

CHAPTER III

A PROJECT PROPOSAL

THE CURRICULUM DEVELOPMENT PROJECT

FOR TEACHING CRITICAL THINKING IN NURSING STUDENTS

AT BOROMARAJONANI COLLEGE OF NURSING, SUPANBURI PROVINCE

3.1 Introduction

Critical thinking is an important and crucial topics in present education, as was written in chapter II. Its means correct thinking in the pursuit of relevant and reliable knowledge about the world. It is reasonable, reflective, responsible, and skillful thinking that is focused on what to believe or do (Schafersman, 1991). Strategies and skills in critical thinking are key to independent judgment and learning, which can be transferred to subjects and objects of inquiry within and outside school. Patrick, John J., (1986) noted that critical thinking is the cognitive process and strategies involved in decision-making, problem solving or inquiry. Individuals who think critically can think for themselves: they can identify problems, gather relevant information, analyze information and come to reliable conclusions without relying to others. This, in turn, allows one to better earn a living, achieve success in life and better solve life's

problems. If a person is happier possessing reliable knowledge and living in objective reality, rather than living in ignorance and possessing false or unreliable beliefs, this is as good a reason as any for teaching and learning critical thinking.

As a professional nurse, critical thinking skills are an important because they are essential to good decision-making and effective clinical practice (Mumm, A.M., 1997). Critical thinking for clinical decision-making is the ability to think in a systematic and logical manner with openness to question and reflect on the reasoning process used to ensure safe nursing practice and quality care. According to Mumm, A.M., (1997), to work as a nurse in direct practice rely on critical thinking to apply theories, make information decision, and explain their assessment and decision.

Nurses who practice critical thinking will adhere to high academic standard, proficient of reasoning, competent of thinking skills and abilities for a sound clinical judgments, and safe decision-making, which are necessary to help nurse to deal with any patient's problems and provide effective care and security to client.

The present study assumes that strengthening student's life satisfaction and intellectual development is important mission of education, that pertaining to education for the good life (O'Neil, 1981). As Schafersman, (1991) noted the purpose of teaching critical thinking in any discipline is to improve the thinking skills of students and prepare them to succeed in the world. McEwen, Beryl C. (1994) also agreed that critical thinking are very important to job performance and career mobility. There are very few straightforward situation and they seem to become even fewer as people mature

responsibility for their lives. If it is true that education is preparation for life, then educators have a responsibility to teach critical thinking skills.

To increase critical thinking skills in nursing students, teachers and educational manager must evaluate the teaching-learning system that composes of input, process, and output (as shown in Chapter II-figure 2.1). The first, inputs, are composes of curriculum, teachers, students and teaching-learning environments. The second is the process of instructional, the teaching method and strategies that teachers teach in their subjects. The third is an output mean of the student characteristics.

However, from data exercise on Chapter IV. result that the critical thinking skills in nursing students of Boromarajonani College of Nursing, Supanburi province are still in the moderate level of all classes (the 1st year, 2nd year, and 3rd year classes), mean score and standard deviation were 48.57 and 7.37 respectively. The measurement separated by classes of studying year resulting that on the first year students result 97.5% were in the moderate level, and 2.5% were low level, there are no students have high level of critical thinking skills respectively in the first year. The second year students were result as 83.7% were moderate level, then 16.3% were in the low level, no students have high level of critical thinking skills. The third year students were reported 83%, 14.9% and 2.1% in a moderate level, low level, and high level of critical thinking skills respectively, which will not enough to provide good care to patients (Khampak, K.1996). As the result, even though its report the actively and good attitude of student's learning behavior. However the critical thinking can be affected by many

relevant factors; teachers, curriculum, teaching-learning method, technique or strategies of teaching and Teaching-learning environment are also in the moderate level.

The result from group interview and in-depth interview with students and teachers found that the teaching-learning method in Boromarajonani college of nursing, Supanburi province, are mostly using lecture emphasizing contents as teacher said there are too many contents to teach to their students before go out to field works. If they teach technique of teaching critical thinking to students, its will not cover all course contents. However, most of teachers have been passed the training program on the teaching critical thinking, but in the practical way seems can not utilize. There are some of subjects using technique of problem-based learning but only small part of it.

Schafersman, S.D. (1991) wrote all education consists of transmitting to students two different things: the first one is the subject matter or discipline content of the course (what to think), the other one is the correct way to understand and evaluate this subject matter (how to think or critical thinking). He gave opinion that why many students never develop critical thinking skills. That is because of mostly teachers or educators and students focus all energies and effort on the task of transmitting and acquiring basic knowledge (what to think), which is the first goal of education. While the second goal of education is how to think (critical thinking) its seems that teacher fail to recognize, and students are also fail to realize that it absence.

To develop critical thinking skills, teachers and manager of the college should improve the teaching-learning system in all aspects, curriculum, teachers, students,

teaching environment and teaching method, to encourage critical thinking to their students. As Schafferman (1991) noted that the critical thinking is a learn ability that must be taught, and its cannot be taught reliably by peers/parents or cannot develop naturally but trained and knowledgeable instructors are necessary to impart the proper information and skills.

To teach critical thinking, Vallentyne, P; Accordino,J; Schafferman, S.D. (1998,1991) suggest 2 approaches; one is a course devoted exclusively to the topic (a specific program), the other is coverage of the topic in a wide range of courses across the curriculum (general program).

For this situation I would like to proposed the project of curriculum development for teaching critical thinking in nursing students by using three strategies (curriculum & instructional development, human resources development, and management & regulatory), which I think they could bring to the increasing of the critical thinking skills in nursing students. The using of policy driven by putting critical thinking skills as one of require characteristic of nursing students into the curriculum (the first task). The training nursing teacher to understand the concept of teaching critical thinking and how to design instructional on their subjects in order to promote critical thinking (will be the second task), and using management & regulatory (the third task) to support, assist and monitoring along the project setting. These three strategies will be the main method of the project, I proposed. The major goal of this project is to illustrate nursing teachers how to plan, develop, evaluate, and manage the instructional process effectively through curriculum along the project development by

using training, workshop, meeting, seminar, etc., so that it will ensure competent performance by students.

The term “curriculum” refers to the subject contents and skills that make up an educational program. A school or curriculum includes the course offerings. Curriculum design is a process of formulating a specific educational platform that defines the beliefs of what should be in the curriculum (Handerson & Hawthorne, 1995).

The instructional design is a systematic method that results in successful learning and performance. A well instructional design with related to curriculum would ensure that students should reach the objective or goal of the school or curriculum, which in this project goal as to increase critical thinking skills. Learning is haphazard; instruction is planned. Thus, teachers as designers should create sound instruction that will lead to appropriate learning.

The curriculum development mean to change all curriculum or some of subjects. The components of curriculum are: objectives, contents, instructional and teaching activities, evaluation techniques. (Wongyai, W. 1994)

The process of curriculum development will be effective and efficiency if all members getting involve and share both direct and indirect responsible. The deep understanding and faith to develop them must necessary. The process to develop curriculum in general composes of four phases: research, development, spread, and implementing & improving.

In this project, the term curriculum development means to improve the curriculum to appropriate for teaching critical thinking. The curriculum improving will cover total of the college curriculum level and all the subject curriculum level (classroom curriculum). The participation of all teachers to be part of the project responsibility will be assigned.

3.2 Project Goals

- 1.) To increase critical thinking skills for nursing students.
- 2.) To increase the ability of teaching critical thinking skills for nursing teachers.

3.3 Target Population

- 1.) The first year students who are going to study in the academic year 2003 at Boromarajonani college of nursing, Supanburi province, Thailand
- 2.) The nursing teachers who are working at Boromarajonani college of nursing, Supanburi province, Thailand

3.4 Project Methodology

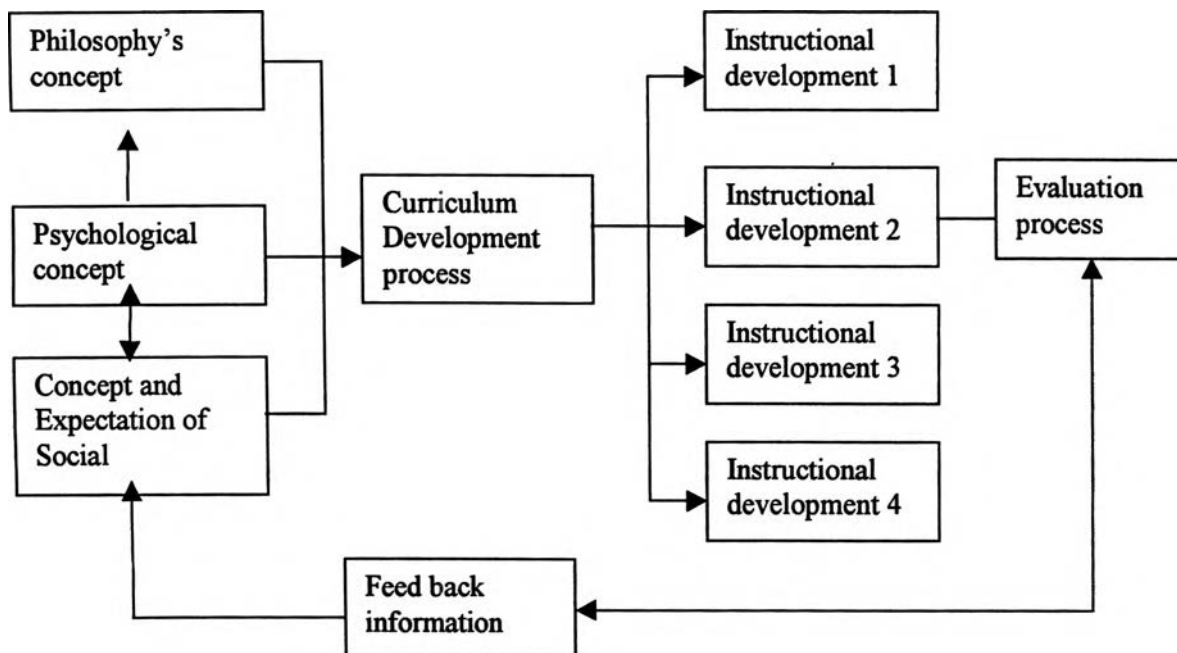
The research and development project, cohort study, 5 years during January 2002 to December 2007.

Teaching critical thinking to nursing students will be mainly method to improve situation through three strategies:

- 1) The curriculum and instruction development
- 2) Training teachers to understand concept of teaching critical thinking and
- 3) The management and regulatory to support and assist along the project

These three strategies will be used together as one task will cooperate with the other tasks. As the curriculum and instructional development will cannot process if teachers are not do it. The teachers, whose roles are design instructional to teaching critical thinking and teach it to students, will be cannot do if they have a shortage of experience and concepts of teaching critical thinking. The last task, managerial and regulatory, takes a very important role of support, assistance, facilitate, solving problems, and others along the project. To bring the project reach their goal, without of good management and regulatory, the project could not process or difficulty to process.

Figure 3.1 The curriculum & instruction development system



Source : Wongyai, W.(1995)

The above figure shows the curriculum and instructional development system in general, that was use in the nursing college under Praboromrajanok Institute, Ministry of Public Health. (Praboromrajnok, 1999)

This project, the curriculum development project, is the continuing project that will be divided into 4 phases: the preparation phase, curriculum development phase, the implementation phase, and the monitoring and evaluation phase.

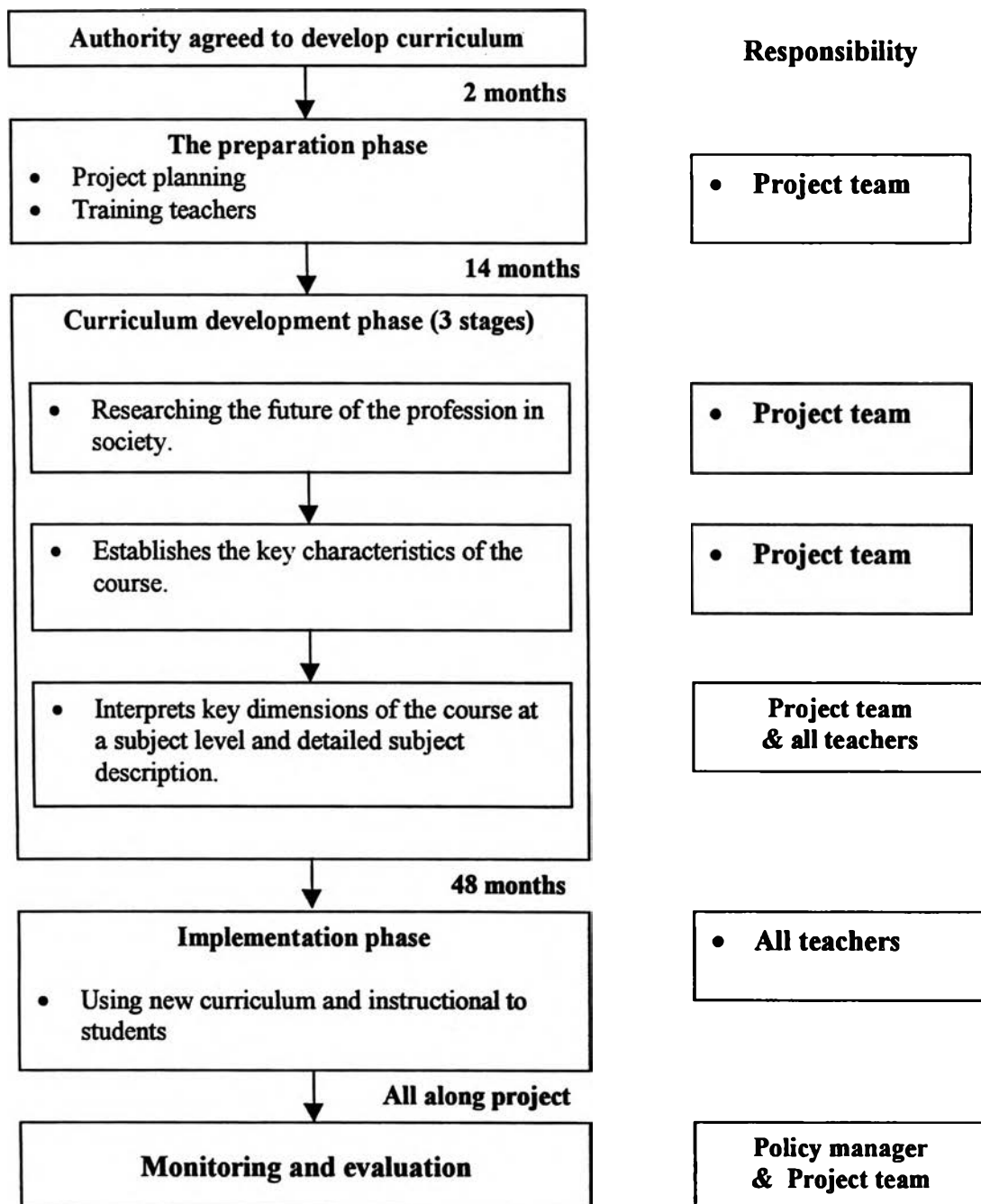
The first phase will focus on planning for the total project and preparing teachers on the concept of teaching critical thinking. The second phase will focus on the developing curriculum and instructional. The third phase will be implementation by using the new curriculum and teaching them to students. The final phase will be the

evaluation to feedback and improving the project and the monitoring of project will be cover along the project setting time.

3.5 Activity Plan

As I stated 4 phases on the above, here will present the practical task of activities that each phase will be working on as shown in figure 3.4.

Figure 3.2 Overview of curriculum development



Source: the figure was developed from the New Course Design, Development and Approval at RMIT

Phase I. the preparation phase

This is the important phase because well planning will bring to better outcome or reach the project goal. The objective is to prepare all steps of work on total of four phases (project planning) by team of project or project committee. The preparation phases will be process after the authority agreed. (This phase will take around 2 months)

1. To set up the project team by meeting all teachers and present the important, the objectives, and outline of project. The objective is to get the commitment from all teachers and to set teams to responsibilities and to take care of each part along the total project.
2. The project teams will have meetings, the objective is to look overall the project for example: concepts, time plan, budget plan, project plan, tasks plan to revise and improve project planing to be more practical, appropriateness, and to get to same understand on the concept of project.
3. The project team will setup the training program in order to prepare teachers on the concept of critical thinking, teaching critical thinking, evaluation of critical thinking. The project responsible team prepares before training program: place, date and time, materials, expert, etc.
4. Training program will held on a two days training course emphasizing on teaching critical thinking.

Phase II. Curriculum development

The objective of this phase is to improve or develop the present curriculum by putting critical thinking skills as one of a require characteristics that students who take this course or this school must it when they graduated. The expected outcome is to get the new curriculum for teaching critical thinking.

This phase will divide to 3 stages (around 14 months): The strategies to develop curriculum will be research as a cross-sectional study design for the baseline information and meeting at the first stage of curriculum developments. The continuing of 2 stages will use workshop, meeting, buzz group, and seminar continuing during the stage of develop curriculum in 14 months.

The first stage involves: researching the future of the profession in society:

- Investigating the needs of employers and likely demand
- Reviewing the strengths and weaknesses, opportunities and threats within the college and wider contexts
- Establish the purpose of the course of curriculum and the role of graduates in the workforce
- Deciding the general attributes desired of graduates

This stage will take 4 months: a cross-sectional design to study as a baseline information and 4 times meeting to work along the process. (see at activities and times lines)

The second stage: establishes the key characteristics of the course:

- Detailing and confirming the purpose and role of the course as well as the desired graduate attributes
- Developing the desired learning outcomes for the whole program
- Establishing the attributes of the desired applicants for the course and their needs for learning
- Deciding the crucial learning outcomes desired at key stages in an effective learning sequence
- Establishing the key learning experiences and assessments which are likely to facilitate the student learning outcomes

Framing these outcomes, experiences and assessment as a course structure. This stage will use around 4 months by workshop 5 days and meeting 3 times. (see at time lines)

The third stage: Interprets key dimensions of the course at a subject level:

- Developing a linked of learning outcomes related to subjects (desired student learning outcomes for each subject)
- Establishing the key learning experiences, assessments and broad topic areas of each subject with links to the learning expected in other subjects
- Determining the resource and support demand
- Confirming the costing and fee structures
- Detailed subject description.

The stage will use 4 months to plan and revise by using workshop 5 days. After workshop each subject or course will revise by them. The progress of work will be meeting 1 time / month and using presentation of each subject design and final will be seminar one time.

Phase III. Implementation phase (Teaching critical thinking)

This implementation phase will start after curriculum was developed. Teachers will delivery their courses through the instructional designed of teaching critical thinking through curriculum. The task of this implement phase will be based on each course designed.

The policy management and regulatory team will take an important role to encourage and support teachers to delivery of teaching critical thinking. The support of all necessary materials that have to use could empower and simulation to them. The monitoring of the policy manager will be important to bring project reach the goal.

Project team will take the role of support and providing necessary information, monitoring, and preparing for the next phase: evaluation.

Step IV. The Evaluation phase

This phase objective is to evaluation of the total project. After implementation: Teaching critical thinking the first semester, the second semester, and after one year project, two year, three year, and four year (student graduated).

- 1) Are student reaches to the main objectives?

1. basic knowledge (what to think)
 2. the critical thinking (How to think)
- 2) Are nursing teacher have the knowledge, attitude, and skills for teaching critical thinking.

Evaluation plan and method of evaluation

September	2003	measuring students on the basic knowledge and critical thinking skills
January	2004	measuring students on the basic knowledge and critical thinking skills
April	2004	<p>measuring after one year project implementation by</p> <ol style="list-style-type: none"> 1) Measuring the teaching-learning condition using both quantitative and qualitative methods on <ul style="list-style-type: none"> - the curriculum - teachers' behavior to teaching critical thinking - students' learning behavior - teaching and learning environment - teaching and learning method and strategies 2) To measure students' critical thinking and basic knowledge : <ul style="list-style-type: none"> - Using achievement test of each subject or course. - Using the measurement tools to measure the critical thinking skills for example; the Watson & Glaser critical thinking Appraisal, or other appropriate instruments.

3) Meeting, and seminar of all teachers

The objective aims to evaluate the project and suggestion from all teacher & experts by using presentation and open discussion.

April 2005 - 2007 measuring after two, three, and four year of project implementation by

1) Measuring the teaching-learning condition using both quantitative and qualitative methods on

- the curriculum
- teachers' behavior to teaching critical thinking
- students' learning behavior
- teaching and learning environment
- teaching and learning method and strategies

2) To measure students' critical thinking and basic knowledge :

- Using achievement test of each subject or course.
- Using the measurement tools to measure the critical thinking skills for example; the Watson & Glaser critical thinking Appraisal, or other appropriate instruments.

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3.7 Project Expected Benefit

1. To teachers as individual
 - Teacher could apply critical thinking in daily life.
 - To be more acceptable from others.
 - Professional grow better.
2. To student as individual.
 - Reach to all information they want to know within and outside school.
 - Can live better in the information system world.
 - Can depend on them after graduated.
3. To the college
 - Getting the appropriate curriculum and instructional to improve critical thinking skills and meet the need of social and workforce.
 - College can grow faster, if all teachers and members have critical thinking.
4. To social and country.
 - Social and country can grow faster.
 - People can depend on themselves.

3.8 Potential Problems and Resolution

1. **Teachers not cooperative or not get involves**
 - 1) **Driven by policy – maker and college vision.**
 - 2) **Commitment from the starting projects.**
 - 3) **Influences by the important of this issues and the workforce; require employee that can think more than knowledge.**
 - 4) **Driven by education reform movement.**
2. **Students' learning behaviors, they have to work harder and may be some of them cannot do**
 - 1) **Support, assist and encourage by teachers**
 - 2) **Given information and orientation of the study as student – center to prepare them ready.**
 - 3) **Student could consult with teacher if they need help**
3. **Management: may be cannot support everything/ difficult to contact.**
 - 1) **Clearly preparation phase.**
 - 2) **Individual ordination.**
 - 3) **Commitment to the project before start project.**
5. **Others facilities: teaching environment may be not enough or not available; budget problems:**
 - 1) **Have to design using the most necessary thing that can provide by college then plan to increase.**
 - 2) **Library, Classroom & Laboratory should be plan to improve by every year.**

3.9 Budget Planning

Budget were plan using during the project, based on Thai Government System. Some categories may be more or less that could be justify. The budget will be design only on the major activities. The budget categories will separate to four phases.

Budget category	Sub-total (Baht)	Total (Baht)
Phase I The preparation phase		
1) Meeting all teacher-set project team (3 hours)		
• Break 25 Baht*45 people	1,215	
• Project outline plan distribute (5 pages) (2 Baht*45 people)		
2) Project team meeting (20 people) for project plan (1 day*1 Lunch*2 Break = 100*20)	2,000	
3) Two days training program		
• Expert (600 Baht/hr.*2 person*6 hours* 2 days)	14,400	
• Lunch & Break (100 Baht /day*47 people * 2 days)	9,400	
• Training material/papers handout (30 Baht*45 people)	1,350	
• Stationery (45 people*20 Baht)	900	
• Transportation of expert (1,000*2 people)	2,000	
• Expert accommodation (1,000 Baht*2 people*2 night)	4,000	
• Typing-report printing (instruction module 50 copies*20 Baht)	1,000	
• Communication: phone, fax, etc.	500	
Sub – total		36,765

Phase II. Curriculum development		
<i>Stage I. Researching the future of the profession in society</i> (4 months)		
Project team meeting plan to study (5 times) : (3 days meeting 1 time, 1 day meeting 4 times)		
• Research project: cross-sectional study designed (3 days meeting in college)(Lunch & Break = 100*20 people*3days)	6,000	
• Try out tools	5,000	
• Data collecting		
- Data collecting form 25 Baht*130	6,250	
- Transport & fuel		
• Analysis data	5,000	
• Write up research paper & typing (2,000 typing + (20 copies*50 Baht)	3,000	
• Meeting after research study and establish the curriculum purpose & general attribute desired of graduates (meeting 4 times*1 day*lunch & Break 100 Baht*20 people)	8,000	
Sub – total		28,250
Phase II. (continue)		
<i>Stage II. Establish key characteristic of curriculum</i> (5 days workshop & 3 times meeting)		
• Expert (600 Baht/hr*6 hour*5 days*2person)	36,000	
• Lunch & Break (100 Baht*47 people*5 day)	23,500	
• Material / papers for workshop (150 Baht*45 people)	6,750	
• Transportation for expert (1000*2 person)	2,000	
• Accommodation (1,000 Baht*2 person*5 night)	10,000	
• 1 day meeting*3 times (45 people*100 Baht *3 times)	13,500	
Sub - total		91,750

<p>Phase II. (continue) <i>Stage III. Interprets key dimensions of the course at a subject level:</i> (5 days workshop & 4 times meeting 1 day)</p> <ul style="list-style-type: none"> • Expert (600 Baht/hr*6 hour*5 days*2person) 36,000 • Lunch & Break (100 Baht*47 people*5 day) 23,500 • Material / papers for workshop (150 Baht*45 people) 6,750 • Transportation for expert (1000*2 person) 2,000 • Accommodation (1,000 Baht*2 person*5 night) 10,000 • 1 day meeting*4 times (45 people*100 Baht lunch & break *4 times) 18,000 		
Sub - total		96,250
<p>Phase III. Implementation</p> <ul style="list-style-type: none"> • Material preparing for students (1 class around 50 people) (500Baht*50 people* 4 years) 100,000 • Material for teachers instruction (300 Baht*45 people) 13,500 		
Sub - total		113,500
<p>Phase IV. Monitoring & Evaluation September 2003, January 2004</p> <ul style="list-style-type: none"> • Material test form (2 times) (100 Baht*50 people*2 times) 10,000 <p>April 2004 – 2007 (4 times)</p> <ul style="list-style-type: none"> • Structure questionnaire (4 times) (50 Baht*50 people*4 times) 10,000 • Material test form (4 times) (100 Baht*50 people*4 times) 20,000 • Meeting 2 days of teachers (in college* 3 times) (100 Baht*45 people*2 days* 3 times) 27,000 		

<ul style="list-style-type: none"> • Seminar 2 days of teachers and expert (April 2007*1times) - Expert (600 Baht/hr*6 hour*2 days*2person) - Lunch & Break (100 Baht*47 people*2 day) - Material / papers for seminar (100 Baht*45 people) - Transportation for expert (1000*2 person) - Accommodation (1,000 Baht*2 person*2 night) 	14,400	
Sub – total		101,300
Grand total		467,815

3.10 Ethical Issues

The project may not force everyone to highly commit their selves to the project. Even though using policy – maker to drive and empower them by training However the project team have to respect their thought or their decision.

3.11 Constraints

There may be resistance from some of teachers, or might not join in the project. As the project team have to encourage and influencing by reasons.

3.12 Limitations

This project setup is based on information from specific area. That might not appropriate to other situation. However, the general process of the project can be study.