal health of experimental group were found no statistically significant differences from control group at the .05 level. This means that the practices on personal health of two groups before experiment were not different. This may be due to Khmer curriculum related with daily hygiene, Khmer media broadcasting about good hygiene on TV and NGO involvement in daily hygienic promotion.

In order to address the Khmer curriculum related to daily hygiene the Ministry of Education, Youth and Sport. (2006a) stated that one of the purposes of the curriculum in primary school focuses on the training of good hygiene characteristics to all Cambodian children to ensure that every child catch up the good health. The content knowledge of health education is taught in schools from grade one to three covered on:

1).Body hygiene(students are able to understand the steps of washing hands, to describe about body clean and to explain the importance of using toilet), 2).Clean food( students are able to explain about the hygiene in eating) and 3).body washing, safety food, and preventing from diseases( students are able to understand about advantages of clean food, body function, to understand about information to prevent and treatment on diarrhea, flue and measles). After finished grade three, students are able to use these content knowledge of health education in order to apply its in daily hygiene. Similarity, the sample of the study were students in grade three, thus they were taught about these all contents knowledge.

For better understanding of good hygiene, Khmer media broadcasting about practices of good hygiene on TV, most of them are produced by NGO and Ministry of Health. National TV channels are chosen to broadcast in the public, so the target audiences can be reach to all ages of citizens of the country. For example, the broadcasting on TV about “when and how to wash the hands” in three minutes. The sequence of the scenes include a song and cartoon animation that focuses on the specific timing to wash the hands, especially before eating and after toilet. Soaps or ashes are recommended to use as the material in hand washing. Health education advertisements is easy to understand and attract to all age groups, thus the media provides short key health message to all citizens about health knowledge and practices.

Many activities have also been set up to promote good health behaviors in Cambodia, NGOs are playing important role to provide help on technical and budget support in health promotion among the general population. Enhancing and supporting health promotion have been carried out not only in community-based but also in the school based as well. For instance, UNICEF in Cambodia have been assisted in the area of health, education, child protection, HIV/AIDs, water and sanitation ...etc. There are many projects implementing in Cambodia. As the result, it is not surprising to find that the health practices on daily hygiene in two groups of students before and after experiment were not different. It could be due to these factors mentioned above.

2. After experiment, the mean scores of health practices on personal health of experimental groups was revealed statistically higher significances than the control group at the .05 level, which supported by the hypothesis of the study. This means that after implementation of the activities on the experimental group, the practices on

personal health was improved and different from the control group. This showed about the good effect of the activities on the personal health practices. The result might have been caused by the activity plans and students' participation.

Also, the result might have been caused by 14 activity plans, which covered on daily personal health. For example, there were three activities, which were the 6<sup>th</sup> activity "The proper steps of washing hands", the 7<sup>th</sup> activity "When you need to wash your hands" and the 8<sup>th</sup> activity "Let practice to be a clean hands", covered on washing hands. These three activities provided the clear understanding and knowledge as well as the chance for students to participate in hand washing practice. The rewards were used to urge students in participating in the game competition. Practicing hand wash may be one of a good habits on the personal health, and many diseases such as diarrhea, intestinal parasitism, flue ...etc. could be prevented by hands washing. This is in line with Talaat et al. (2011) conducted a research on "Effects of hands hygiene campaigns on incidence of laboratory-confirmed influenza and absenteeism in schoolchildren, Cairo, Egypt". The result stated the intervention on hands washing was effectiveness to reduce absenteeism that caused by diarrhea and influenza illness. The same of study result which conducted by Le Thi Thanh Xuan (2013) on "Hands washing among schoolchildren in an ethnically diverse population in northern rural Vietnam". The result indicated the students visibly excited and pleased to join with hand washing with soap session. During that time, the reward, game and demonstration of hand washing were used as the method of teaching. Similar to a study, conducted by Sibiya and Gumbo (2013) "KAP survey on water, sanitation and hygiene in selected schools in Vhembe District, Limpopo, South Africa". The finding of the study revealed that before of the presentation of hands washing facilities, the attitude and practice on hygiene were high level. In addition, the content knowledge of 14-activity plans was elicited from Thai National Health Recommendation which is a set of health practices to encourage the desired health behaviors of children, youth and adult. While these target groups practice continuously, the good health habits will be occurred. This study used some part of the set of health practice from Thai National Health Recommendation, that why it is not surprising that students in experimental group had good health practices than the control group. Not different from a study conducted by Mounghnam (2001) with the title "The effect of activity for personal health development according to National



Health Recommendation”. The finding revealed that after implement the activity, taking care of personal health behaviors among students was better than before implement the activity with .01 statistically significant . Also as, the consistent with a study “Self- practicing according to National Health Recommendation among low secondary students in Seum Ngam District, Lampang Province” was conducted by Tepkeo (2006). The result indicated that most of participants had better health practices according to National Health Recommendation, and this finding could be used as the evidence for stakeholder to conduct the school promotion to enhance appropriate self-practices.

The result might have been caused by other factors besides these activities, perhaps because of students’ participation. During the implementation of activities, the researcher noted and appreciated of the cooperation from students and teachers in Pi Thnou Primary School. The researcher would like to take an example to expressed about the cooperation-“Group Work” in first and second activity plans. The students played a game called : Organizing in order of the steps of washing hair and taking bath. Three groups of students were divided and each group need to find out one students as a group representative to present their task in front of the class. In that time, the researcher observed about their work spirit and their willing to participate in the activity with joyful. Similar to a study about “Influences on teachers’ use of participatory learning strategies in health education classes” conducted by Cahill et al. (2013). The result indicated the most significant influences on teacher pedagogical choices was teachers understand approach in education, students engagement, confident in class control and having positive relationship.

3. The mean scores of the health practices on personal health in the experimental group, after experiment and one month follow-up were found statistically higher significances than before experiment at the .05 level. However, the mean scores between one month follow-up and after experiment were found no statistically significant differences at the .05 level, which supported by the hypothesis of the study. It means that the before experiment, the practices on the personal health of the experimental group was different from after experiment and one month follow-up. In the other hand, the practices on the personal health still remain unchanged between after

experiment and one month follow-up. This result may be due to effect of the activity plans, self-regulation concept used and media broadcasting.

Students in the experimental group may be considered that the practices related to the daily hygiene were not hard to catch up. They joined the activities which consisted of the content based knowledge on the personal health practices. For example, the 7<sup>th</sup> activity “When you need to wash your hands”, the main concept and handout consisted of the advantages and the appropriate steps for washing hand. Thus, 7<sup>th</sup> activity plan not only enhance the practices, but also gave the knowledge to the students as well. While the knowledge was given clearly, students can continuous their good hygiene practices until it becomes the good habits for better health.

The researcher used real model of the materials in the activities, therefore it was an easy way for them to understand and all the handouts was translated into Khmer language with the attractive colorful pictures. Moreover, during the activities implementation, a leaflet with short key message about daily hygiene practices was distributed to all students in order to remind on key points they have learned from the activities.

From this achievement, it could be concluded that using self-regulation concept was an appropriate concept for this activity plans. All 14 activity plans were covered by three main process of self-regulation: self-observation, judgment process and self-reaction. For instance, the 2<sup>nd</sup> activity plan “The proper way self-washing hair”, one of the 14 activity plans. This activity composed of three stages: first stage- asked question by showing the poster. This stage could be reflected about the judgment process. Second stage-asked the volunteers to do a role play. This stage was reflected about the judgment process as well. Third stage-divided students to work in group. Students were asked to do the ordering of the cart sort about the steps of washing hair. These actions reflexed about self-observation and self-reaction. After ordering, students were asked to present their task. This presentation action reflexed the judgment process and self-observation. As mentioned, one month after experiment, the researcher asked students to take follow up test in the experimental group. The result revealed that students’ health practices on personal health remain unchanged. It seem that they kept practices their daily hygiene, thus the good health habits occurred. This could be concluded that self-regulation concepts could help students adhere to good daily health practices then good

habits of practices on personal health could be appeared. The result of this study was consistent with three studies which the concepts of Bandura (1991) which stated that three processes of self-regulation can improve the behaviors and self-regulation concept (Schunk, 1990; Zimmerman, 2002) also help increase the adherence to a good behavior. Additionally, this finding from this study was consistent with three studies which used self-regulation concept for implementing in health education program. First study was conducted by Limrunangrong (2011) "A self-regulation program on diet and exercise behavior in pregnant women with gestational diabetes mellitus". The finding pointed out that the experimental group could control diet, exercise and two hours post prandial blood glucose were significant greater than the control group on fourth week. Secondly, Markjaroen (2011) studied on the effects of the health education learning management using a self-regulation program in fast food consumption behaviors of the secondary school students. The result indicated students received the self-regulation program had attitude and practices on fast food behavioral consumption better than students did not receive self-regulation program intervention. The last study, Chanchay (2006) conducted a research about "A self-regulation program on decreasing junk food consumption among students in Bumrunwitha, Thonburi Primary School, Bangkok". The result showed about the effectiveness of the application of self-regulation concepts and participation learning on decrease the junk food consumption behaviors.

In this study, the researcher collected not only the health practices test but also the knowledge test and parents' interview. The result of the knowledge test showed that after experiment, the mean scores of the experimental group was statistically higher significances than before experiment at the .05 level. However, in the control group the mean scores between before and after experiment were found no statistically significant differences at the .05 level. This could be expressed about the effect of the learning activities could enhance not only the health practices on personal health but also the knowledge on the personal health was improved in the same time. Moreover, the result of parents' interview (parents of experimental and control groups) were indicated that mostly of their children had good health practices on daily hygiene such as self-taking bath, self-washing hair, selecting clean clothes, preparing their belonging and washing hands. One parents reported that "My son takes a bath by himself as I have been taught. Actually, he like to collect his pencil and prepare the books after do the homework by

himself". But surprisingly, the information related to food (dangerous substances, extremely flavors, and artificial colors) the parents reported that "We have no choice, I know some kind of some food with artificial colors like the grill meat that is the favorite breakfast of my son". The different houses with different life style and income were influence on the ways to choose the food consumption. Thus giving knowledge about the information and disadvantages of these kind of food were needed.

Refer to the result from each items of health practices test was found that after experiment, the items of the questions number 11, 12, 13, 14, 20 and 29 were found statistically significant differences from before experiment at the .05 level. It means that the health practices on the nail care (I soak my nails before cutting, I use shaped and clean nail cutter, I sharpen my nails after cutting) the stuff preparation (I prepare my personal belonging in order after using) the hands wash (I wash my hands after toilet) and the taste of food consumption (I eat bland tasty food) were improved. They were practices more perhaps because of the effect of the activities. For example the 3<sup>rd</sup> activity: "Keeping short clean nails", the research gave the colorful handout which described about the disadvantages of the long nails. Moreover, students were provided the chance to practices with the small new nail cutter which distributed by the researcher to all the students in grade 3A. In general, their parents reported that "my daughter always ask me to cut her toe nail when it look long", "my son cut the finger nail by himself when it looks long nail and nail dirt".

### **Implication of Finding**

1. The results from this study revealed that learning activity design by using self-regulation concept could enhance the personal health practice among elementary school students. Thus, the school administrator should implement these learning activities to all grades of students in Pi Thnou primary school in order to promote the personal health.

2. School administrators should modify and apply these learning activities to tackle other health problems.

3. School administrators should build up the knowledge based environment about the food information to the student in order to using the children to educate to their community.

## **Recommendation for Further Research**

1. The studies should be carried out to explore the implementation of the learning activities in different age groups.

2. This learning activity design was built by the researcher based on the concept of self-regulation and three rules of Thai National Health Recommendation. Therefore, the further study should implement with ten rules of Thai National Health Recommendation in order to enhance health behaviors of the elementary school students.

3. Qualitative methodology should be used to find out the factors influencing on the barriers of personal health practices.



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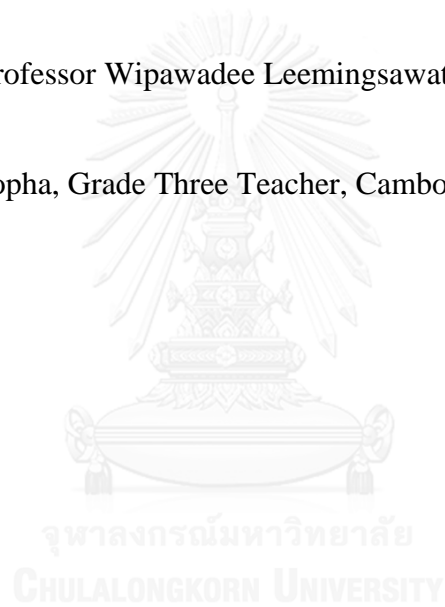
**APPENDIX**



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY

## Appendix A: List of Experts

1. Professor Samjit Supannatas, Dr.P.H.
2. Associate Professor Tepwanee Homsanit, HS.D.
3. Ms. Benjamas Suramithmaitree, Director of Health Education Division,  
Ministry of Public Health
4. Assistant Professor Wipawadee Leemingsawat, Ph.D.
5. Ms. Van Bopha, Grade Three Teacher, Cambodia



## Appendix B: Instruments of the Study

### IOC of the Activities

Activities	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Total
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	1	1	-1	1	1	0.6
4	1	1	1	1	1	1
5	1	1	1	1	1	1
6	1	1	1	1	1	1
7	1	1	1	1	1	1
8	1	1	1	1	-1	0.6
9	1	1	1	1	-1	0.6
10	1	1	1	1	1	1
11	1	1	1	1	1	1
12	1	1	0	1	1	0.8
13	1	1	1	1	1	1
14	1	1	1	1	1	1
<b>Total</b>						<b>0.9</b>

### Reliability of the Health Practice Test

#### RELIABILITY ANALYSIS-SCALE (ALPHA)

#### Reliability Coefficients

N of Cases=35.0

N of Items=33

Alpha= .708

### Health Practices Test (English Version)

Instructions: Please mark one choice in each row based on your practice behaviors in the last one month:

*Every times* means Students practice this action as regularly = practice 100%

*Sometimes* means Students mostly practice this action but not regularly  
= At least 50%

*Never* means Students never ever practice this action= 0%

Health Practice Items	Every time	Sometimes	Never
1.I take a bath by myself			
2.I use soap to scrub my whole body			
3.I wipe my body dry after taking bath			
4.I wear new set of cloth after taking bath			
5.I wash the hair by myself			
6. I use my fingertip to slightly massage my hair while I wash the hair			
7.I wipe my hair dry after washing hair			
8.I take a bath and wash the hair in the same time			
9.I cut my long finger nails by myself			

10.I cut my long toe nail by myself			
11.I soak my nails before cutting			
12.I use shaped and cleaned nail cutter			
13.I sharpen my nails after cutting			
14.I prepare my personal belonging(books, pens, pencils) in order after use it			
15.I prepare my toys in order after used it			
16.I clean my toys when they are dirty			
17. I wear the clean clothes			
18. I do not wear the clothes with bad smell			
19.I wash my hands before eating			
20.I wash my hands after toilet			
21.I wash my hands after holding dirty thing			
22. I dry hands after washing it			
23. I wash palm to palm with fingers interlaced			

24. I eat five groups of food			
25. I eat fruit			
26. I eat vegetable			
27. I eat candy			
28. I eat chip			
29. I eat bland tasty food			
30. I drink the soft drink			
31. I drink eight glasses of water			
32. I drink two to three glasses of milk			
33. I eat uncooked well food			
34. I eat hot and cook food			
35. I eat clean and safe food			

**Health Practice (Khmer Version)**

សូមគូសសញ្ញាបញ្ជាក់ពីជំរើសរបស់អ្នកលើសំណួរនៅក្នុងជួរដេកនីមួយៗដោយផ្អែកលើ

ឥរិយាបថក្នុងការអនុវត្តសុខភាពរបស់អ្នកក្នុងរយៈពេលខែកន្លងមក

**គ្រប់ពេល** មានន័យថាអ្នកអនុវត្តសកម្មភាពនេះបានជាប្រចាំ (អនុវត្ត 100%)

**ពេលខ្លះ** មានន័យថាអ្នកអនុវត្តសកម្មភាពនេះមិនបានជាប្រចាំ(អនុវត្តយ៉ាងហោចណាស់ 50%)

**មិនដែល** មានន័យថាអ្នកមិនដែលអនុវត្តសកម្មភាពនេះសោះ (អនុវត្តស្មើនឹង 0%)

ចំណុច	ឥរិយាបថក្នុងការអនុវត្តសុខភាព	គ្រប់ពេល	ពេលខ្លះ	មិនដែល
1.	ខ្ញុំងូតទឹកដោយខ្លួនឯង			
2.	ខ្ញុំជុំសន្ទនាពេញម៉ាតូខ្លួន			
3.	ខ្ញុំជូតខ្លួនអោយស្ងួតបន្ទាប់ពីងូតទឹក			
4.	ខ្ញុំពាក់ខោអាវមួយកំប្លែងបន្ទាប់ពីងូតទឹករួច			
5.	ខ្ញុំកក់សក់ដោយខ្លួនឯង			
6.	ខ្ញុំប្រើម្រាមដៃម៉ាស្សាគ្រាលពេលកំពុងកក់សក់			
7.	ខ្ញុំជូតសក់អោយស្ងួតបន្ទាប់ពីកក់សក់រួច			
8.	ខ្ញុំងូតទឹកលើយកក់សក់ក្នុងពេលតែមួយ			
9.	ខ្ញុំកាត់ក្រចកដៃដោយខ្លួនឯង			
10.	ខ្ញុំកាត់ក្រចកជើងដោយខ្លួនឯង			
11.	ខ្ញុំគ្រាំក្រចកអោយទន់មុននឹងកាត់			
12.	ខ្ញុំកាត់ក្រចកដោយប្រើកន្ត្រៃមុតហើយស្អាត			



13. ខ្ញុំសំរួចក្រចកកុំអោយមុត បន្ទាប់ពីភាត់រួច			
14. ខ្ញុំរៀបចំទុកដាក់របស់របរប្រើប្រាស់ផ្ទាល់ខ្លួន (សៀវភៅ, ប៊ិច, ខ្មៅដៃ...)បន្ទាប់ពីប្រើប្រាស់រួច			
15. ខ្ញុំរៀបចំទុកដាក់របស់លេងបន្ទាប់ពីលេងរួច			
16. ខ្ញុំលាងសំអាតរបស់លេងនៅពេលវាកខ្វក់			
17. ខ្ញុំពាក់ខោអាវស្អាត			
18. ខ្ញុំមិនពាក់ខោអាវដែលមានក្លិនស្អុយ			
19. ខ្ញុំលាងដៃមុនញាំអាហារ			
20. ខ្ញុំលាងដៃក្រោយពីបន្ទោរបង់រួច			
21. ខ្ញុំលាងដៃក្រោយពីកាន់របស់កខ្វក់			
22. ខ្ញុំជូតដៃអោយស្ងួតបន្ទាប់ពីលាងដៃរួច			
23. ខ្ញុំលាងដៃដោយដុះនៅចន្លោះប្រាមដៃទាំង សងខាង			
24. ខ្ញុំញាំអាហារ 5 ក្រុម			
25. ខ្ញុំញាំផ្លែឈើ			
26. ខ្ញុំញាំបន្លែ			
27. ខ្ញុំញាំស្ករគ្រាប់			
28. ខ្ញុំញាំដំឡូងបំពង			
29. ខ្ញុំញាំម្ហូបសជាតិសាប			
30. ខ្ញុំផឹកទឹកក្រូច			

31. ខ្ញុំដឹកទឹកស្អាត 8 កែវក្នុងមួយថ្ងៃ			
32. ខ្ញុំដឹកទឹកដោះគោ 2 ទៅ 3 កែវក្នុងមួយថ្ងៃ			
33. ខ្ញុំញ៉ាំម្ហូបអាហារមិនបានចំអិន			
34. ខ្ញុំញ៉ាំម្ហូបអាហារធ្វើហើយថ្មីៗ នៅក្តៅៗ			
35. ខ្ញុំញ៉ាំម្ហូបអាហារស្អាត			

Learning Activity Plan on Personal Health according to Thai National Health  
Recommendation by using Self-Regulation concept

**Activity Plan1: The Proper Way for Self-Taking Bath**

**I. Main Concept**

Taking bath refers to clean or wash the body. Washing the body can prevent oneself from a lot of pathogens which can transmit to the body or spread to another person.

The proper way for self-taking bath consists of many steps such as soaping, scrubbing everywhere of the body, removing the soap by using clean water, and wiping the body by using bath towel.

**II. Objective of the Activities**

By the end of the activities, pupils should be able as following:

- To explain about the steps of the self-taking bath
- To demonstrate about the proper way for self-taking bath.

**III. Content of the Activities**

The proper way for self-taking bath

**IV. Learning Activities**

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Ask questions to students:</p> <p>a. “Today, has everybody taken the bath already before going school?”</p> <p>b. “ Who took the bath for you”</p> <p>c. “Who can sing a song ALWAYS CLEAN?”</p>			

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Activity Stage</b></p> <p>1. Let students look at a picture “clean girl” and “ugly girl” and then ask:</p> <ol style="list-style-type: none"> <li>Why two girls are different?</li> <li>What do I need to do to become a clean girl? And what I need to avoid from ugly.</li> </ol> <p>2. Find three volunteer students to do a role play about their routine self-taking bath (students exchange their experience in taking bath)</p> <p>3. Distribute the handout to all the students, read it in 3minutes</p> <p>4. Divide students into three groups</p> <ol style="list-style-type: none"> <li>Order the card sort of the steps of taking bath</li> <li>List what things that they need to avoid while taking bath.</li> <li>Each group needs to present their work, and find the different points among the groups</li> </ol> <p>5. The teacher gives feedback on their performances</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p> <p>√</p>

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<b>Conclusion Stage</b> 1. The teacher summarizes the main point of this section to students 2. Give self-record sheet to students as a diary in order to set goal “Be able to practice self- taking bathing proper way, in seven days”	√		

#### V. Resources Materials used in the Activities

- Three sets of card sort about the steps of self- taking bath in proper way
- One picture of the clean and dirty girl picture
- 40 handouts of the steps of taking bath
- Three set of the materials for taking bath: soap, towel and new cloth..etc

#### VI. Evaluation of the Activities

- Checklist
- Observation
- Self-record sheet

### **Handout: “Proper Way for Self-Taking Bath”**

Taking bath refers to an action for cleaning the dirty thing, sweat, and body odor. Moreover, you will be feel fresh and prevented from a lot of pathogens by taking a bath. Taking bath should be taken at least once or twice a day.

There are seven steps of self- taking bath in proper way as following:

1. Preparing to take a bath: take off the cloth and prepare new cloth.
2. Using water to soak your body from head to toe.
3. Scrubbing the face
4. Scrubbing the body with soap
5. Rinsing the body with clean water
6. Wiping the body dry by bath towel
7. Wearing new set of clothes



### Checklist on the Steps of Self Taking Bath in the Proper Way (For Teacher)

Instruction: Please tick  $\checkmark$  in the box about step of taking bath

Steps of Taking Bath	Group I		Group II		Group III	
	Yes	No	Yes	No	Yes	No
1. Taking off the cloth						
2. Preparing new cloth.						
3. Soaking your body						
4. Scrubbing the face						
5. Scrubbing the body with soap						
6. Rinsing the body with water						
7. Wiping the body dry by bath towel						
8. Wearing new set of cloth						

### Self-Record Sheet of Self Taking Bath (For Student)

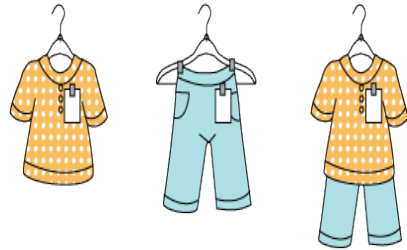
Instruction: Please complete the information below:

	What time you take a bath	How many time you take bath	Tell about step of taking bath
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			



### Card Sort: “Steps of Self-Taking Bath” (For Student)

Instruction: Please order the steps of taking bath in proper way:



1. Preparing to take a bath: take off and prepare the cloth



2. Using water to soak your  
body from head to toe

3. Scrubbing the face

4. Scrubbing body  
with soap



5. Rinsing the body

6. Wiping the body dry by  
bath towel

7. Wearing new set  
clothes

**Pictures: “Clean and Dirty Girl”**



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Source of Picture and Cart Sort

Manual Learning Activity Management, Health Education Division, Department of supportive Health Services, Ministry of Public Health (2013)

## Activity Plan 2: The Proper Way for Self-Washing Hair

### I. Main Concept

Hair washing is the act for cleaning the hair and preventing the body from the pathogens. Everyone should keep on practice washing hair at least twice per week.

Therefore, in term of well understanding about the steps of proper washing hair for children need to be educated.

### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To describe about the steps of the self-washing hair
- To demonstrate about the proper way for self-washing hair

### III. Content of the Activities

The proper way for washing hair

### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1.The teacher shows a picture of girl scratched head</p> <p>2. Ask question “Have you ever scratch your head?”</p> <p><b>Activity Stage</b></p> <p>1. Ask questions to students</p> <p style="margin-left: 20px;">a. Anyone knows that someone ever have head lice</p> <p style="margin-left: 20px;">b. Why this person has head lice on the head.</p>		√	

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
2. Find three volunteer students to do a role play about their routine self-hair washing		√	
3. Distribute the handout to all the students			
4. Divide students into three groups			
a. Order the card sort of the steps of self- washing hair	√		√
b. List what things that they need to avoid while washing hair			
c. Each group needs to present their work	√	√	
5. The teacher gives feedback on their performances.		√	
<b>Conclusion Stage</b>			
1.The teacher summarizes the main point			
2. Give self-record sheet to students as a diary in order to set goal “Be able to practice self- taking bathing proper way, in seven days”	√		

#### V. Resource Materials used in the Activities

- Three sets of card sort about the steps of self- washing hair in proper way
- One picture of the girl scratched head
- 40 handouts of the steps of washing hair
- Three set of the materials for hair washing: shampoo, towel and comb..etc.

#### VI. Evaluation of the Activities

- Checklist
- Observation and -Self-record sheet

### **Handout: “Proper Way for Self-Washing Hair”**

Washing hair is an action for cleansing the dirty things from hair then the hair will be smelt as perfume. These actions not only remove the dirty thing but also prevent the pathogens such as the head lice.

Without taking bath, the hair will be dirty, and the friendship discrimination from neighborhood or friends will occur. In addition, the most important point is the scalp dermatomes, which is one of the skin diseases.

Washing hair should be taken at least once or twice a week. Self- proper hair washing is considered as easy action for every adult, whereas the child find that it is a hard action since they do not well known about the self- proper hair washing steps. Therefore, the steps of the self-proper hair washing need to be mentioned.

There are six steps of self-washing hair as following:

1. Using water to soak the hair.
2. Pressing the shampoo on the palm and crumpling up the hair as well
3. Using the fingertip to slightly massage the hair
4. Rinsing the hair with clean water
5. Wiping the hair dry by small towel
6. Combing the hair

### Card Sort of the Step of Self-Washing Hair

Instruction: Please order the steps of washing hair



1 Using water to soak the hair



2. Pressing the shampoo on the palm and crumpling up the hair



3. Using the fingertip to massage the hair



4. Rinsing the hair with clean water



5. Wiping the hair dry by small towel



6 Combing the hair

Source of Cart Sort  
 Manual Learning Activity Management, Health Education Division, Department of supportive Health Services, Ministry of Public Health (2013)

### Checklist on the Steps of Washing Hair in Proper Way (For Teacher)

Instruction: Please tick  $\checkmark$  in the box about step of washing hair

Steps of washing hair	Group I		Group II		Group III	
	Correct	In correct	Correct	In correct	Correct	In correct
1. Using water to soak the hair						
2. Pressing the shampoo on the palm						
3. Crumpling up the hair						
4. Using the fingertip to head massage						
5. Rinsing the hair with water						
6. Wiping the hair dry by small towel						
7. Combing the hair						

### Self-Record Sheet of Self-Washing Hair (For Student)

Instruction: Please complete your weekly hair washing as below:

	Which days you wash your hair per week	How many times you wash your hair per week	Tell about step of hair washing
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			



**Picture: “Scratched Girl”**



What is she doing?

Have you ever do like that?

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Source of Picture  
Manual Learning Activity Management, Health Education Division,  
Department of supportive Health Services, Ministry of Public Health (2013)

### Activity Plan 3: Keeping Short Clean Nail

#### I. Main Concept

Cut nail means a nail having a tapering rectangular form with a blunt point, made by cutting from a thin rolled sheet of iron or steel. Clean fingernails and toenails in the proper way are the things need to be practiced to improve daily hygiene and stay healthy.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able to do as followings:

- To describe and explain about the tips of cutting nail by oneself
- To demonstrate about the proper way for cut the nails and clean the fingernails and toenails

#### III. Content of the Activities

Keeping short clean nail

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Request students to show their nails</p> <p>2. Ask questions:</p> <p>a. “Who have long nails?”</p> <p>b. “Who cut the nails for you?”</p>		√	
<p><b>Activity Stage</b></p> <p>1. Divide students into three groups</p> <p>a. Students will do the brainstorming about the disadvantages of long nails</p> <p>b. Students present their results of the discussion</p>	√		

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
2. Distribute the handout to all the students			
3. Teacher demonstrates two method of nail cutting a. Follow the recommendation of cutting nail b. Skipping some steps. c. Ask students to decide to express their opinion on which method should be better		√	√
4. Give the sample paper of the nail pictures for practicing cutting nail (as group work) and ask about the tips for cutting nail	√		√
5. The teacher gives feedback and small gift to the volunteer answering the question.		√	√
<b>Conclusion Stage</b>			
1. The teacher and students summarize the main point of this section			

#### V. Resource Materials used in the Activities

- Three set of the materials for nail cutter or manicure kits
- 40 handouts of keeping for cutting nails
- Sample papers of the pictures of the fingernails and toenails

#### VI. Evaluation of the Activities

- Observe students from practicing nail cutting on the picture sample papers
- Observe students' fingernails and toenails

### **Handout: “Keeping Short Clean Nail”**

The stump will get in to the nails for those who keep long nails. One of the disadvantages of having long nail is dirty. When a nail is dirty, it is the source susceptible to spreading the diseases from one part to another part of the body. In case of nail fracture, you will suffer from pain, and the pathogens will be penetrated into the body. Therefore, keeping short and clean nail are the important and required actions in order to avoid from pathogens and other diseases.

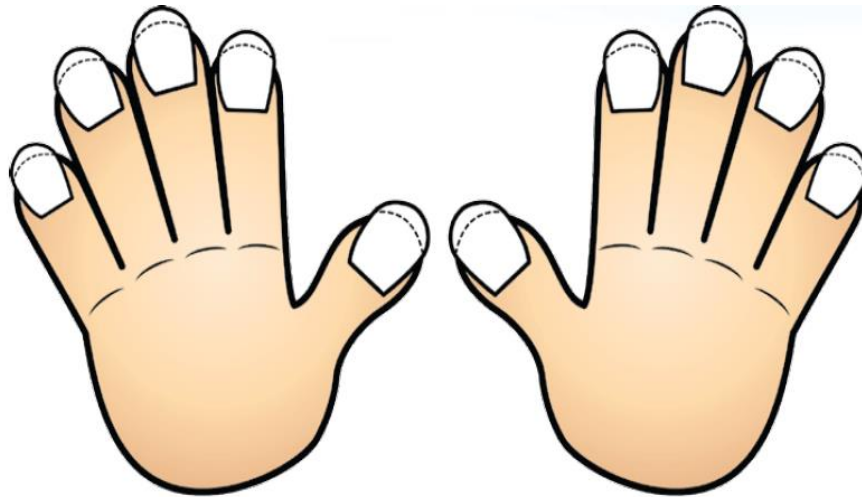
Clean fingernails and toenails in the proper way are the compulsory actions and get us healthy by staying with good hygiene.

There are some tips in clipping the nail as following:

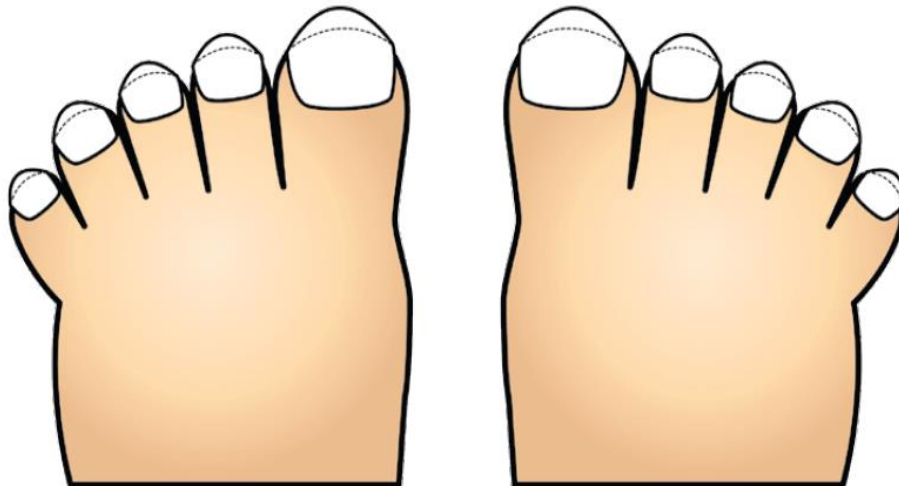
1. Using shaped nail cutter
2. Cutting the nails after hand washing, after taking bath or soaked nails
3. Cutting the fingernail in the curve shape and cutting the toenail in straight shape
4. Cutting the nails every three weeks
5. Avoiding using the hard material for scratching the nails
6. Steeping for manicure the nails: soaked nails in 5 minutes, massaged hand, cleaned and shaped nails by using manicure kit

### Sample Paper (For Student)

Instruction: Please shape the sample paper of long finger and toenail



Long Fingernail



Long Toenail

Source of Sample Paper

Manual Learning Activity Management, Health Education Division,, Department of supportive Health Services, Ministry of Public Health (2013)



Fingernail Cutting



Toenail Cutting



Nail Cutter and Manicure Kit

Source of the picture:

Manual Learning Activity Management, Health Education Division, Department of supportive Health Services, Ministry of Public Health (2013)

<http://www.cosmtools.com/tweezerman-manicure-kit.html>

<http://www.aliexpress.com/item/Free-Shipping-Hello-Kitty-Nail-clippers-Cartoon-Nail-cutter-10pcs-lots/545772159.html>

### Activity Plan4: How to Organize and Clean the Personal Belonging or Toys

#### I. Main Concept

Toys create clutter and trip hazards. The action of organizing or cleaning your stuffs or toys is compulsory. It's good to keep toys clean and organized because younger are constantly touching things and putting their hands and objects in their mouths, so they can pick up germs and illnesses easily. When we arrange thing in order, we are easily to find the thing we want and save time. Cleaning things and Toys can reduce the chance of catching illnesses. The broken toys, duplicated toys, and unused toys should be eliminated.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To describe the ways to clean the toys
- To demonstrate the way to organize the toys

#### III. Content of the Activities

How to organize and clean the personal belonging or toys

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Show the picture of well order toys and ask questions to students:</p> <p>a. What do you think about this picture?</p> <p>b. What kind of toys do you have at home?</p> <p>c. Have you ever cleaned your toys by yourself?</p> <p><b>Activity Stage</b></p> <p>1. Find two volunteers to ask about how to clean their toys.</p>	√		

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>2. Give handout to students and let them read in three minutes</p> <p>3. Divide students into three groups</p> <p>a. Brainstorm about advantages of cleaning toys</p> <p>4. Teacher collects some students' belongings and takes some toys from home (pens, notebooks, balls, cartoon..)</p> <p>a. Ask two groups of students to play a game "Please prepare your stuffs within three minutes"</p> <p>b. The remaining group will act as judges by giving the heart sticker.</p> <p>5. Teacher counts on the stickers to find the winner group.</p> <p>a. Select two students among the winner group to ask "What are the advantages of preparing toys in the good order?"</p> <p>b. Reward the students having the best answers</p> <p><b>Conclusion Stage</b></p> <p>1. The teacher and students summarize the main point of this section</p>	<p>√</p>	<p>√</p>	<p>√</p>



**V. Resources Materials used in the Activities**

-Students' personal stuffs and toys: pens, pencils, notebook, bags, balls, cartoons...etc.

-40 handouts "How to organize and clean the stuffs or toys"

-Heart sticker and alarm clock

**VI. Evaluation of the Activities**

-Observation

-Heart sticker counting



**Handout: “How to organize and clean the stuffs or toys”**

Toys create clutter and trip hazards. The action of organizing or cleaning your stuffs or toys is compulsory. It's good to keep toys clean and organized because younger are constantly touching things and putting their hands and objects in their mouths, so they can pick up germs and illnesses easily. When we arrange thing in order, we are easily to find the thing we want and save time. Cleaning things and Toys can reduce the chance of catching illnesses. The broken toys, duplicated toys, and unused toys should be eliminated.

Firstly, organizing the stuffs and toys will help to get home clean, essay to maintain and re-picking use. Some of the ways to prepare the stuff and toys in the good order are making toy in category, putting toys in shelves or box with labelling. Lastly, cleaning toy is the act of removing the dust, dirtiness or pathogens in order to prevent the dirty thing approaching to the body. One of the ways to clean the toys is wiping down by clean towel.

### Pictures: “Well Organizing and Messy Toys”



#### Well Organizing Toys



#### Messy Toys

Source of picture:

<http://www.furnishburnish.com/homekeeping/organizing-storage-ideas-for-kids-room/>  
<http://www.furnishburnish.com/homekeeping/organizing-storage-ideas-for-kids-room/>

### Activity Plan 5: Wearing Clean Clothes

#### I. Main Concept

Wearing clean clothes can prevent the body from some pathogens. If you wear the dirty clothes or wet clothes, you might get sick and have a problem with skin disease or allergy.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able as following:

- To choose the clean clothes for themselves
- To distinguish between clean and dirty clothes

#### III. Content of the Activities

Wearing clean cloth

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Teacher tells a story of a girl who used to wear wet clothes</p> <p>2. Ask students:</p> <p style="margin-left: 20px;">a. How many set of uniform do you have?</p> <p style="margin-left: 20px;">b. For one set of uniform, how many times do you wear it?</p> <p><b>Activity Stage</b></p> <p>1. Give handout and “Like and Dislike” sticker to all students</p>			

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>2. Ask students to put the “Like and Dislike” sticker between clean and dirty clothes. “Which one will you choose to wear?”</p> <p>3. Teacher prepares some sets of clothes from home and put them on the table</p> <p>a. Select three pairs of students to take clothes for their peers</p> <p>b. Select three students from the pair group to perform how to select the clothes to wear and tell about their experiment in wearing student clothes</p> <p>c. Other students will give the stickers to the performers</p> <p>5. Teacher counts on the stickers to find the winner and give some gift with the comment</p> <p><b>Conclusion Stage</b></p> <p>1. The teacher summarizes the main point of this section to all students</p>		√	√
		√	
		√	√

#### V. Resources Materials used in the Activities

- 40 handouts of wearing clean clothes
- Pictures of clean and dirty clothes
- Like and Dislike sticker
- Some sets of sample clothes

#### VI. Evaluation of the Activities

- Observation
- Like and Dislike sticker counting

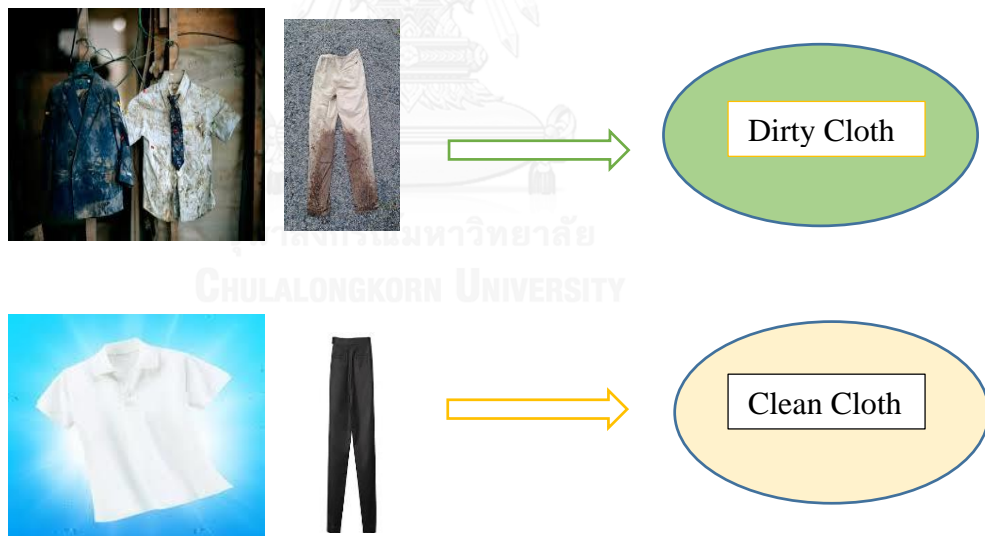
### Handout: “Wearing Clean Clothes”

There are many types of clothes like clean, dirty, dry, wet, and fresh cloth. Some clothes are in bad smell.

The clean clothes refer to wearing the cloth without stains (colored stain or caked stain). Wearing the same clothes without washing so many times must be avoided. Wearing clean clothes should be a rule to be practiced. In the other hand, dirty clothes maybe consist of some pathogens sticking on, and these dangerous pathogens can allow to enter body easily.

The dry fresh clothes refer to the clothes that not wet and not in bad smell. If you wear wet bad smell clothes, your will catch cold. Furthermore, if wearing wet clothes, you maybe have respiratory disease, allergic and skin disease.

Wearing clean cloth can prevent the body from some pathogens. If you wear the dirty clothes or wet cloth, you might get sick and problem with skin diseases or skin, allergy.



Source of the pictures

<http://childrcloth.net/new-orleans-childrens-clothes/>

[http://www.huffingtonpost.com/2013/05/16/brighten-whites-lemon-juice\\_n\\_3281298.html](http://www.huffingtonpost.com/2013/05/16/brighten-whites-lemon-juice_n_3281298.html)

### Pictures of Clean and Dirty



Source of picture:

<http://mothering-matters.com/10-tips-for-easier-laundry/>

## Activity Plan 6: The Proper Steps of Washing Hand

### I. Main Concept

Generally, hands touch dirty things and washing hand should be practiced. Some parts of the hands cannot be reached during washing and it will become a good place for pathogens to expand their species. These pathogens can transfer in to our body through dirty hands.

Therefore, the regular hand wash in the proper steps are one of the best way to remove dirty things from hands and prevent from diseases.

### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To describe about the steps of washing hand
- To demonstrate about the proper steps of washing hand

### III. Content of the Activities

The proper steps of washing hand.

### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Ask questions to the students:</p> <p>a. Do you think you have clean hand?</p> <p>b. Ask students to show their hands to each other</p> <p><b>Activity Stage</b></p> <p>1. Ask students: “If your hands not clean what should you do?”</p>			



Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
2. Find three volunteer students to show their routine washing hand	√	√	
3. Teacher distributes the handout and demonstrates the seven steps of washing hand with the picture.	√		
4. Ask students to work in pair to practice the hand wash and complete the peer checklist.	√	√	√
5. Teacher collects the students' checklist and randomly selects one pair of students to demonstrate their hand wash practices.		√	
6. Select three students to organize the order of washing hand in correct way within three minutes.	√		√
<b>Conclusion Stage</b>			
1. The teacher and students summarize the main point of this section.			

#### V. Resources Materials used in the Activities

- 40 handouts of the steps of washing hand
- Picture of washing hand will have good health
- Card sort of the steps of washing hand
- Materials: soaps, water, towels, glasses, plastic jars

#### VI. Evaluation of the Activities

- Observation
- Peer-checklist

### **Handout: “Proper Steps of Washing Hands”**

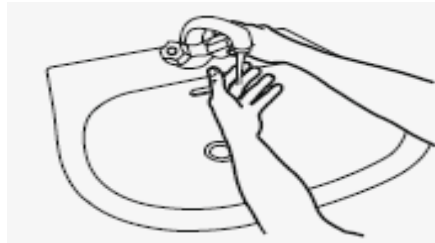
Hands, which are the part of the body, are used to hold and touch everything that might consist of the dirtiness or pathogens. Hands should be washed all segments even fingers, palm, back or wrist of hand. If you cannot wash all over your hand, it may provide a good chance for the pathogens to expand their species. Washing hands should be last around 40 to 60 seconds per time.

Therefore, the seven steps of washing hand in proper ways need to be practiced as following:

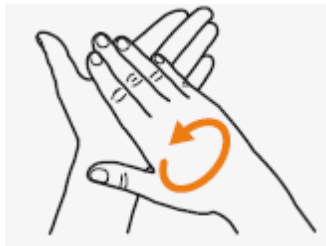
1. Wet hand with water and apply enough soap to cover all hand surfaces
2. Rub hand palm to palm
3. Right palm over left dorsum with interlaced fingers and vice versa
4. Palm to palm with finger interlaced
5. Rotational rubbing of left thumb clasped in right palm and vice versa
6. Rub in circle on your palm and vice versa
7. Rinse hand with water and dry hands through with small towel

### Card Sort: “Steps of Washing Hand”

Instruction: Please order the steps of washing hand in proper way



1. Wet hand with water and apply enough soap to cover all hand surfaces



2. Rub hand palm to palm dorsum with interlaced



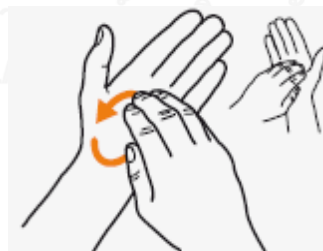
3. Right palm over left fingers and vice versa



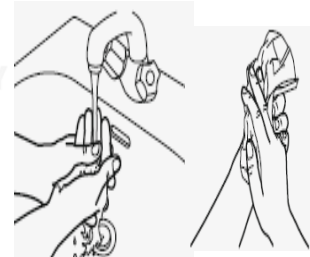
4. Palm to Palm with fingers interlaced



5. Rotational rubbing of left thumb clasped in right palm and vice versa



6. Rub in circle on your palm and vice versa



7. Rinse hand with water and dry hands through with small towel

Source of Card Sort:

Report: WHO Guideline on Hand Hygiene in Health Care 2009, part II: Consensus Recommendations on How to hand wash (page 156)

Picture: "Washing Hand"



Source of Picture:

[http://www.unicef.org/cambodia/results\\_for\\_children\\_21265.html](http://www.unicef.org/cambodia/results_for_children_21265.html): Poster to Promote Good Hygiene Practices in Cambodia

### Peer Checklist (For Students)

Instruction: Please tick  $\checkmark$  in the box about step of washing hair

Steps of Washing Hands	Peer Action		Note Comment
	Do/Yes	DoNot/No	
1. Wet hand with water and apply enough soap to cover all hand surfaces			
2. Rub hand palm to palm			
3. Right palm over left dorsum with interlaced fingers and vice versa			
4. Palm to palm with finger interlaced			
5. Rotational rubbing of left thumb clasped in right palm and vice versa			
6. Rub in circle on your palm and vice versa			
7. Rinse hand with water and dry hand through with small towel			

## Activity Plan 7: When You Need to Wash Your Hands

### I. Main Concept

Having clean hand is one of the mean to stop the spread of some diseases and to prevent your body from the pathogens transmission. Therefore, the regular hand wash should be practiced, especially before eating and after toilet.

### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To explain when the appropriate times for washing hand
- To choose when the appropriate times for washing their hands

### III. Content of the Activities

When you need to wash your hands

### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Teacher shows the poster of washing hand 2. Ask students “When should you wash your hands?”</p>			
<p><b>Activity Stage</b></p> <p>1. Ask students to write down when they wash their hands</p> <p>2. Teacher gives the answers and the handout to all students</p>	√	√	

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>3. Divide students into three groups:</p> <p>a. Two groups join a game “Before and After Washing hand”.</p> <p>b. The rest of the group will be observer and scorer too.</p> <p>c. Ask two groups to leave the sign word “Before and After” in front of the times of washing hand within three minutes.</p> <p>d. The observer group will give the heart sticker as scoring the two groups.</p> <p>4. Teacher counts on the stickers and rewards to the winner group</p> <p><b>Conclusion Stage</b></p> <p>1. The teacher and students conclude the main point of this section.</p> <p>2. The teacher gives self-report form on washing hand activities to the students as the record.</p>		<p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p>√</p>

#### V. Resources Materials used in the Activities

- 40 handouts of when you need to wash your hands
- Picture of the appropriate times to hand wash
- Sign word: After and before
- Heart stickers
- Self -report

#### VI. Evaluation of the Activities

- Self-report
- Heart sticker counting

### Handout: “When You Need to Wash Your Hand”

When you hold the food to eat, please make sure your hand is clean. If your hand is not clean, for example, touching wound, pet, ill patients and some parts of your body. Some pathogens will transmit to body easily by dirty hands.

Washing hand to get clean hands is the action that should to be done. Moreover, knowing about the appropriate times for washing hand is equally important.

The regular washing hands need to be done as following times:

Before	After
1.Eating food	1.Eating food
2.Touching patients	2.Using toilet
3.Touching the face	3.Touching dirty thing
4.Touching the wound	4.Touching pet
	5.Touching patients
	6.Getting back from school



### Pictures of the Appropriate Time of Washing Hand

Instruction: Please leave the sign word: “Before and After” in front of the times of washing hand



Before eating food



Before touching Face



Before touching Patients



Before touching wound



After eating Food



After using toilet



After touching pet



After touching dirty



After getting back from school



After touch patient

Source of Pictures

Manual Learning Activity Management, Health Education Division, Department of supportive Health Services, Ministry of Public Health (2013)

### Students Self-Report on Daily Washing Hands (For Students)

Instruction: Please tick  $\checkmark$  on the box about your daily washing hand practices:

Wash Date	Before Eating	After Eating	After Toilet	Back From School	After Touch Dirty	Before Touch Face
Date 1: .....						
Date 2: .....						
Date 3: .....						
Date 4: .....						
Date 5: .....						
Date 6: .....						
Date 7: .....						

## Activity Plan 8: Let's Practice To Have Clean Hand

### I. Main Concept

Hands should be cleaned by washing them regularly. The proper step for washing hand is one of the means to prevent your body from the pathogens. Moreover after you know the correct steps of washing hand, you also need to know when to wash hands especially washing hand before eating food and after using toilet.

### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To practice the washing hand in the proper steps
- To decide when the good moment to wash hand are.

### III. Content of the Activities

Let's practice to have clean hand.

### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Teacher ask students</p> <p style="margin-left: 20px;">a. To review about the correct steps of washing hand</p> <p style="margin-left: 20px;">b. To explain when they need to wash hand</p> <p><b>Activity Stage</b></p> <p>1. Select three students to show the steps of washing hand</p> <p>2. Teacher distributes the handout to all students</p>	√	√	

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>3. Divide students in to two group:</p> <p>a. One group is looked after by the teacher assistant. TA takes the students to the toilet and he/she will observe that after going to the toilet “Do students wash their hands or do not?”</p> <p>b. Another group is looked after by the teacher. The teacher prepares the sample dishes of food for students to choose and he/she will observe that before holding food to eat, “Do the students wash their hands or do not?”</p> <p>c. Change turn between other groups</p> <p>* Using checklist to observe students action on washing hand</p>		√	√
<p>4. The teacher chooses two students among two groups</p> <p>a. To compete with each other in showing the steps of washing hand.</p> <p>b. Other students will act the judge based on the performance by giving the heart stickers.</p> <p>5. Teachers counts on the stickers and find out the winner group to reward</p>		√	√

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<b>Conclusion Stage</b> 1.The teacher summarizes the main point of this section to students 2. Teacher says thanks you to TA and suggests students to keep the good behavior practices and habit of having clean hand.			

#### **V. Resources Materials used in the Activities**

- 40 handouts of being clean hand
- Some cakes and dishes of food
- Heart stickers for scoring on the competition on washing hand
- Check list for observing on students washing hand action.
- Material for washing hand: soaps, water, plastic jars, towels...etc.

#### **VI. Evaluation of the Activities**

- Observation
- Check list

**Handout: “Being Clean Hand”**

Hands, which are the parts of the body, are used to hold and touch everything that might be consist of the dirtiness or pathogens. Washing hand should be done in regular times, especially before holding food to eat and after using toilet.

There are seven steps of washing hand in proper ways need to be practiced as following:

1. Wet hand with water and apply enough soap to cover all hand surfaces
2. Rub hand palm to palm
3. Right palm over left dorsum with interlaced fingers and vice versa
4. Palm to palm with finger interlaced
- 5 Rotational rubbing of left thumb clasped in right palm and vice versa
6. Rub in circle on your palm and vice versa
7. Rinse hand with water and dry hand through with small towel

**Check List: Observe on Students' Washing Hand Action (For Teacher)**

Instruction: Please fill the students name and tick  $\checkmark$  in the box on the students' washing hand action

Student Name	After Toilet		Before Eating	
	Wash hands	Not Wash Hand	Wash hand	Not Wash Hand
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				

Student Name	After Toilet		Before Eating	
	Wash hand	Not Wash Hand	Wash hand	Not Wash Hand
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				



### Activity Plan 9: Regular Eating Fruits and Vegetables

#### I. Main Concept

There are many benefits of fruits and vegetables. Choosing to eat variety of them will be a good tip for healthy living.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To describe about the advantages of many kinds of fruits/ vegetables
- To make decision on which fruit and vegetable they want to eat

#### III. Content of the Activities

Regular eating fruit and vegetable

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Ask students “Have you ever eaten any fruits and vegetables? Please give some examples”</p> <p><b>Activity Stage</b></p> <p>1. Divide students into three groups and ask them to list down eight items of fruits and vegetables in each group.</p> <p>2. Teacher shows the picture of fruits and vegetables and gives handout to all students</p>	√		

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>3. Request students</p> <p>a. To classify some fruit and vegetable within their color</p> <p>b. To match between their color with their advantages ( * Using matching table)</p> <p>4. Teacher selects three students to choose among these samples and asks: “what do you like the most, and why?” (Teacher prepares the sample of fruit and vegetables: banana, orange...etc. from home and put them on the table)</p> <p><b>Conclusion Stage</b></p> <p>1.The teacher summarizes the main point of this section to students</p> <p>2. Request students to complete self-report on “what types of fruit and vegetable do you eat in seven days?”</p>		√	√

#### V. Resources Materials used in the Activities

- 40 handouts of eating fruits and vegetables
- Picture of fruits and vegetables in different colors
- Matching table sheet between fruits and vegetables with health benefit
- Self-report on seven day eating fruits and vegetables
- Sample of fruit and vegetable: banana, orange, apple, watermelon, eggplant

#### VI. Evaluation of the Activities

- Observation
- Self-report

### Handout: “Eating Fruits and Vegetables”

Vegetable composes of vitamins and minerals. There are two forms of vegetables and you can find them in fresh form and cooked form. The advantages of vegetables are building up the immune system in the body, holding back the carcinogen and facilitate the excretion system.

Fruit is the sweet and freshly products of the trees or other plants that contain seed and can be eaten as food. It consists of vitamins and minerals. The benefits of fruits are facilitating the excretion system and retaining the beautiful skin.

The advantages of eating variety of fruits and vegetables in many colors are listed in the table below:

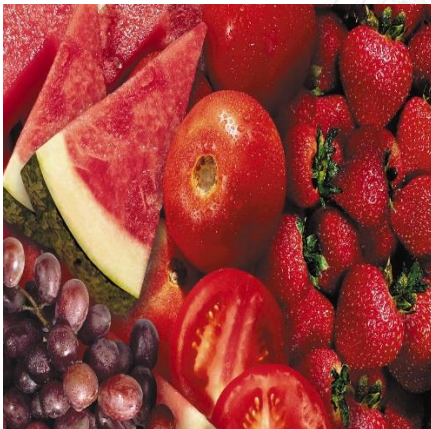
Different Colors of Fruits &Vegetables	Example	Health Benefit
Yellow and Orange	Orange, Carrot, Banana, Papaya, Pineapple,...etc.	1.Strengthen vision 2. Strengthen circulation system
Green	Morning glory, Cucumber, Kale,	1.Againt with the poison 2 .Prevent cancer
Red	Tomato, Watermelon, Red Grapes, Pomegranate	1 Maintain low level of cholesterol 2.Boost the burning calorie in use
Violet	Eggplant, Blueberries	1.Prevent risk of heart disease, or stroke 2. Helping memory function



Fruits and Vegetables in Yellow and orange



Fruits and Vegetables in Green



Fruits and Vegetables in Red



Fruit and Vegetable in Violet

Source of the picture:

<http://www.healthyfoodstar.com/the-colors-of-fruits-and-vegetables/>

[http://images.google.com/search?site=&tbm=isch&source=hp&biw=1024&bih=499&q=yellow+and+orange+fruits+and+vegetables&oq=yellow+and+orange+frui&gs\\_l=img.1.0.013.2880.12019.0.14531.26.16.2.8.8.0.328.2013.4j6j2j1.13.0.msedr...0...1ac.1.60.img..4.22.2108.Eu7-VDr5Ei4#tbn=isch&q=fruits+and+vegetables](http://images.google.com/search?site=&tbm=isch&source=hp&biw=1024&bih=499&q=yellow+and+orange+fruits+and+vegetables&oq=yellow+and+orange+frui&gs_l=img.1.0.013.2880.12019.0.14531.26.16.2.8.8.0.328.2013.4j6j2j1.13.0.msedr...0...1ac.1.60.img..4.22.2108.Eu7-VDr5Ei4#tbn=isch&q=fruits+and+vegetables)

### Matching Table

Instruction: Please match between fruits and vegetables in the different colors with their health benefit

Fruit and Vegetable	Health Benefit	Answer
1. Yellow and Orange (Orange, Carrot, Banana, Papaya)	A. Helping the memory function	1-C
2. Green (Morning glory, Cucumber, Kale)	B. Prevent cancer	2-B
3. Red (Tomato, Red Grapes, Watermelon, Pomegranate)	C. Strengthen vision	3-D
4. Violet (Eggplant, Blueberries)	D. Boost the burning calorie in use	4-A

### Self-Report on Consuming Fruits and Vegetables

Instruction: Complete the following information about yourself. What types of fruits and vegetables do you consume in seven days?

Fruit Day/Date	Yellow Orange	Green	Red	Violet
Day1: .....				
Day2: .....				
Day3: .....				
Day4: .....				
Day5: .....				
Day6: .....				
Day7: .....				

### Activity Plan 10: Consuming Variety of Food

#### I. Main Concept

Consuming many kinds of food with five categories means the good behavior in eating, and the body will receive the nutrient which is beneficial to the human health.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able:

- To classify five groups of food
- To choose many kinds of food to eat by themselves

#### III. Content of the Activities

Consuming variety of food

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Ask students</p> <p>a. In your three meals, what kind of food do you consume?</p> <p><b>Activity Stage</b></p> <p>1. Teacher shows the picture of five groups food and distributes handout to all students</p> <p>2. Ask students to observe their breakfast, lunch, and dinner “which category of food did you consume per meal?” Please, write it down</p>	√		

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
3. Divide students into three groups a. The teacher gives a cart sort of food picture b. Ask students to classify the cart sort in five groups of food and find the winner group c. Select three student among the winner group to play a game: "Complete the missing word" within 3 minutes 4. Teacher gives comments and rewards to the winner.		√  √	√  √
<b>Conclusion Stage</b> 1.The teacher and students summarize the main point of this section together			√

#### V. Resources Materials used in the Activities

- 40 handouts of consuming variety of food
- Complete missing word sheet about nutrient of five groups' food
- Picture of five groups food
- Cart sort of some pictures: egg, rice, bread, meat, milk, tomato, watermelon,

#### VI. Evaluation of the Activities

- Observation
- Missing word sheet



### Handout: “Consuming Variety of Food”

Nutrient consists in many types of food. The food is classified in five groups as the following table:

Food Groups	Items	Food Nutrient	Health Benefits
Group1	All kind of meats, Egg, Milk, Bean, Nut, Seed...etc.	Protein	1.Build immune system 2.Help growing up 3.Build muscle and repair body tissue
Group2	Rice. Bread, Tarot, Potato, Sugar, Cereal...etc.	Carbohydrate	Provide energy
Group3	Morning glory, Cucumber, Kale, Tomato, Eggplant...etc	Vitamins and mineral	Facilitate digestion system
Group4	Orange, Banana, Papaya, Pineapple...etc.	Vitamins and mineral	1.Help beauty skin 2.Strength teeth
Group5	Oil, Chess	Fat	Heat up the body

### Pictures: "Five Groups Food"



Source of pictures and Card Sort

<http://www.dreamstime.com/royalty-free-stock-photography-five-food-group-illustrations-graphics-groups-including-meats-pastries-fruits-vegetables-image33103917>

<http://www.wou.edu/~kmmartin06/MyWeb/Meat&Beans.html>

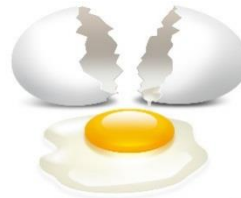
<http://www.weightlossforall.com/complex-carbs.htm>

<http://www.total-body-nutrition.com/list-of-low-carbohydrate-foods.html>

<http://www.healthyfoodhealthyplanet.org/about/food-groups/>

### Card Sort of Five Groups Food (For Students)

Instruction: Please classify the pictures on the card sort in five groups of food



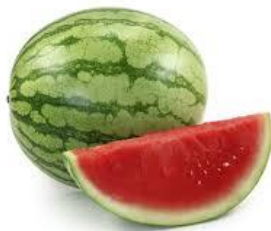
Group1



Group2



Group3



Group4



Group5

### Complete the Missing Word

Instruction: Please choose the word in the box to complete the following sentences:

Five	Protein	Carbohydrate
Fat	Vitamins and mineral	

There are..... groups of the food. Group 1 consists of meats, egg, milk, bean, and nut. The nutrient in group1 is .....Some kind of food item as rice, bread, tarot, potato, sugar, cereal are classified in group2. And the nutrient in group2 is..... Morning glory and cucumber are listed in the group3. Orange, banana, and papaya are in the group4. The nutrient in group3 and group4 .....The last group is group5, which consists of oil and chess. The nutrient in the last group is.....

### Activity Plan 11: Let's Taste the Food

#### I. Main Concept

There are many tastes of food: sweet, salt, sour, bitter. Each taste will give some disadvantages to the health. Therefore, eating food in bland taste can prevent some diseases related to food.

#### II. Objective of the Activities

By the end of the activities, pupils should be able to identify the taste of food.

#### III. Content of the Activities

Tasting the food

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Ask students: “What type of the tastes of food you have eaten?”</p> <p><b>Activity Stage</b></p> <p>1. Divide students in to three groups to list down two dishes of sweet, spicy, and bitter food.</p> <p>2. Teacher shows the picture of food dishes and gives the handout to all students</p> <p>3. Teacher tells about consequences of eating extreme taste food</p>			

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>4. Teacher puts three menu of dishes and some sauce on the table:</p> <p>a. Select two students from each group to try these food.</p> <p>b. Observe on the students reaction after tasting food and ask students to tell the tastes of food.</p> <p>(Use checklist to observe students reaction)</p> <p><b>Conclusion Stage</b></p> <p>1. The teacher and students summarize the main point of this.</p> <p>2. Leave some suggestion that eating bland taste of food, being far away from diseases related to extreme taste food</p>		√	√
		√	√

#### V. Resources Materials used in the Activities

- 40 handouts of tasting food
- Picture of some food dishes
- Sauce and some ingredients
- Three sample of food dishes: fried noodle, soup noodle, pork rice...etc.
- Check list to observe students reaction

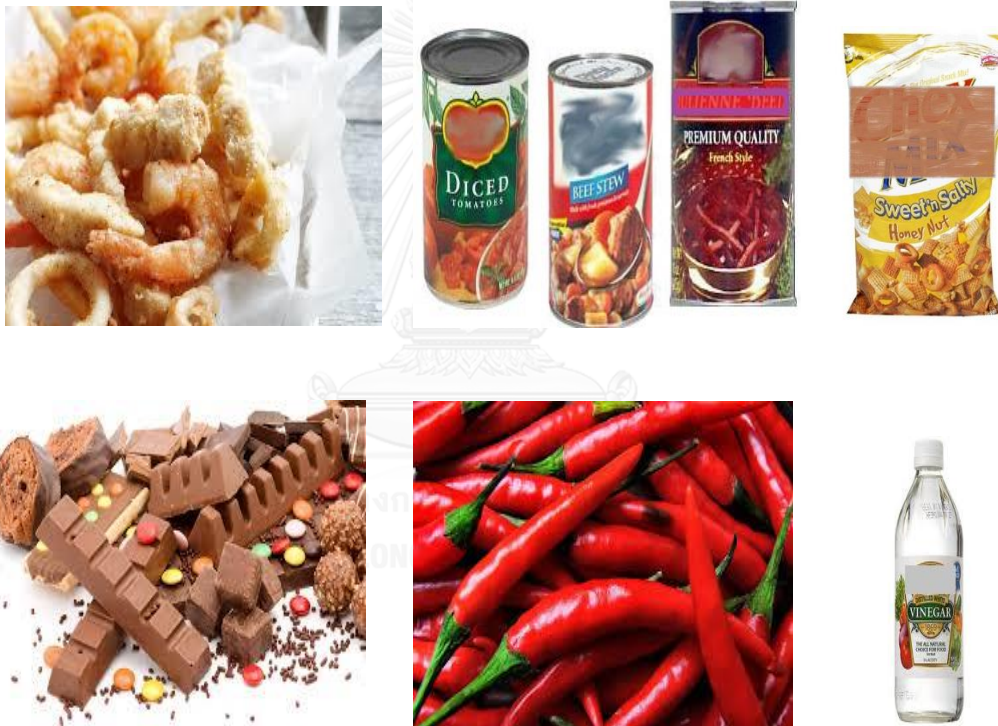
#### VI. Evaluation of the Activities

- Observation
- Check list

### Handout: “Tasting Food”

There are many taste of food: sweet, salt, sour, bitter. Some disease related to food are mentioned as following:

1. Eating extremely salt (sea food, can food, snack...etc.) maybe lead to problem with rein, hypertension and heart disease.
2. Eating extremely sweet (dessert, candy...etc.) maybe lead to have diabetic.
3. Eating extremely sour (artificial vinegar...etc.) maybe lead to have osteoporosis and diarrhea.
4. Eating extremely spicy (chili, garlic) maybe lead to have problem with the digestive system.



Source of the pictures:

- <http://www.mccormickandschmicks.com/Locations/wauwatosa-wisconsin/north-mayfair-rd.aspx>  
<http://www.canadianpackaging.com/general/ball-corporation-provides-1450000-meals-food-drive-136944/>  
[http://www.taquitos.net/snacks.php?snack\\_code=2027](http://www.taquitos.net/snacks.php?snack_code=2027)  
<http://hdwallsource.com/free-chocolate-candy-wallpaper-41406.html>  
<http://losangeles.cbslocal.com/top-lists/some-like-it-hot-los-angeles-best-spicy-food/>  
<http://www.amazon.com/Heinz-Distilled-White-Vinegar-16/dp/B001QD5XHK>

### Checklist on Students Reaction on Testing Food (For Teacher)

Instruction: Teacher observes on students' action about tasting food and complete the information below:

Students Group	Add		Not Add		Taste of Food
	Sauce	Ingredient	Sauce	Ingredient	
1.					
2.					
3.					
4.					
5.					
6.					



### Activity Plan 12: Avoiding Junk Snacks

#### I. Main Concept

Junk snacks refer to colorful candy, salty chip and soft drink. There are many diseases related to the junk snack. Therefore, all kind of these snacks should be avoided.

#### II. Objective of the Activities

By the end of the activities, pupils should be able to choose what kinds of snacks which need to be avoid to eat.

#### III. Content of the Activities

Avoiding junk snacks

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Teacher shows the pictures of candy, some kind of snack</p> <p>2. Asks to student: “Who have ever try these?”</p> <p><b>Activity Stage</b></p> <p>1. Ask students to list down some snacks that they have always eaten?</p> <p>2. Teacher gives “Like and Dislike” stickers to all students</p> <p>( Like = eat regularly, Dislike = eat rarely)</p>	√		

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>3. Teacher puts some samples of junk snacks (candy, fried potatoes, soft drink, water and some kind of traditional cake) on the table:</p> <p>a. Ask students to leave the stickers on the snacks</p> <p>b. Select two students to ask: “Why do you choose to eat these snacks regularly and rarely?”</p> <p>4. Teacher distributes the handout and explains the consequences on junk snacks to all students</p> <p><b>Conclusion Stage</b></p> <p>1. The teacher summarizes the main point of this section to students</p> <p>2. Give some suggestions to keep decrease consuming junk snack</p>		√	√
		√	√

#### V. Resources Materials used in the Activities

- 40 handouts of avoiding junk snacks
- Picture of junk snacks
- Like and Dislike stickers
- The sample of snacks: candy, fried potatoes, soft drink, water and some kind of traditional cake

#### VI. Evaluation of the Activities

- Observation
- Counting stickers

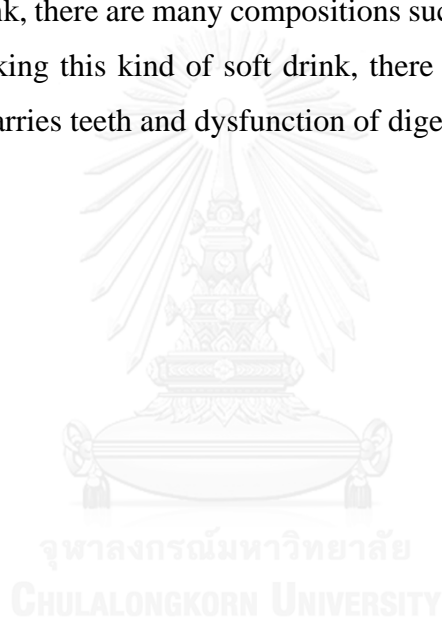
**Handout: “Avoiding Junk Snacks”**

The term of junk snacks refer to colorful candy, salty chips and soft drink. There are some health problems related to junk snacks such as carries teeth, hypertension, diabetes, and rein dysfunction.

The color candy maybe extract from natural or artificial color. Some artificial color consists of carcinogenic substance that is so dangerous for the body system.

The composition of salty chips are oil, bread, salt, and monosodium glutamate. Moreover, some additional flavors and preservatives are added in these composition as well.

In the soft drink, there are many compositions such as sugar, artificial color and carbon dioxide. Drinking this kind of soft drink, there will be occurred some health problems: diabetes, carries teeth and dysfunction of digestive system.



**Pictures: “Junk Snacks”**



Colorful  
Candy



Salty Chip



Soft Drink

Source of picture:

<http://www.liveinthenow.com/article/soft-drinks-trigger-heartburn>

<http://www.superwallpapers.com/photography/colorful-candy-18822/>

<http://www.psmag.com/navigation/health-and-behavior/distracted-eating-increases-desire-for-sugary-salty-foods-59161/>

### Activity Plan 13: What I Do Need to Choose/ What I Do Not Need to Choose?

#### I. Main Concept

There are some behaviors that need to be practiced in choosing food to eat. For example, eating clean and cooked food, eating five groups of food, drinking two to three glasses of milk and eight glasses of water per day.

In the other hand, some behaviors need to be considered as avoiding in choosing food to eat such as extremely taste and color food.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able as following:

- To choose the clean and cooked food to eat
- To identify extreme and color food in term of avoiding to eat them

#### III. Content of the Activities

What I do need to choose/ what I do not need to choose?

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b></p> <p>1. Teacher asks students to give the meaning of cooked food.</p> <p>2. Show the pictures of food and ask to students: “Which food in the pictures you will choose to eat?”</p> <p><b>Activity Stage</b></p> <p>1. Divide students in to three groups.</p>			

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p>2. The teacher puts some samples of food ( cooked meat and uncooked meat, pork rice and pork rice with vegetable, soft drink and water) on the table:</p> <p>a. Group one: ask two students to choose between cooked and fresh meat.</p> <p>b. Group two: ask two students to choose between pork rice and pork rice with vegetable.</p> <p>c. Group three: ask two students to choose between soft drink and water.</p> <p>3. Teacher selects one student among each three groups then asks the reasons why they choose these food.</p> <p>4. Teacher distributes the handout to students.</p> <p><b>Conclusion Stage</b></p> <p>The teacher and students summarize the main point of this section together.</p>		<p>√</p> <p>√</p> <p>√</p> <p>√</p>	<p>√</p> <p>√</p> <p>√</p> <p>√</p>

#### V. Resources Materials used in the Activities

- 40 handouts of choosing food
- Pictures of food
- The samples of food: cooked meat and uncooked meat, pork rice and pork rice with vegetable, soft drink and water.

#### VI. Evaluation of the Activities

Observation

**Handout: “Choosing Food”**

Eating good and clean food will lead to have strong health. On the other hand eating artificial or additional substances in food will lead to have health problems.

There are some behaviors that need to be practiced in choosing food to eat. For example, eating clean and cooked food, eating five groups of food, drinking two to three glasses of milk and eight glasses of water per day.

However, some behaviors need to be considered such as avoiding choosing extreme tastes and color food.



### Pictures of Some Food



Source of pictures:

<http://www.psmag.com/navigation/health-and-behavior/distracted-eating-increases-desire-for-sugary-salty-foods-59161/>

<http://www.superbwallpapers.com/photography/colorful-candy-18822/>

<http://intensivedietarymanagement.com/milk-body-bad/>

<http://www.dreamstime.com/stock-image-meat-isolated-raw-steak-image519321>

<http://www.dreamstime.com/royalty-free-stock-images-cooked-meat-cutlets-vegetablesimage16419429>



### Activity Plan 14: What I have done

#### I. Main Concept

Let's evaluated yourself on health practices about taking care the body and personal belonging, washing the hand and eating clean food.

#### II. Objectives of the Activities

By the end of the activities, pupils should be able as following:

- To explain the good health practices
- To practice how to take care their body, wash the hand, choose food to eat in term of keeping the healthy behaviors.

#### III. Content of the Activities

What I have done!

#### IV. Learning Activities

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
<p><b>Introduction Stage</b> Teacher asks students to list down how many activities they joined?</p>	√	√	√
<p><b>Activity Stage</b> 1. Divide students in to three group: group1 is taking care body, group2 is washing hands, and group3 is choosing food to eat.</p>	√		√

Activities	Self-Regulation Concept		
	Observation	Judgment	Reaction
2. Teacher arranges the each group to practice about their task			
3. Select three students from each group to join a role play on taking care body, washing hands and choosing food to eat	√	√	√
4. Teacher prepares the a game: Question Box with Gift box			
a. All students have chance to pick up a question and a gift		√	√
b. Students need to recall all the knowledge on the 13 activities.	√	√	√
<b>Conclusion Stage</b>			
1. The teacher and students summarize all the points and review all the main point about the past activities.			
2. Suggest and remind students to keep these good health practice behaviors which help prevent themselves from diarrhea			

**V. Resources Materials used in the Activities**

-40 handouts of summary health practices.

-Material for washing hands, taking bath and cutting nails

-The samples of food

-Gifts for students: Notebooks, pens, pencils, shampoos, soaps, towels and nail cutters

**VI. Evaluation of the Activities**

-Observation

-Collect back on students' self-reports: taking bath, washing hair, washing hands, and eating fruits and vegetables



**Handout: “Summary Health Practices”**

Diarrhea is one of the diseases which occurs by poor hygiene practice and unclean food.

To deal with the disease, strengthening hygiene practices and consuming cleaned cooked food need to be considered. Therefore, three rules from Thai National Health Recommendation such as taking care the body and personal belonging, washing hands and eating clean and cooked food are the good behavior practices to apply.





จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY

Source of the pictures

Manual Learning Activity Management, Health Education Division, Department of supportive Health Services, Ministry of Public Health (2013)

<http://www.psmag.com/navigation/health-and-behavior/distracted-eating-increases-desire-for-sugary-salty-foods-59161/>

<http://www.superbwallpapers.com/photography/colorful-candy-18822/>

<http://intensivedietarymanagement.com/milk-body-bad/>

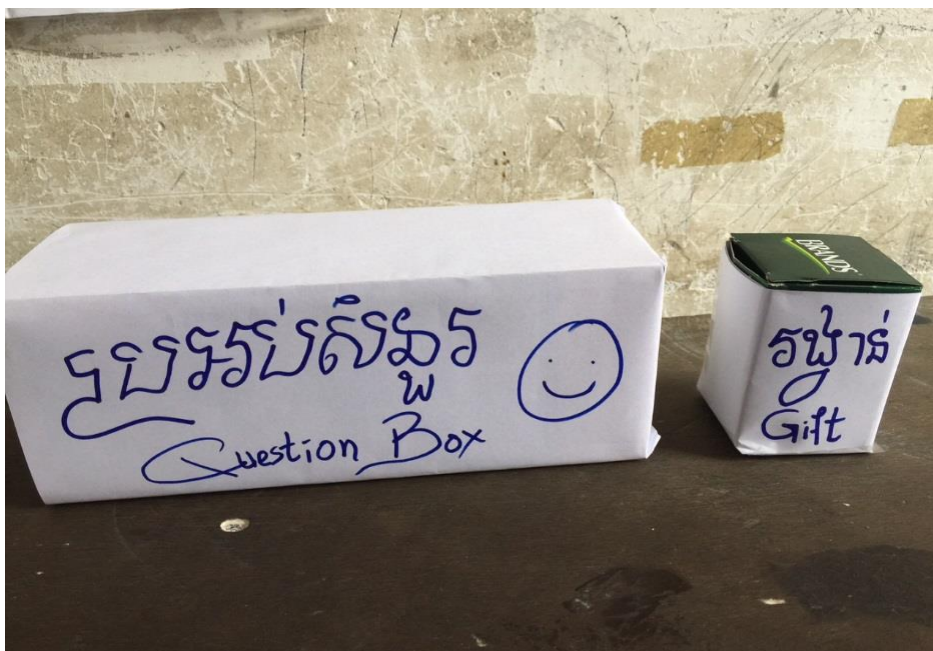
<http://www.dreamstime.com/stock-image-meat-isolated-raw-steak-image519321>

<http://www.dreamstime.com/royalty-free-stock-images-cooked-meat-cutlets-vegetables-image16419429>

<http://www.dreamstime.com/royalty-free-stock-photography-five-food-group-illustrations-graphics-groups-including-meats-pastries-fruits-vegetables-image33103917>

<http://www.healthyfoodhealthyplanet.org/about/food-groups/>

### Game: Question and Gift Box



## Appendix C: Additional Data

*Table 10.6: Mean scores of health practices on personal health before and after experiment of the experimental groups by each item of the questions*

Item of the Question	Experimental Group				t
	Before Experiment		After Experiment		
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	
1. I take a bath by myself	2.80	.40	2.93	.25	1.52
2. I use soap to scrub my whole body	2.63	.55	2.57	.56	.45
3. I wipe my body dry after taking bath	2.80	.48	2.77	.56	.24
4. I wear new set of cloth after taking bath	2.63	.49	2.80	.48	1.32
5. I wash the hair by myself	2.87	.34	2.80	.40	.68
6. I use my fingertip to slightly massage my hair while I wash the hair	2.50	.77	2.63	.55	.76
7. I wipe my hair dry after washing hair	2.63	.61	2.63	.49	.00
8. I take a bath and wash the hair in the same time	2.60	.56	2.70	.46	.74
9. I cut my long finger nails by myself	2.57	.56	2.43	.46	.90
10. I cut my long toe nail by myself	2.57	.62	2.57	.56	.00
11. I soak my nails before cutting	2.17	.83	2.63	.61	2.46*
12. I use shaped and cleaned nail cutter	2.67	.54	2.93	.25	2.46*
13. I sharpen my nails after cutting	2.30	.70	2.70	.46	2.59*
14. I prepare my personal belonging(books, pens, pencils) in order after use it	2.60	.49	2.93	.25	3.26*
15. I prepare my toys in order after used it	2.63	.55	2.83	.37	1.62
16. I clean my toys when they are dirty	2.57	.56	2.80	.40	1.82
17. I wear the clean clothes	2.70	.46	2.80	.40	.88

Item of the Question	Experimental Group				<i>t</i>
	Before Experiment		After Experiment		
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	
18.I do not wear the clothes with bad smell	2.63	.71	2.70	.70	.36
19. I wash my hands before eating	2.80	.40	2.80	.40	.00
20.I wash my hands after toilet	2.63	.55	2.87	.34	1.95*
21.I wash my hands after holding dirty thing	2.57	.62	2.77	.56	1.29
22.I dry hands after washing	2.70	.46	2.67	.66	.22
23.I wash palm to palm with fingers interlaced	2.60	.56	2.80	.48	1.47
24.I eat five groups of food	2.30	.79	2.53	.57	1.30
25.I eat fruit	2.50	.57	2.57	.50	.47
26.I eat vegetable	2.37	.71	2.53	.57	.99
27.I eat candy	2.00	.64	2.23	.72	1.31
28.I eat chip	1.87	.68	2.03	.66	.95
29.I eat bland tasty food	1.70	.65	2.10	.66	2.36*
30.I drink the soft drink	1.73	.58	1.83	.53	.69
31.I drink eight glasses of water	2.27	.78	2.57	.56	1.69
32.I drink two to three glasses of milk	2.20	.76	2.20	.80	.00
33.I eat uncooked well food	2.40	.85	2.53	.81	.61
34.I eat hot and cook food	2.63	.55	2.83	.37	1.62
35.I eat clean and safe food	2.73	.52	2.90	.30	1.51

\*  $p < .05$



*Table 11..7: Mean scores of knowledge test on personal health before and after experiment of the experimental and control groups.*

Knowledge Test on Personal Health	Pre-Test		Post-Test		t
	<i>M</i>	<i>SD.</i>	<i>M</i>	<i>SD.</i>	
Experimental Group	2.48	.21	2.62	.17	6.90*
Control Group	2.46	.23	2.50	.24	.21

\*  $p < .05$



## Appendix D: Related Documents

### Invitation Letter for Experts

ศธ 0512.6(2791.10)/๘๕-๖๒ ๖2



คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย  
ถนนพญาไท กรุงเทพมหานคร 10330

๑ มีนาคม 2558

เรื่อง ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน ศาสตราจารย์ ดร. สมจิตต์ สุพรรณทัศน์

สิ่งที่ส่งมาด้วย เครื่องมือที่ใช้ในการวิจัย

ด้วย นางสาวแก้วปัญญา เลือง นิสิตหลักสูตรครุศาสตรมหาบัณฑิต สาขาวิชาสุศึกษาและพลศึกษา ภาควิชาหลักสูตรและการสอน อยู่ระหว่างการดำเนินงานวิทยานิพนธ์เรื่อง การออกแบบกิจกรรมการเรียนรู้ เพื่อเสริมสร้างสุขนิสัยส่วนบุคคลสำหรับนักเรียนระดับประถมศึกษาโดยใช้แนวคิดการกำกับตนเองกรณีศึกษา ประเทศกัมพูชา โดยมี รองศาสตราจารย์ ดร. เอ็มอัชมา วัฒนบูรานนท์ เป็นอาจารย์ที่ปรึกษา ในการนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย ทั้งนี้ นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)

รองคณบดี

ปฏิบัติการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ

โทร. 0-2218-2681-82 ต่อ 612



ศธ 0512.6(2791.10)/58-1161

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย  
ถนนพญาไท กรุงเทพมหานคร 10330

9 มีนาคม 2558

เรื่อง ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน รองศาสตราจารย์ ดร.เทพวณี หอมสนิท

สิ่งที่ส่งมาด้วย เครื่องมือที่ใช้ในการวิจัย

ด้วย นางสาวแก้วปัญญา เสือ นิสิตหลักสูตรครุศาสตรมหาบัณฑิต สาขาวิชาสุศึกษาและพลศึกษา ภาควิชาหลักสูตรและการสอน อยู่ระหว่างการดำเนินงานวิทยานิพนธ์เรื่อง การออกแบบกิจกรรมการเรียนรู้ เพื่อเสริมสร้างสุขนิสัยส่วนบุคคลสำหรับนักเรียนระดับประถมศึกษาโดยใช้แนวคิดการกำกับตนเอง:กรณีศึกษา ประเทศกัมพูชา โดยมี รองศาสตราจารย์ ดร. เอ็มอัชมา วัฒนบุรานนท์ เป็นอาจารย์ที่ปรึกษา ในการนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย ทั้งนี้ นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

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ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.เนาวรัตน์ สงคราม)

รองคณบดี

ปฏิบัติการแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ  
โทร. 0-2218-2681-82 ต่อ 612



ที่ ศธ 0512.6(2791.10)/58-1160

คณะครุศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย  
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๑ มีนาคม 2558

เรื่อง ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน ผู้อำนวยการกองสุศึกษา

สิ่งที่ส่งมาด้วย เครื่องมือที่ใช้ในการวิจัย

ด้วย นางสาวแก้วปัญญา เลือง นิสิตหลักสูตรครุศาสตรมหาบัณฑิต สาขาวิชาสุศึกษาและพลศึกษา ภาควิชาหลักสูตรและการสอน อยู่ระหว่างการดำเนินงานวิทยานิพนธ์เรื่อง การออกแบบกิจกรรมการเรียนรู้ เพื่อเสริมสร้างสุขนิสัยส่วนบุคคลสำหรับนักเรียนระดับประถมศึกษาโดยใช้แนวคิดการกำกับตนเอง:กรณีศึกษา ประเทศกัมพูชา โดยมี รองศาสตราจารย์ ดร. เอ็มอัชมา วัฒนบุรานนท์ เป็นอาจารย์ที่ปรึกษา ในการนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย ทั้งนี้ นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

จึงเรียนมาเพื่อขอความอนุเคราะห์จากท่านโปรดเป็นผู้ทรงคุณวุฒิดังกล่าวเพื่อประโยชน์ทางวิชาการต่อไป และขอขอบคุณมาในโอกาสนี้

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร. เนาวนิตย์ สงคราม)

รองคณบดี

ปฏิบัติกรแทนคณบดี

งานหลักสูตรและการจัดการเรียนการสอน ฝ่ายวิชาการ

โทร. 0-2218-2681-82 ต่อ 612



### บันทึกข้อความ

ส่วนงาน งานหลักสูตรและการจัดการเรียนา ฝ่ายวิชาการ คณะครุศาสตร์ จุฬาฯ โทร. 82681-2 ต่อ 608

ที่ ศธ 0512.6(2791.10)/36-... 33 วันที่ ๑ มีนาคม 2558

เรื่อง ขอเชิญเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย

เรียน ผู้ช่วยศาสตราจารย์ ดร.วิภาวดี สัมมังสวัสดิ์

ด้วย นางสาวแก้วปัญญา เสือง นิสิตหลักสูตรครุศาสตรมหาบัณฑิต สาขาวิชาสุศึกษาและพลศึกษา ภาควิชาหลักสูตรและการสอน อยู่ระหว่างการดำเนินงานวิจัยวิทยานิพนธ์เรื่อง การออกแบบกิจกรรมการเรียนรู้ เพื่อเสริมสร้างสุขนิสัยส่วนบุคคลสำหรับนักเรียนระดับประถมศึกษาโดยใช้แนวคิดการกำกับตนเอง:กรณีศึกษา ประเทศกัมพูชา โดยมี รองศาสตราจารย์ ดร. เอ็มอัชฌา วัฒนบุรานนท์ เป็นอาจารย์ที่ปรึกษา ในการนี้จึงขอเชิญท่านเป็นผู้ทรงคุณวุฒิตรวจเครื่องมือวิจัย ทั้งนี้ นิสิตผู้วิจัยจะได้ประสานงานในรายละเอียดต่อไป

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(รองศาสตราจารย์ ดร.เนาวนิตย์ สงคราม)

รองคณบดี

Ref. 0512.6(2791.10)/54-134



Faculty of Education  
Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

March 9, 2015

Mrs. Van Bopha  
Pi Thnou Elementary School,  
Battambang Province, Cambodia

**Subject: Request for Being an Expert**

**Dear Mrs. Van Bopha**

Attachment: Miss. Keopanha Soeung's thesis proposal summary

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request for being an expert in a research project conducted by Miss. Keopanha Soeung, one of our students in the field of Health and Physical Education. Miss. Keopanha Soeung is currently conducting her master research project on "**Learning Activity Design to Enhance Personal Health Habits of Elementary School Students Using Self-Regulation Concept: A Case Study of Cambodia**". This research is advised by Associate Professor Aim-utcha Wattanaburanon, Ed.D.

We are hoping that you will be one of the experts in this research project. Your kind cooperation is greatly appreciated.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Noawanit S.'.

(Associate Professor Noawanit Songkram, Ph.D.)  
Associate Dean

Office of Academic Affairs Tel: +66 2 218 2681 Ext. 600

Letter of Data collection Permission

ព្រះរាជាណាចក្រកម្ពុជា  
ជាតិ សាសនា ព្រះមហាក្សត្រ

និស្សិតនៃសាកលវិទ្យាល័យដូណូឡូកា  
គោរពដល់លោកនាយកសាលាបឋមសិក្សា២៨


កម្មវត្ថុ៖ សំណើសុំធ្វើការប្រមូលទិន្នន័យ និងចុះបង្រៀននៅសាលាបឋមសិក្សា២៨  
សម្រាប់បំពេញនិក្ខេបបទថ្នាក់បរិញ្ញាប័ត្រជាន់ខ្ពស់ផ្នែកអប់រំ

តបតាមកម្មវត្ថុបានគោរពជូនខាងលើ នាងខ្ញុំមានកិត្តិយសជម្រាបជូនលោកនាយកឲ្យ  
បានជ្រាបថា នាងខ្ញុំត្រូវបំពេញនិក្ខេបបទដែលទាក់ទងនឹងប្រធានបទ "ការរៀបចំសកម្មភាព  
បង្រៀនដើម្បីបង្កើនទម្លាប់ល្អក្នុងការធ្វើឲ្យសុខភាពផ្ទាល់ខ្លួនល្អប្រសើរឡើងសម្រាប់សិស្សបឋម  
សិក្សាដោយប្រើគោលការណ៍ការដាក់កម្រិតខ្លួនឯងករណីសិក្សាប្រទេសកម្ពុជា" ដើម្បីសរសេរ  
និក្ខេបបទថ្នាក់បរិញ្ញាប័ត្រជាន់ខ្ពស់ផ្នែកអប់រំនៅសាកលវិទ្យាល័យដូណូឡូកា។

អាស្រ័យហេតុនេះ សូមលោកនាយកមេត្តាពិនិត្យ និងសម្រេចដោយអនុគ្រោះ។  
សូមលោកនាយកសាលាមេត្តាទទួលនូវការគោរពដ៏ខ្ពង់ខ្ពស់ពីនាងខ្ញុំ។

ធ្វើនៅបាត់ដំបង ថ្ងៃទី ០៧ ខែ ០៤ ឆ្នាំ ២០១៤

បានឃើញ និងឯកភាព  
លោកនាយកសាលាបឋមសិក្សា២៨  
  
លោក ស៊ី ធីតា

និស្សិតនៃសាកលវិទ្យាល័យដូណូឡូកា  
  
សៀង កែវបញ្ញា

Ethic Consideration Letter



**ក្រសួងសុខាភិបាល**  
**MINISTRY OF HEALTH**  
**គណៈកម្មាធិការជាតិរក្សាសីលធម៌**  
**សម្រាប់ការស្រាវជ្រាវសុខភាពដែលពាក់ព័ន្ធនឹងមនុស្ស**  
**National Ethics Committee for Health Research**

លេខ...១៤៤...N.E.C.H.R.....

**ព្រះរាជាណាចក្រកម្ពុជា**  
**KINGDOM OF CAMBODIA**  
**ជាតិ សាសនា ព្រះមហាក្សត្រ**  
**NATION RELIGION KING**

រាជធានីភ្នំពេញ, ថ្ងៃទី...៤...ខែ...៥...ឆ្នាំ201.

**Ms. Soeung Keo Panha**

**Project:** Learning Activity Design to enhance Personal Health Habits of Elementary School Student Using Self-Regulation Concept: A Case Study of Cambodia. Version N° 1, dated 31<sup>th</sup> January, 2015.

**Reference:** - Your letter on 10<sup>th</sup> April, 2015  
- Summary report of NECHR’s secretaries on 21<sup>th</sup> April, 2015

Dear Ms. Soeung Keo Panha,

I am pleased to notify you that your study protocol entitled “Learning Activity Design to enhance Personal Health Habits of Elementary School Student Using Self-Regulation Concept: A Case Study of Cambodia. Version N° 1, dated 31<sup>th</sup> January, 2015” has been approved by National Ethic Committee for Health Research (NECHR). This approval is valid for twelve months after the approval date.

The Principal Investigator of the project shall submit following document to the committee’s secretariat at the National Institute of Public Health at #2 Kim Il Sung Blvd, Khan Tuol Kok, Phnom Penh. (Tel: 855-23-880345, Fax: 855-23-881949):

- Annual progress report
- Final scientific report
- Patient/participant feedback (if any)
- Analyzing serious adverse events report (if applicable)

The Principal Investigator should be aware that there might be site monitoring visits at any time from NECHR team during the project implementation and should provide full cooperation to the team.

Regards,

Chairman

**Prof. ENG HUOT**



### Appendix E: Activities

#### Student Achievement

ញ៉ាំបាយ

មុនពេល

មុនពេល

ក្រោយពេល

មុនពេល

មុនពេល

ប៉ះពាល់អ្នកដទៃ

មុនពេល

មុនពេល

ក្រោយពេល

ក្រោយពេល

ប៉ះអ្វីដែលកខ្វក់

ក្រោយពេល

ក្រោយពេល

ក្រោយពេល

ក្រោយពេល

ប៉ះមុខ

មុនពេល

មុនពេល





វិទ្យា បែកដំ

- 1 ត្រីកោណ
- 2 ក្របី
- 3 ត្រីកោណ
- 4 ក្របី
- 5 ចែក
- 6 ក្របី
- 7 ត្រីកោណ
- 8 ត្រីកោណ

ស្រាយ

ស្រាយ  
 ១៩  
 ១៩  
 ១៩

13

Pictures of the Activity



Practiced Hands Washing



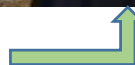
Showed Nails Cut in front of Classroom



Judged Activity by Heart Sticker



Organized Stuff  
In the Order



Presented their Group work

## VITA

My name is Keo Panha Soeung, I was born in 1986 at Battambang Province, Cambodia.

About my educational background, in 2007, I graduated from University of Health Sciences, Faculty of Pharmacy, Cambodia. Then in 2013, I graduated from National Institute of Public Health, Master of Public Health, Cambodia. From 2013 to 2015, a master student in Health and Physical Education Division, Curriculum and Instruction Department at Faculty of Education, Chulalongkorn University, Thailand.

For my working experience, in 2008, I worked as a medical representative at SERVIER International Company. In 2009 to 2013, I worked as a pharmacist at Social Health Clinic, where is one clinic of National Center for HIV/AIDS, Dermatology and STDs (NCHADS). In 2014, I was a president of the Cambodian Students Group of Chulalongkorn University (CamCU).

