

CHAPTER 2

Review of Literature

The objective of this research is to develop the development model on the competency of research conduction of the faculty of the physical education institute in the North. To achieve the objective of the research, the researcher studies and investigates a project and its important contents that relate to the development of competency on the research conduction, including other materials and findings of other research and other secondary data. This chapter will present the completed research report as the followings.

1. Concept and the process for developing the model
2. Needs assessment
3. Concept on human resource development
4. Concept on competency
5. Social Network
6. Concept on the curriculum development
7. Concept on attitude
8. Concept on the training
9. Concept on evaluation
10. Concept on power base
11. Research conceptual framework

1. Concept and the process for developing the model

The researcher likes to present the process and the development of the model which can be divided into four topics as the followings.

- 1.1 Definitions of a model
- 1.2 The process of developing a model
- 1.3 Qualification of a good model

The details are given as what follows.

1.1 Definitions of a model

Different academics define “model” in similar or different manners. It can be concluded that the definition of a model can be set as the followings.

Model means the mimic form of the fact or truth in order to explain in simpler way the phenomenon which has relationship between the components and the processes of such phenomenon (Good, 1973; Stoner and Wankle, 1986; Nadler, 1980; Mescon and Khedouri, 1985; Smith and Others, 1971); Chaovarut Temiyakul, 2010).

Sirichai Kanjanawasee (2009) defined the model into three types which are (1) descriptive model that is presenting the model by describing the concepts, principles or the variables and explaining the phenomenon with the descriptive words that show relation, (2) graphic model that is presenting the model by using pictures or mimics/symbols and then drawing the line to show relationship among concepts, principles, or those variables, and (3) mathematics that is presenting the model by using symbols to represent the concepts, principles or variables and using the mathematic functions to make linkage or relationship between the concepts and the principles.

The researcher defines the definition of the model as the mimic model that is constructed under concepts, theory, and facts in the context systematically to be used for developing competency for research conduction of faculty of physical education institute in the North.

1.2 The process for developing the model

The development of a model has important requirements such as that the model should be based on theories. After the development of the model before the trial use, it also needs to be studied to test the theory and check the internal consistency in utilities in real situation and to bring the findings to set for some revisions. The development of a model has main objective that if applied by the users consistently according to the main objective, it will create the maximum result as well as it could be applied in other situation (Joyce and Weil, 1986).

The development of a model is a process of research and development which is used for making inquiry to design some products or new processes. It is the study to seek for guidelines for development directly on the issues around the model. In constructing the innovation or model for the trial use in the field and developing the innovation or model according to the findings, these processes will be repeated until the data indicates that the innovation or model achieves the behavioral objectives.

The model that is widely used in the research and development is the system model of Far West Laboratory for Research and Development (Borg and Gall, 1981) which has been researched and developed as the model for short-term curriculum for the training on the instructional skills in the classroom that is summarized into 10 steps of research cycle and development. The details are as what follows.

In Step 1, the research and data collection in this step are composed of review of literature, observation of the real situation, preparation of materials or documents, research or study on the context, and the need for developing innovation or model to be used for making judgment for developing the model and identifying the important qualification of the model. The explanation of main qualification of the model that will be developed would cover three main issues which are (1) explaining the whole picture of the goals for constructing the model, (2) setting the guideline for the utilization of the model, and (3) setting the statement that identifies the unique objectives of the model.

In general, the details of the model can be changed all the times throughout the development process, but there should be planning in constructing the model under the concept and the appropriate principles from the first step of the model construction. For the criteria in selecting the model for development, it should consider the following considerations.

- 1) Whether the target of the model is around educational need or not.
- 2) Whether there any situation or the facilitating factor that is up to date or progressive enough to make the model possible.
- 3) Whether there are personnel with skills, knowledge and experience necessary for the development of the model or not.
- 4) Whether the development of the model is possible under appropriate time or not.

In Step 2, the planning includes the definition of the skill required for development, identification of objectives, planning for instruction, prioritization of the subjects, and the test for feasibility in small groups. The planning for developing the model can be implemented after the researcher has studied the literature and gathered primary data. The researcher starts from identifying specific objectives or setting the criteria for judging efficiency of the model clearly. The objectives should identify the level of efficiency that can be developed from the instruction, and the efficiency should be consistent with the time to use the model. The design should consist of the content, model/pattern, the educational philosophy, and guideline which get acceptance from the teachers and learners. Therefore, if the identification of the target of the developed model is not clear, the result measured from the users' perspective is not clear and inconsistent with the issue. The results cannot confirm the level of effectiveness of the developed model. Beside the identification of the objectives, the important component on time of planning is composed of planning to use the resources and duration for implementation in developing the model in each step. Careful planning will not only maximize the use of resources but also facilitate the plan for getting external sources of support before the implementation of the model development. The cooperation in the

area for the trial use of the model will be consistent with timing and the process for the model's application.

In Step 3, the primary development of the model includes the preparation for the instruction, the list of resources to be used, the manual, and the evaluation method. This step is done according to the details identified in the timing of the planning.

In Step 4, the test on primary field is done by bringing the model to use in one to three schools with a sample group of 6 to 12 students. The application data is collected through interviews, observation, and questionnaire, all of which will be analyzed.

In Step 5, the activity is correcting and reviewing the main model. This is a correction step for the model according to the suggestions from the primary field test throughout Steps 4 to 5. This step is bringing the model for trial use. The target for the primary field test is to evaluate the quality of the model. Using the primary test with the small sample group is aimed to evaluate the appropriateness on the contents and the method of the model more than to evaluate the model. Therefore, the selection of the methods for testing must be similar and consistent with the real area for the model application. Whenever differences on the evaluation results in any area are found, the model must be tested again in other areas to find clearer conclusion. It should be borne in mind that the data collection from the reflection of the model application sometimes produces the "Hawthorne Effect". It happens when the evaluation results on the efficiency of the model appear too much higher than the results in reality. This will lead to the incorrect methods for revision. Therefore, the researcher should be aware on giving too much incentive to the sample groups who participate in the project. If the evaluation result is biased in the level that is much higher than the objective one, the researcher will perceive the efficiency of the model as not responsive to the reality and will implement the evaluation result incorrectly.

In Step 6, the test on the main field is accomplished by bringing the model to be used in 5 to 15 schools with the sample group of 30 to 100 people. The data are gathered quantitatively and the results before and after using the model are compared.

The evaluation according to the objective of the model may be conducted through the comparison made with the results of the “control group”.

In Step 7, the revision on the model for real implementation is settled based on the suggestion from the main test in the field in Steps 6 to 7. The target of the test in the main field is to select the educational model that proves high efficiency. In this step, the research design of experimental design will be used to test the efficiency of the model. The test in the main field are to test the success or achievement of the model as identified by the objectives and to gather data for the model development further in next level. Therefore, the data collection in this step requires collection from the questionnaires and interviews. The data gathering should cover all relevant people who are involved in the main test. When the main filed test found any data that reveals imperfect model and thus the model needs improvement, the result must be used to test in other areas until this cycle is perfect. The cycle will be tested and reviewed continuously until minimum flaw appears when the model is evaluated against the objectives of the model.

In Step 8, the real test is applied in the field. This can be done by using the model in 10 to 30 schools with the sample group of 40 to 200 people. The data is collected though interviews, observation, and questionnaire that all are then analyzed.

In Step 9, the model is finally revised. The model is revised based on the suggestions from the real test in the field in Steps 8 to 9. This is the test in real area with targets to judge the developed educational area as ready or not ready for real implementation. Readiness means that the model can be really used in the identified target population group. During this time, the model must be carefully perfected and pass the test until it gets acceptance. After the test in the real area, the data should be collected on the result of implementation of the model and the satisfaction of using the model that it would lead to the final general revision of the whole model.

Step 10 is used to publicize the generalization of the whole process as the last step of development of the model for research conduction. The step consists of preparing reports, reporting on the research findings from the relevant groups, publishing the magazine, using the magazine to work with others to generalize the

research finding, and to develop the model's quality. During the application of the model, the monitoring of data collection should be done so that the derived data could be used for improving the model continuously. The final step is very important and necessary for controlling the quality of the model's application process, leading to the reference, and preparing the application of the model widely in the future.

Ratana Buason (2009) stated about the steps for developing the model that are composed of five steps which are Step 1 (the analysis, synthesis, preliminary survey of the current condition, problem or the need), Step 2 (to design, construct and evaluate the innovation or the produced model), Step 3 (to bring innovation or product for trial use), Step 4 (to evaluate and improve or revise the innovation or product), and Step 5 (to publicize the innovation or product). The relationship of these five steps can be shown in the following Diagram.

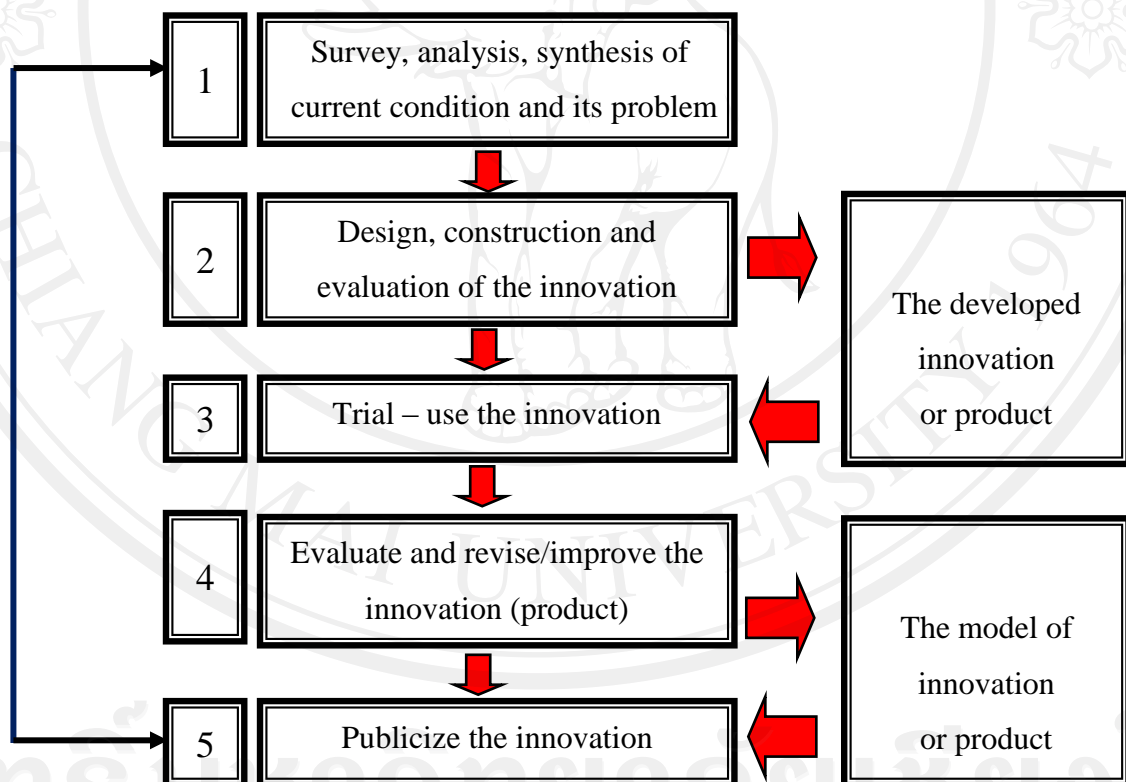


Figure 2.1 Presentation of the steps of research and development

Source: Ratana Buason, 2009: 14.

Figure 2.1 shows that the research and development start from analysis, synthesis or preliminary survey of the current situation and problem, including the need of the relevant people/stakeholders on certain implementation action. The inquiries needed are as the followings. How to make such implementation possible in the current situation? Is there any problem or obstacle? And is there any need for solution or any development/improvement needed to make it better? How to do it? The method to get the data can be done through analysis, synthesis on the secondary data, reviews on the result of previous implementation, or surveys on the opinion of the stakeholders and relevant people in the implementation (including surveys on the need for solution or the development of implementation in several issues from all stakeholders). This judgment is gathered from the type of implementation in Step 1 which is the research and development. When judged clearly, it is clear that the implementation in this step is accomplished through Documentary Research or Synthesis Research and the Survey Research.

Step 2 is the following step after Step 1. After getting the implementation results from Step 1, the results (such as problems and the needs of the relevant people and stakeholders as well as the implementation condition) will be taken to be used for designing or making plan to construct the model further. Afterward the researcher constructs the model following the way as it has been designed. Following this construction, the researcher evaluates the consistency and correlation among all components of innovation and the appropriateness before applying the model to the target groups. The evaluation result of the model will give the useful data for making revision or improvement for the innovation further before it gets ready for the application in Step 3.

Step 3 is the trial phase of the model. After the revision or improvement of the innovation, the innovation will be tested with the identified target group. This trial use will be implemented in form of the Experimental Research. There must be an Experimental Design to select the target group for the experiment and to observe the results of the experiment.

Step 4 begins after the trial use of the model since there will be the general evaluation of the application of the model as the whole picture from all relevant people

and stakeholders. These results will be useful data for making better revision of the model. Evaluating the model can be conducted through evaluation of the project evaluation or Evaluation Research which have concepts for the methodologies and the patterns for evaluation.

The last step is the publication of the model that has passed the trial use process, the evaluation of the whole picture, and the improvement or final revision before release of the results to the user groups in general. These can be done in ways of managing business in the market or reproducing the product for the public, including providing services. This step will deal with public relation, registration of goods, copyrighting, etc. The implementation in this step is separated from the research process because this step is more like about public relation or marketing. Nevertheless after the publication of the model for some time, data collection on the model's users will be gathered that the derived data will be reflexive data that goes back to the development and research process.

The process of development of the three models reveals that the steps for development share some similarities and differences only on the step classification. The researcher has applied the process for developing the model based on the concept of research and development of Ratana Buason (2009) because it has clear steps and convenience for the following development steps. These are (1) survey, analysis, synthesis the context, problem condition, and the need for development at present, (2) study on related literature, concept, theory, and related research findings and the analysis result of the context, (3) design, construction and evaluation of the model, (4) application of the model for trial use, (5) evaluation and improvement of the model, (6) test of the model into real implementation, (7) measurement for the effectiveness of the model, and (8) publication of the model.

2. Needs Assessment

The researcher would like to present the concepts related to the "needs assessment" which can be classified into four issues as the followings.

2.1 Definition of the need

2.2 Definition of the needs assessment

2.3 Steps for the needs assessment

2.4 Prioritization of the needs.

The details will be given as what follows.

2.1 Definition of needs assessment

The study of the definition of the needs assessment reveals that academics and educational or social evaluators define the needs in many aspects that can be summarized as the followings.

Needs means difference or gap between the actual fact at present and the expected situation that should be at present (Kaufman, 2000; Barrow and Milburn, 1990; Witkin and Altschuld, 1995; Suwimon Wongwanich, 2007).

Stufflebeam, et al. (1985) defined and summarized that the needs mean things that need to be responded or that become useful after getting responded. The definition of needs can be categorized based on four aspects as the followings.

- 1) On discrepancy aspect, the needs mean the difference during the action plan or the Desired Performance and the action or the Observed Performance.
- 2) On democracy aspect, the needs mean the desire or want of the majority which can be considered as a reliable reference group.
- 3) On analysis aspect, the needs mean information of a thing or an organization upon which competent personnel can make judgment that it is very important for the organization and thus creates development in the organization.
- 4) On diagnosis aspect, the needs mean something that a person judges as a flaw or Deficiency of Absence and the person can prove that the “Deficiency of Absence” can be harmful to the organization.

Mckillip (1995) states that the needs mean judging the value of certain individual group on the problems found and then trying to solve those problems on these following aspects.

- 1) The needs on values and differences by each individual,
- 2) The needs of certain groups,
- 3) The needs in form of problem when the product is insufficiently effective, and
- 4) The needs on setting judgment or solving problems.

The definition of needs can be summarized as follows. The “needs” is differences between the expectancy and the fact at present. It is the condition that requires development, improvement, and revision based on the perception of the group of people who provide the information for such purposes. The researcher utilizes such concept in studying the needs for developing the competency in conduction of research through the comparison study between the things expected and real things at present about the competency in conducting research among the faculty of the physical education institute in the North. This study will be the database for developing the training kit for developing the competency of conducting research among the faculty of physical education institute in the North.

2.2 Definition of Needs Assessment

The secondary study on the definition of the Needs Assessment reveals that academics and educational or social evaluator define the needs assessment into the followings (Kaufman, 2000; Mckillip, 1987; Witkin and Altschuld, 1995; Suwimon Wongwanich, 2007).

Needs assessment means the process of Gap Analysis or analysis of the differences between the current condition and the desired or expected condition in order to fill up the gap.

From above explanation, the needs assessment is a systematic evaluation in order to identify the differences or the outcome gaps between the expected condition and the real condition at present. Afterward, the researcher then prioritizes the needs to reach the real needs and to solve the problem. From such concept, the researcher will study the needs for developing the competency in research conduction of the faculty of the physical education institute in the North. The knowledge on research conduction will be used as the information or database for developing the training kit that the development might respond to the actual context.

2.3 Steps for the needs assessment

The needs assessment is planning for the implementation to get rid of the problems that come from the unfulfilled needs. Some academics have discussed about the steps of assessment as the followings.

Witkin and Altschuld (1995) claimed that the needs assessment must be as efficient as possible into a status of the Complete Needs Assessment. The steps are composed of Needs Identification, Needs Analysis, and Needs Assessment. In order to finally identify what are the most wanted needs, Witkin and Altschuld (1995) classified the needs assessment into three phases as the followings.

Phase 1 is the Pre-Assessment period. This period is the step to survey to set planning for the needs assessment by gathering the problems or the needs for current performance. Then the assessor identifies the important areas or interesting issues for development. The assessor identifies objectives that need assessment, including identifying the existing data and the relevant data to reveal the needs which aim to evaluate and identify the data sources, data collection, and data utilization methods. The result from the implementation in this period is the primary implementation plan for the needs assessment which will be used during the assessment period and after the assessment.

Phase 2 is the Assessment period. This is the step of gathering data from other sources as identified in the implementation plan and of analyzing the data in order to know the needs. After that the assessor prioritizes the needs and analyzes the roots of

the needs. It may relate to the needs in three levels which are level 1 (primary level or the service receiver such as students, customers and patients), level 2 (secondary level or the service provider such as teachers, family, physicians and librarians), and level 3 (tertiary level or the resources and the guideline for problem solution such as supplies, size of the classroom, time, supporting money, etc.). Then all data around the needs are analyzed and synthesized along with the sources of such needs. The result from the implementation during this period is the criteria or the guideline for next implementation to solve the important problems.

Phase 3 is the Post-assessment period. This is the step of utilizing the implementation result of Phase 2 by prioritizing the importance of the needs and identifying the applicable methods to solve problems appropriately. Then the report of assessment result of the needs to the relevant people and stakeholders is presented. The result from the implementation in this period is the implementation plan, report on the result of needs assessment, and the written summary or oral summary.

Stufflebeam, et al. (1985) stated about the process of needs assessment which is composed of these following five activities that are related to one another.

- 1) Preparation for the needs assessment,
- 2) Data collection on the needs assessment,
- 3) Data analysis on the need assessment,
- 4) Report on the information of needs assessment,
- 5) Application of the data on needs assessment.

These steps are not necessary to occur in chronological order because more than one of the steps can occur at the same time.

2.4 Prioritizing the needs

Priority setting of the needs is the final step for identifying the needs. Analyzing the causes and identifying the solution to problems will fulfill the process of

the needs assessment. The results can be used for analyzing the causes and the solution methods further. Priority setting of the needs is the analysis of each issue of the needs. Then the evaluator prioritizes the order of the needs (sorting) from the most important needs to the least important one (Suwimon Wongwanich, 2007) . It would help the evaluators to realize the real needs or the real problems which need urgent attention before other needs.

There are several methods to prioritize the needs. Each of the methods is different from one another but the method for prioritizing the need must apply this formula of Modified Priority Needs Index ($PNI_{Modified}$). The calculating formula is as the followings.

$$(PNI_{Modified}) = \frac{(I - D)}{D}$$

By calculating the difference value of (I - D) divided by the (D) value to control the size of the needs, the evaluator keeps the range with manageable gap and meaningful in the comparison when using the existing level as the base for calculating the rate of expected development of the group.

The researcher of this research will focus on studying the expectation and the real condition (Gap) of the knowledge and skill for research conduction of the faculty of physical education institute in the North and arranging the demographic or basic data to be used as the information to construct the training kit. The researcher seeks for advice from the experts on the main issues for the training so that the training kit will be appropriate and responsive to the development for competency in research conduction of the faculty of Physical Education Institute in the North.

3. Concept on Human Resource Development

The researcher would present the concept of human resource development into four topics as what follows.

3.1 Concept on human resource development

3.2 Definition of human resource development

3.3 The need for human resource development

3.4 The model for human resource development

The details are as what follows.

3.1 The concept on human resource development

The human resource development has been the knowledge that can be explained clearly based on the concept of Adult Learning Theory since the 19th century. Human resource development emphasizes on adult learning which can be the life-long learning because human resource is the factor with the highest value in the organization. Furthermore it is the factor that can push the organization to be successful and achiever of the goal of the organization. The administrative concept of the organization in the new era then focuses on the importance of human resources and perceives human resources, not capital, as profit. Human resource becomes the value-added resources. The more the human resource is used, the more valuable it will be (Chira Hongladarom, 2007; Badi Treesukon, 2007). In the past, the concept of human resource development emphasized on training and developing human resources in the organization through the process of learning and motivation. The motivation will emphasize on the Employee Satisfaction Index. However, at present the concept of human resource development in organizational administration has moved to emphasize on the employees' motivation to love their organization, to love learning, and to build attachment to the organization (engagement). Badin Wijarn, (2007) emphasizes on the achievement of the organization's goal. These are things that most organizations want to have among their employees in the organizations. In this study, the researcher studies secondary data, reviews the literature, and summarizes that the human resource development can be successful if it is implemented seriously, continuously, and systematically. Ulrich (2006) emphasizes that high-level executives will prioritize the human resource development as this is the important force to push the organization to reach its goals concretely.

Nevertheless, the activities of personnel development are considered the core of human resource development (core HRD beliefs). Swanson and Holton (2001), for example, stated about the personnel development as the followings.

- 1) Organization is an identity that is created from human by human specialization that can achieve the organization's goals.
- 2) Development of human specialization to create the highest benefit can be done through the process of human development. It should be created so it could become the common benefit in long-term and short-term missions of the organizations and individuals.
- 3) Occupational experts/specialists on human resource development promote the prosperity and unity of individual/ groups, the working process, and the organization.

The concepts for developing the competency of research conduction of the faculty in the Physical Education institute in the North is borrowed by the researcher from the theory of Swanson (2009) for developing personnel's competency on the research conduction. This research applies the development in form of training which is composed of the participants of the training or trainees, a training manual, a monitoring process, a consultation arrangement, series of advice for conducting research, and assessment of the research's findings.

3.2 Definition of human resource development

Human resource development is the expansion of knowledge on Human Resource Management. This expansion of knowledge is developed to be the tool to be used as the guideline and principle for human resource development. From the study of the definition of human resource development, it can be summarized and categorized into three groups which are the followings.

Group 1 defines human resource development as the implementation to make individuals gain experience and learning for some time in order to be able to improve their competency in their professional performance. This experiential learning

can be done through three methods which are training, education, and development (Mondy and Neo, 2005; Raymond, 1999; Werner and DeSimone, 2006). The researcher summarizes the three methods as what follows.

1) Training is the development for learners to get necessary knowledge and skill in their present jobs. The objective of the training is to enhance the personnel's levels of knowledge, abilities, and skills at that time that they can perform their work better in their positions. The participants of the training can bring the knowledge to apply in their work immediately.

2) Education is an activity that is arranged for the learning for the future job. The objective of the education is to prepare people for promotion, career development, and prevention of personnel loss.

3) Development is learning beside the present job. It is the preparation for changes and long-term growth through the development that focuses on human resource and their future jobs.

Group 2 defines human resource development that it is the process to enhance knowledge, skill, and capacities of all people in a certain society. It covers the process of group activities to be arranged in an identified period to create some consequences on the behavioral changes. The development emphasizes on three parts which are on individual development or ID, career development or CD, and organization development or OD. It leads to production, quality, opportunity and maximization of production which are the highest goals of the organization (Rennie, 2003; Werner & DeSimone, 2006; Wexley & Latham, 2002). The details of developing these three parts are as the followings.

1) Individual Development is helping the personnel in the organization to realize their weaknesses and strengths. Therefore, they reinforce the strengths and improve their weaknesses by using their full potentials to create the efficiency in the organization as well as the achievement of individual targets. The development model will be the individual development that has been created through experience in several types of job. The jobs might be the formal or informal jobs or on-the-job training.

2) Career Development emphasizes on the analysis in order to perceive about the interest, value, knowledge, abilities, activity, and the assignment for individuals to perform to develop their skill to perform the work in their future job. In career development, both personnel and organization must perform in some activities. The personnel must make plan for their careers, be aware of their profession, and maximize the benefits from the occupational Development Center in their organizations. The organization must arrange activities that cover the consultation system, the activity arrangement of seminars, workshop trainings, human resource planning, and assessment of the implementation and career plan.

3) Organization Development aims to develop some methods to solve the problems in the organization with new and creative methods by trying to adjust the cultural structure, administrative processes, and strategy on human resource management accordingly. All parts must be integrated and thus make the organization adaptable or capable to reorient itself and perceive their problems and weaknesses of the organization. Then, the management brings these learning and adaptability to improve or solve the problem efficiently.

Group 3 defines human resource development as the organizational development to become a Learning Organization through the integrated learning which can be integrated continuously and systematically. The learning organization must have learning in the organization in three levels. The learning may develop from each of the levels or all three levels at once. They are as the followings (Marquardt, 1996; Onjaree Natakatoong, 2008).

1) Individual Level. For example, there are individuals who have potential to seek for knowledge, develop their intellectual skills, and attitude through independent study and shared learning with others. This level of learning emphasizes the stimulation to each individual to seek for knowledge, love to learn, and create learning opportunity continuously.

2) Working Group or Team Level is the enhancement of knowledge and ability of the group by allowing everyone's participation and exchanging of knowledge among the group members. Therefore, working group or team level is created as the

consequence of earlier growth at the individual level. Part of it is from every member to share one's knowledge to the other members of group. The working group learning, therefore, is created through activities or processes that facilitate the group process or the interaction among the members of the group.

3) The System Level is utilizing the knowledge, abilities, and everything else that each individual in each of the groups has acquired to be shared or used together to achieve the organization's goal. The learning at this level can be created if the organization gives authority to individuals to utilize their existing knowledge for the organization and to integrate quality of knowledge into quality of working life.

Therefore, human resource development is the process that creates human prosperity and has higher potential through developing knowledge, ability, attitude, and skills to create good life quality to the human resources of the organization. The objective is to enhance the value of human resource in the organization to be valuable and professional resources. This enhancement will push the organization to be successful and achieve the target efficiently according to the definition of Group 2, which is consistent to the research objectives. The research objective is to enhance the competency in research conduction of the faculty of physical education institute in the North. This development is composed of improvement of knowledge, attitude, and skills. This development is the professional development of the faculty in the Higher Education Level that are responsible in teaching, conducting research, and developing organization that the organization can achieve the mission of the physical education institute which are studying, conducting research to create knowledge, and developing knowledge and innovation.

3.3 The need for developing human resources

From the study of secondary data and the trends at present, the researcher can summarize the issues regarding the need for developing human resources into three issues as what follows.

3.3.1 The business need. Because of changes and hard competition in business world at present, the conventional style of personnel management is no longer

applicable for the business growth. The leaders in new era must have broad vision and potentials to develop their own human resources into valuable resources. Personnel must be developed on their thinking methods and urged in the organization to love learning for the rest of their lives.

3.3.2 The need in building human capital to be efficient that they can compete with other organizations. In creating different qualities of human capital and create the highest value to the business, the human resource development must have an appropriate and clear guideline that the development can achieve the most valuable human capital.

3.3.3 Creation of valuable human capital with unique qualities is called organizational capital. It is creating the prominently unique qualities that other organizations cannot imitate. The importance of creating the differences is creating unique identity of the organization (Ulrich, 2005b). Such concept and necessity for human resource development are considered as the role and responsibility of human resource developers. New organizations require professional human resource developers who can make linkage of the organization's goals to concrete implementation. It is expected that the human resource developers create the followings in the organization (Rennie, 2003).

- 1) New Generation Leader who shows leadership in the organization and is able to develop competency of personnel in all aspects systematically and clearly. For example, this able leader can create the Training Road Map or TRM to be used as guideline for human resource development to achieve consistency with the organization's goal or the identified systematic Independent Development Plan or IDP to create the change agent of the organization.

- 2) New Employees Retirement System. This system can be settled through the human resource management's allowing the proper roles of professional human resource developers and Heads of the Unit or the supervisors of working line in the big organization. Some Contract Manager or Outsourcing officer may be hired in to take care of liaison between the organization and partners or to create partnership (partnering) or alliance between personnel and organization. The result is a higher level

of personnel's attachment to the organization because of the created close bond that responds the most to the needs of the personnel.

3) Strategic Result Management is creating innovations that emphasize on the result. This management has the measurement of the result with the Key Performance Indicators to measure the increased abilities that are made or the most valuable results of the organization. There are some Key Performance Indicators on the concrete achievement of human resource development (or Human Resource Scorecard). The measurement of the model for Strategic Human Capital Management will be used in managing the compensation system based on the achievement and giving welfare with quality. This system creates efficiency in the organization in responding the need of the personnel, including the development of organizational result through self-development of personnel at all levels.

The evaluation result of the Office for National Education Standards and Quality Assurance (ONESQA) reveals that Physical Education Institute must have the development and promotion of research conduction among their faculty. This development responds to the role and responsibilities of the faculty in the Physical Education Institute which are teaching and producing research. Therefore, the development for the faculty to have competency for conducting research efficiently is an important factor and indicator of academic excellence of the institutes under Higher Education Level. In this way, the faculty of Physical Education Institute can adapt themselves to the imminent changes.

3.4 The Model for Human Resource Management

Human resource management is a process that promotes the personnel to have heightened knowledge, attitudes, skills, and appropriate behavior for their work quality. Human resource management enhances the potential of the personnel so they can perform the work efficiently. The study of the Model or the method for human resource development shows many academics' findings about the models or the methods for human resource development as the followings.

Mankin (2009) stated that the model that is used for human resource development must have various development stages as shown below.

1) Lecture is the training which is given through lectures on the learning contents by specialists or experts on certain matters. Most of this training is one-way communication from the trainers to the trainees, but the process can pass through the floor by discussion occasionally. This type of training should be used with the topics that are not emphasizing on implementation. It is appropriate for the training group with many participants in limited time.

2) Demonstration is creating understanding through demonstration of real implementation such as the use of tools and equipments or machinery. This training is appropriate for the highly practical implementation and requires the minimum mistake because it may affect the quality of the product or work.

3) Workshop training is the training that uses lecturing of learning contents, which at the same time allowing the participants of training to produce their own product/work after the lecture. This training can be done alone or in group. This training is the method that emphasizes the participants of training to have practical knowledge and skills for real implementation and to enhance skills for working in team.

4) Brainstorming is stimulating the participants of the training to express their own opinion freely on certain things. Then, the facilitator selects the valuable expressions by using consensual vote or judgment by the administrator/facilitator. This kind of training avoids criticisms from the facilitators or participants. It is appropriate for the training on creative thinking to develop, improve, revise, or seek for solution of known problems.

5) Discussion is stimulating the participants of the training to exchange opinions and experiences to one another. Participants will analyze and synthesize advantages and disadvantages of their positions, including the causes. Then they draw conclusions, suggestions, or solutions on certain problematic matters. This type of training is appropriate for Critical Thinking development.

6) Case Study is bringing real issues to be studied together among participants of training through analyses and syntheses so they can grasp strong and weak points, including the opportunities for development and obstacles of the case study. Then participants bring these analyses to prevent or solve the problem and to develop the implementation of oneself and organization. This training is appropriate for training on Applied Thinking and integration for developing theoretical solutions for real issues.

7) On-the-job Training is the supervised training for the subordinates while they take instructions for real implementation. The objective of the training emphasizes on enhancing the implementation skill and reducing mistakes from the experiment which may result in safety, efficiency, and effectiveness of work. In addition, this method reduces the waste of time for deliberate off-site training.

8) Observation is going study tours in the real implementation in real places. There is a speaker who explains or lectures. The objective of this training method is to enhance the experience for the participants in training atmosphere. The most important thing is to select appropriate places for enhancing the experience on real implementation of the training participants.

Sparks and Loucks Horsley (1989) propose the model for human resource development as the followings.

1) The development model must come from the needs of the teachers (or Individually Guided Model). This model presumes that teachers are the best persons who should identify the needs to develop themselves and the things to be developed related to the learning experience. Therefore, the procedures to develop the teachers according to this model will start from identifying the needs followed by setting plans to achieve such needs. Then, the trainers implement the steps to accomplish the plan and evaluate the result according to the plan evaluation.

2) Observation and Assessment Model. This model allows the teachers to observe and produce feedback information with the other teachers. It causes positive

result both for the observer and the persons who are observed through the methods of Peer Coaching, Team Building, Collaboration, and Clinical Supervision.

3) Involvement in a Development Process Model. It is believed that this model will make the teachers as “adult learners” who are taking their participation seriously in solving problems that are consistent to their interests. Besides, it is assumed that the teachers are in the right position where they can identify guidelines to solve the problems the best. Such belief turns the teachers into acute researchers and learners by themselves, and they seek for solutions on their curricula or their instructions. The teachers start from identifying problem, seeking for possible alternatives to solve the problems, gathering data or studying the identified problem, developing the implementation plan from the derived data, implementing the plan to solve the problems, and evaluating implementation results according to the plan which will lead to improvement or changes in the implementation plan.

4) Training Model is the model which has been widely used for a long time with a characteristic of transferring knowledge (Transforming). This model creates changes from the outside. The process is found in the problem of bringing the learning skills derived from the training to real implementation in the classroom.

5) Inquiry Model is the one that can be used individually or in groups. It is the model that stimulates the teachers to study in order to improve a situation and to solve the problem found during the instruction in the classroom or the school problem through action-based research or Quality Circles Methods and Total Quality Management.

The review of literature on the model for human resource development shows that the model for human resource management has several methods. The model for human resource development is a training process which is used for developing personnel. However, in selecting any of the methods it is important and influential to pick a model for developing personnel which is closest to the planned objectives of development. In developing the competency on research conduction of faculty of physical education institute in the North, the researcher uses several development methods along with the training method. The training will be the process for developing knowledge on research conduction. After the training, the participants will return to do

research by the self-learning system. This method imparts real practice of the activity to the training participants. Such stage is the step for developing research conduction skill. The researcher must evaluate the research result by oneself by using the evaluation forms. Such evaluation form will provide explanation through scores (Rubric Score). During research conduction, some experts and coaches will give consultation and suggestion and they monitor the evaluation of the research conduction. This research step is the process to give assistance to faculty-researchers that they are confident in research conduction. It will be the process for developing the proper attitude toward research conduction. It provokes the researchers to learn and to instill positive feeling toward the learning and positive feeling toward real implementation until the completion of the research process.

4. Concept on Competency

David C. McClelland (1973), an expert on psychology at Harvard University, initiated the concept on competency. He studied why the personnel at same position have different performances. McClelland conducted the study by separating the personnel with good performance out of the personnel with moderate performance. Then he studied two groups of personnel to see how these two groups of personnel have produced such different performances. The research finding drew conclusion that the personnel with good performance have something called competency. In 1973, McClelland wrote an article on “Testing for Competence Rather than Intelligence” which was the original concept on competency. The article explained the personality of people just like an iceberg. It revealed that the good or poor performance relied on the inner characteristics of the person such as attitude, value, belief, skills, ability, knowledge, etc. They play important part and thus influence the behavior and the achievement of the working personnel. These things come from experience, upbringing, education, hearing and seeing which accumulate to be the inner characteristics of the persons. Therefore, development or changes that make the person perform better and successful is not easily built. It requires time and it is the initiation of attention paid to the competency building of people.

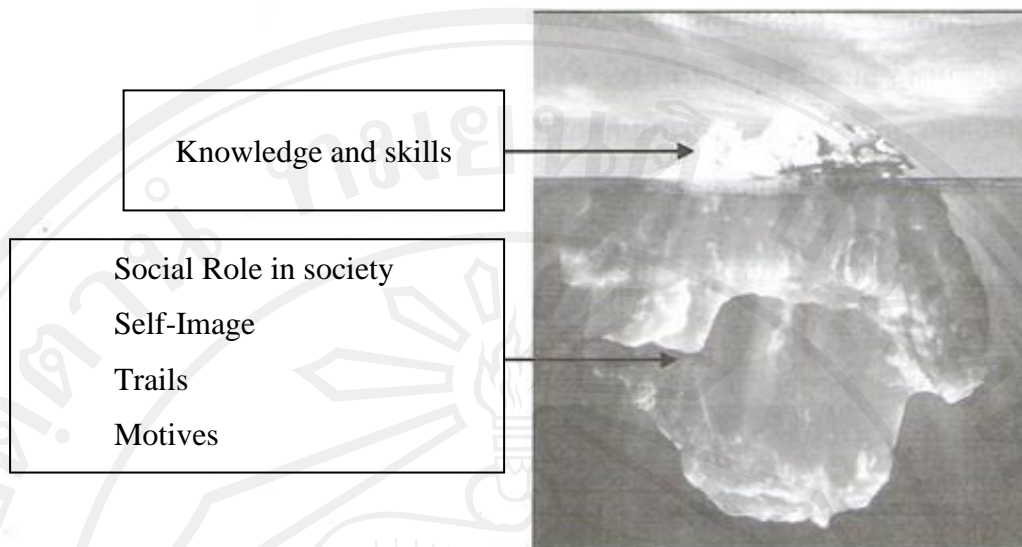


Figure 2.2 The Iceberg Model
 Source: Chuchai Smithikrai, 2013

The figure above can explain that a person's character is like an iceberg which floats on the surface of water. Little part of it floats above the water to be seen and measured easily such as knowledge gathered from studying and skills such as competency or special skills. The part of the iceberg which is under the water surface is the biggest part. It cannot be seen clearly, more difficult to measure, and influential more on the behaviors of individual in terms of social role in the society, self-image, traits, and motives. The part which is above water is related to the intellect of the person. The persons who are clever and able to absorb knowledge and skill are still not good enough to have dominant performance. They must have proper motives, trait of person (attributes), self-image, and social role in society before they can show dominant performance.

Using the concepts of "competency" or "ability", the objective of the researcher is to develop the faculty of physical education institute in the North. This personnel development must be based on the mission in the organization's guideline of Physical Education Institute, especially on the issue of competency in research conduction that the faculty of Physical Education Institute in the North can produce research work according to the mission of the institute and responsibility of the faculty in the Higher

Education Level. The researcher would like to present the concepts on competency which are divided into three topics as the followings.

4.1 Definition of competency

4.2 Type of competency

4.3 Assessment/evaluation of competency

4.4 The details of development of competency in research conduction in the Physical Education Institute are given below.

4.1 Definition of Competency

From the study on Competency in English, many academics define the definition of competency as the followings.

Polson Phosrithong (2010) ; CharoenwitSompongdam (2010) ; Sukanya Rassametummachot (2004); Prajak Sub-udom (2007); Piyachai Chantarawong-phaisan (2006) define consistently competency as knowledge, skill, and attributes which influence the necessary behavior and make the person to perform responsibly better than other people. David C. McClelland (1973), Boyatzis (1982: 58), Mitrani, Dalziel and Fitt (1992: 11), and Spencer and Spencer (1993: 9) stated that competency is the traits or attributes that are related to efficiency and have causal relationship with criterion reference and superior performance.

From the definitions of competency according to the academics, it can be summarized that competency means the behavior group of individuals that expresses and influences the individuals' performance under their responsibility and their performance to achieve the standard or higher criteria. There are at least three components which are knowledge, skill, and attributes that hide some values, ethics, personalities, other traits, and behavioral group that are used and have relationship and consistent with the performance under the person's responsibility.

For this research, the researcher identifies the competency for research conduction of the faculty of Physical Education Institute as composed of (1) knowledge

(ability and understanding about the process of research conduction), (2) attitude (feelings of individuals or opinions of people toward research conduction), and (3) skill (ability to conduct research).

4.2 Type of Competency

From the study on the type of competency, some academics states about the types of competency as the followings.

Office of the Teacher Civil Service and Educational Personnel Commission (OTEPC) (2010) defines the competency of governmental teachers and educational personnel into two types as shown below.

1) Core Competency identifies that all academic standings and other fields of teaching, educational supervision and educational administration or educational management to have and to be evaluated on four competencies which are achievement motivation, service mind, self-development, and teamwork.

2) Functional Competency is the ability to analyze, synthesize, design, learn, develop learning skills, and manage the classroom.

Tuan Thongkaew (2007) classifies the type of competency into five types as shown below.

1) Personal Competencies means the competency that each individual has as individual abilities that others cannot imitate such as talents in self-defense, musical talents, acrobatic skills, and athletic prowess. This type of personal competency is hard to imitate by others or they must have attempted very seriously to do so.

2) Job Competencies means personal competency with the works under personnel's responsibilities or personal roles such as in professions related to calculation. These people must be able to analyze figures or numbers for calculation and to accomplish accounting.

3) Organization Competencies means special abilities of certain organizations.

4) Core Competencies means the ability that the personnel have or must do to achieve the set goals.

5) Functional Competencies means the individual's ability to perform responsibly their tasks. The position may be the same kinds but the personnel may show different levels of performance.

Chuchai Smitikrai (2013) divides the type of personnel competency into three types as shown below.

Core Competency is the competency that all personnel (in all fields, units, or positions) in the organization need to have.

Functional Competency is the competency which is knowledge, ability, and necessary skills to perform the task in a field such as the personnel who work in the supplies section need to have competency in supply duties.

Role Competency is the competency that personnel at administrative level need to have in order to perform their responsibilities and roles as administrators efficiently. Some organizations may call this competency as Management Competency.

The review of literature on the type of competency shows that the type of competency can be considered from the principle of organization goals. All personnel must have competency based on the organization's goals which is the core competency such as physical education institute is a higher education institute in which the faculty of physical education institute must be responsible for teaching and conducting research. Therefore, teaching and researching are considered as the core competency while the other competency is considered as minor competency or called differently as functions or job competency. For example, the personnel who work in the Student Affairs Section need to be competent in their fields of student affairs.

4.3 Competency assessment

From the study of competency assessment some academics have defined the meaning consistently and thus can be summarized as the followings.

Thitipat Pichayathadapong (2006: 55) states that the competency assessment means the process to evaluate the knowledge, ability, skills, and behavior on performance of individuals by making comparison with the expected competency levels in the organization for such position. The assessment of competency should be proceeding as the followings. It should be evaluated systematically. It must have clear objectives for evaluation and some measurable processes. The measurement tools must have proper validity and reliability.

Office of The Civil Service Commission (OCSC) divides the measurement and evaluation of the competency into three groups which are given below (Ratchaneewan Wanichtanom, 2006: Online).

- 1) Tests of Performance are the tests that allow the person who take the test to perform a task. This type of test is designed to measure the ability of an individual (can do) under the testing condition. The sample for this test is the test on General Mental Ability. It is the test that measures certain abilities, skills, and physical performance levels.

- 2) Behavior Observations is the test that is related to the observation of behavior of the persons who takes the test in certain situation. This type of test is different from the earlier type that the persons who take the test do not need to perform any task but their behaviors are measured through observation and under certain situation.

- 3) Self Reports is the test that allows the respondent to give self-assessment report such as feelings, attitudes, beliefs, interests, personality test, questionnaire, and survey. In answering this type of questions, however, the respondents may not relate their true feelings or answers.

Tuan Thongkaew (2007: Online) states that competency assessment relies on the methods or the use of certain tools to assess individual's competency as the followings.

- 1) Background history of the individuals' work. What have they been doing? What kind of knowledge, skill, or ability do they have? What are the statuses of

their work experience? Gathered from the work experience, the personal data of an individual can be collected.

2) The assessment of Performance Appraisal. It is about the data on performance which can be reported in two types as what follows.

2.1) Task Performance is the work that results in a set of tasks.

2.2) The result of performance that is not the work or tasks but merely the context of the work or tasks (contextual performance). They are the behaviors of the persons who perform the task such as hospitality and helpfulness to others.

2.3) Interview is the data gathered from the interview. It can take form in the semi-structured interview which is interview based on identified topics or issues and the non-structured interview which is asking questions based on situation.

2.4) Assessment Center is the center that gathers all the techniques of psychological measurement together, including group discussion without the group leader in this center.

2.5) The 360-Degree Feedback means the surrounding evaluation, such as from evaluation from colleagues, supervisors, subordinates, or customers to check personnel's knowledge, skills, and qualifications.

In this research, the researcher applies the assessment evaluation form of several experts to use in the evaluating/assessing the competency in research conduction on three aspects, which are on knowledge by using the Tests of Performance, on skills for evaluating the research work which is the assessment form (Performance Appraisal), and on attitude which is assessed from the questionnaire which is in form of Self Assessment.

4.4 Development of core competency on research of Physical Education Institute.

The research competency is an important character of a competency which should be developed in the personnel in all professional fields, especially on the

educational personnel. It is consistent with the National Education Act on B.E 1999 Section 30 that emphasizes on research. It identified that the teacher must conduct research to develop their own instructional development through the research process as the tools for instructional management (Office of the National Education Commission, 2002). This is consistent with Civil Service Act in the Higher Education Institution in 2004 and its amendment/revision in 2008 Section 18 that identify the position of civil servants in the Higher Education Institution with responsibilities for teaching and researching.

Physical Education Institute is an educational institution in Higher Education Level. Conducting research is a mission of a physical education institute that it must implement and identify the policy on research conduction to encourage the faculty of Physical Education Institute to conduct research. It can be summarized as the followings (Physical Education Institute, 2014).

- 1) The institute seeks for budget for support the research from financial institutes both from domestic and overseas sources.
- 2) The institute prepares regulation and implementation guideline for fund disbursement to set efficient methods for budget distribution to support research conduction training.
- 3) The institute accelerates the process of research conduction that it completes by due date by identifying the budget spending plan. The institute must consider on the contents, time, and budgets in similar standards.
- 4) The institute encourages and supports the publication of research findings and the creative works in the country and overseas.
- 5) The institute supports and encourages the research conduction to make it responsive to the strategy of national research and consistent with the mission and strategy of the institute. This support can solve the problem and answer the questions exactly, including the academic work in the promotion of academic position such as assistant professors, associate professors, professors, or promotion to higher position.

6) The institute arranges the regulation in the research unit of research and evaluates the research. The development of the research group creates the branch that is dominant in Physical Education Institutes on Physical Education, Sport Sciences, Health Science, Recreation, and related fields.

7) The institute creates the cooperation network on research and innovation. It prepares the research database in the institution level for research and publication. Then the linkage to the networks of other domestic Higher Education Institutions and overseas is settled.

8) The institute sets the development plan on the quality criteria and standards of the research on physical education and Sport Science, Sports, Health Science, Recreation, including encouraging and promoting the combination of research group on certain research fields or subjects. Through interdisciplinary and integrated research, all subjects and branches of subjects and other related branches are analyzed to solve the problems of the country and to lead to excellence.

9) The institute promotes and supports academic meetings and publication of the research work to the public and participates in the academic network in national and international levels.

10) The institute creates the supporting factors or motivations for researchers by promoting and supporting in several forms such as awarding honors to researchers of the institutes that have produced very good research works.

Such policy, however, has not influenced the production of quality research works among the faculty of Physical Education Institute. According to the results from the third round of the external education quality assessment by the Office for National Educational Standard and Quality Assessment (ONESQA), the research works that are creative and published is still in the criteria level of “Urgently need Improvement” (Office for National Educational Standard and Quality Assessment, 2013) . It is consistent with the report of the internal educational quality assessment of the institute which reveals that the numbers of research works which get published have the evaluation result in “low level” (Physical Education Institute, 2013) . From such

evaluation, the committee members who assess/evaluate the produced research give suggestion on the research as the followings.

- 1) The institute should support the faculty in all faculties to accelerate production of research work through search for research funding sources and to consider teaching trainings that match with the research conduction.
- 2) The institute should find other publication sources in both the country and overseas institutions to publish more research works.

The status as the Higher Education Institution demands production and publication of research works to the communities inside and outside the institute as an important issue to be considered to promote and support for publication of research work in several forms. This activity would create values, beliefs and enhanced image of the organization as the Higher Education Institution. It includes the management of promoting and supporting the resources, personnel who implement the activities, and the personnel who arrange the open the floor meeting for learning exchange on the production and publication of the research work. Therefore, in order to set efficient production of research work of the faculty, there should be the integrated support of research so the implementation can achieve the mission target.

5. Social Network

The researcher would like to present the concept of social network which can be divided into four topics as the followings.

5.1 Definition of social network

5.2 Type of social network

5.3 Creation of social network

The details are as what followings.

5.1 Definition of social network

Many academics define the term “social network” which can be summarized as what follows.

Network means the groups of people or organizations that are willing to exchange news and information to one another or launching activities together while the individuals or the organizational members still have freedom in implementing their own activities. Creating a network is connecting scattered individuals and organizations to exchange information and cooperate voluntarily. The members in the network have good friendship to one another independently (Bruce, S. and Yearley, S. 2006; Paul, S. 1997; Borgatta, E. F. and Borgatta, M. 1992; Phramaha Suthit Aphakaro, 2005).

The definition of research network means the model of social relationship of groups and organizations through Social Interaction Model in form of activity, cooperation, reliance, or learning exchange with the objective to develop the competency in research conduction of the faculty of Physical Education Institute in the North.

5.2 Type of Social Network

In setting typologies of social network, the researcher can divide it into several forms. Many academics have classified the type of network which the researcher can present briefly as what follows.

Phramaha Suthit Aphakaro (2005) has divided the type of network into three types such as below.

- 1) Area Network is the gathering of groups, organizations, or networks in the implementation area as the main factor in functioning or working together. It is the development process that relies on the recurring activities in these areas to be the guiding targets. The closely tied integrated development is based on the area of location as the achievement of functioning or working together of all parties.

- 2) Issue Network is the network that uses the issues as activity or incurring situation to be the main factor to gather the groups or organizations. They

overlook certain areas or dimensions and aim to manage the issues of activity seriously and develop the cooperation with related parties.

3) Functional Network is the network that is created by a mission or activity and the form of beneficiary group in the society as the guideline in driving the network. It can be divided into the network of governmental sectors and citizen sectors, private business sectors, and private development sectors. All networks aim to implement under the conceptual framework, principles, objectives, and main targets of the organization or the main project of the beneficiary groups.

Kilduff Martin and Wenpin Tsai (2003) classified type of network according to the level of Network Analysis into four types which are (1) individual level network, (2) business unit level network, (3) organization level network, and (4) other level network.

In this research, the network that is used in the research is based on the area of implementation because the Physical Education Institute in the North have four campuses, and it is based at the organization level network that is based on issues on developing the competency of research conduction of their faculty as the shared main problem. This is the responsibility of the faculty in the Higher education level to conduct research through a co-operation at the organization level network and to use the policy as the driving force to develop research competency.

5.3 The construction of Social Network

The construction of networking means the activity to construct groups either as organizational groups or people groups with the objectives to exchange the activity arrangement or the work production among the members of the organizations. This purpose relies on the members' interaction together before the responsibilities to make an agreement to build a network organization or to construct a social network.

Starkey (1977) proposed the guideline to construct the social network that it should have the following implementation.

Invite organizations and beneficiaries to attend the meeting. The meeting topic is interesting about the common benefits or the related targets, assignments of the responsibility on meeting arrangement for the beneficiaries to be in charge, and settlement for agreements on activities that may bring in such common benefits.

Identify the objectives of establishing the network, direction, main activities, qualification for the members, and allowance for the majority of the members to participate in the identification process in to prevent from negative influence from certain people or groups. The revision should be done from time to time to adjust these identifications to the situation in the society and the needs of the members.

Establish the core group of the network who are willing to work as the coordinator, responsible for cooperating, and managing and sending supplies to members. They should be consistent to daily responsibility at their own organization, and the core group must implement the activities of the network to achieve maximum benefits.

The sense of ownership and attachment is an important thing for the success of the network. The network should open opportunity for members to participate in decision making process, selection of activities, and the implementation/working method of the network in democratic form.

The network must have the method for providing and arranging the resources to reach efficiency in running the network business and setting the ability to be self-reliant. This resource is not necessarily covering only capital but it can cover the quality of the members, the method of collaborative management, and the technology for exchanging information etc.

To set the network a legal status that the network and the leader of the network can get support and trust from the members of the network. Besides, the network can implement the work widely, gain reputation, and set the symbol of the network to be remembered easily.

Members should support the linkage between the network and larger set of network that they can strengthen the network horizontally and vertically or in different

regional levels. The connection of network can be either formal or informal although it appears in activity together or has the same representatives in arranging the relevant workshop meetings.

There should be monitoring and evaluation regularly and accurately by checking on the consistency of the implementation plan, the objectives, the progress, and achievement of the network in certain period. It should allow members to participate in the process of identifying the method and indicators of efficiency of network activity and to join in the learning throughout the process of monitoring and evaluation.

There should be an arrangement for the training curriculum on the network management for the core organization and the leaders in regular basis.

If the objectives of the network are good, the linkage in the network is appropriated, and facilitation of the activity, movement and competition among members is running, the project or activities have been decentralized properly to all members who get benefits. The implementation of the network will lead to sustainable network development.

Burke (1999) proposed a guideline to construct and develop the network that aims to preserve the balance between the needs of the supporting organization and the network as the followings.

- 1) External input factor. The most important issue is the danger from external resources which can bring more disadvantages than advantages. The openness and the participatory planning process can solve this problem. There will be a lot of complicated combination of centers through fund-raising management that might weaken the network. It is very important to ascertain that the representatives of the groups are responsible and become the leaders in resource management to replace the weakened parts of the organization.

- 2) Unity. It is the model which is designed in a way that is difficult to grow. Each of the networks may be different from one another. The opportunity and independence should be given to the network to design the forms.

3) Definition. The network must define and identify objectives and boundaries of issues or areas. The network is necessary to be sure that it is not replicating or competing with the existing network but developing relationship and linkage to the relevant institutions.

4) The extensive links of concern. If the network would survive, the network must have many members who are determined in the principles of activity arrangement of the network, and there is a core group within the network who pushes or stimulates the relationship within the existing network continuously. The core group of the network should regularly communicate with the members who are often absent. There must be work division among the responsible members.

5) Participation. The network normally is composed of the members of the private development organizations, researchers, community organizations, etc. Therefore it is necessary to promote the connection among the beneficiaries to make sure that these people keep in touch and facilitate benefits.

6) Internal conflict. The members of the network often suspect one another or have some hidden agenda. Openness and good communication in the network will reduce stress and tension, and democratic process and transparent decision-making process are important for this management.

7) Reward. The perception of attempt to make members devote themselves to the network is very important to preserve enthusiastic members. But it is inevitable that the network may change as time passes. The group that separates itself to be a new one will pay attention to different issues. The members resigning or arriving, the values of the network may come from the informal relation which occurs around the network.

8) Flexibility. The network requires rules and responsibilities although they should not be too permanent. The ability to adapt is very important for the sustainability of the network. At the same time, the objectives of the network should be clear but there must be an area that can be changeable.

9) Creation of experience to be a matter. If the network uses the benefit from the experience, learning must be done properly to be useful for the members as much as possible.

10) Provision of financial support. A network cannot implement the activity by itself. It needs funds.

Other resources are not in form of money for the work of the network. The various sources of finance are necessary for creating sustainability of the network.

The legal right. The network must have name and connection to build reputation of the network from the support of the high level of organization and publication through media. It will help creation of sustainability and authority of the network. In creating the network of research, the researcher applies the concepts to create the network of Physical Education Institute in the North. The objective is to develop the competency for research conduction of the faculty through the activity management to promote and support the research. This development is done through the combination of groups to exchange the limited resources for common targets. This teamwork will lead implementation to achieve targets or objectives of the network because the teamwork works for the combination of benefits together.

6. Concept on the curriculum development

The researcher would like to present the concept of curriculum development. This can be divided into four topics which are composed of the followings.

6.1 Definition of the curriculum

6.2 Components of the curriculum

6.3 The process for curriculum development

The details are as what follows.

6.1 Definition of the curriculum

The study of definition of curriculum reveals that academics define it consistently as the followings. Curriculum means boundary of experience and knowledge, arranged for the learners both from inside and outside the classroom. Curriculum is arranged in form of activity for the instructional management to create experience which is the guideline for the learners. There are some desired characteristics or qualifications required according to the objectives of the curriculum. (Boonleang Thumthong, 2010; Atchara Wattananarong, 2008; Duanpen Homhuan, 2008; Kanat Thatthong, 2007; Pisanu Fongsri, 2006; Ornstein and Hunkins, 2004; Posner, 2004; Taba, 1962).

From the definition above, it can be summarized that curriculum means all arranged experiences which will make the learners learn, cover the identified contents of the subjects, list the teaching or learning activity, and reveal the process for the learners to learn according to that identification of contents of the subjects. There is identification of objectives, guideline, and the arrangement methods for the experience for the learners that they can develop their knowledge, skills, attitude, and desired behavior as identified. After allowing the learners to complete the courses and follow the identification of the curriculum, this research is the training curriculum for developing the competency for research conduction of the faculty of physical education institute in the North. It is the training curriculum which has a set of meanings not differing from the normal curriculum but there might be different boundaries/areas.

6.2 Component of the curriculum

The curriculum developers have identified that the curriculum is composed of four things which are as following (Beauchamp, 1981; Saylor; & Alexander, 1981; Taba, 1962; Tyler, 1949; Boonleang Thumthong, 2010; Kanat Thatthong, 2007).

- 1) Objective means the target of the teaching. Objective identifies the desired qualification or characters of the learners. The objective of the curriculum is divided into four levels as the followings.

1.1) Objective of the curriculum is the needs or the total target of each curriculum.

1.2) Objective of the subject groups or the units is the target of the subject groups that has similar learning contents. The question is on how to make the training participants to have knowledge, skill, and ability?

1.3) Objective of the subject. What is the objective to make the learners learn?

1.4) Behavioral objectives are related to the observable behaviors and can be measured concretely.

2) Content is the areas of learning content and the concentration of the learning contents on skills and experience.

3) Instructional activity is the tool to develop the learner to achieve the learning target according to the curriculum. Normally the instructional activity will be composed of two parts as what follows.

3.1) Teaching media means the equipment that facilitates the teaching sessions to achieve the targets efficiently.

3.2) Method is the technique that is used to transfer the knowledge, skills, and attitude efficiently and effectively.

4) Evaluation is checking the learning achievement whether it achieves the objectives of the curriculum or if it needs any improvement or revision. How to do it to allow the result in accordance with the curriculum?

The details of the components of the curriculum reveal that curriculum consists of four parts which are the curriculum objective, its contents, its instructional management, and the evaluation methods. The components of such curriculum will be the guideline for making the curriculum to develop the competency of the faculty of Physical Education Institute in the North. In developing the curriculum to develop the competency for research conduction of the faculty of Physical Education Institute in the

North, the researcher will improve the curriculum from the content of existing research to reach consistency and appropriateness with the needs for development among the faculty of the Physical Education Institute in the North.

6.3 The process for curriculum development

The process for curriculum development has many phases. They are different in the concepts or perception of the developers. The presentation of the process for curriculum development can be made broadly. Many academics have stated about the process for curriculum development as the followings.

The process for curriculum development, which is proposed by Tyler (1949), is based on the principle for developing the curriculum beginning from seeking for answers to four basic questions which are:

- 1) What is the objective of education that the school should achieve?
- 2) What educational experience should be arranged to achieve the educational targets?
- 3) How to arrange the educational experience in a way that is efficient?
- 4) How to judge whether the targets are already achieved?

In identifying the educational objectives, Tyler (1949) proposed that the data from three sources need to be used for the judgment, i.e., the data from studying the learners, the data from studying society, and the data from the suggestion of the academics. After reaching the objective, the curriculum makers set a judgment through consideration of the philosophy and learning psychology to be the markers of the curriculum's success. It will be used as a guideline for selecting educational experience, arrangement of educational experience, and evaluation.

The process for curriculum development which is proposed by Taba (1962) assumed that the instructors in the curriculum should also participate in the curriculum development. The step for the curriculum development of Taba (1962) is divided into seven steps as what follows.

- 1) Survey on the needs. It starts from checking the needs of the learners by analyzing the gaps, weaknesses, and background of the learners.
- 2) Identify the objectives or the target. It is identifying the desired targets in order to respond properly to the needs.
- 3) Select the contents. Identification of the content must come from the identified targets.
- 4) Arrange the contents and prioritize the contents that are appropriate for the maturity, readiness and the learning achievement of the learners.
- 5) Select the learning experience. The planner of the curriculum must select or identify the methods to facilitate the learning by the learners on the identified contents.
- 6) Arrange the learning experience, prioritize the experience, and prioritize the learning activity efficiently.
- 7) Consider the achievement of the curriculum's targets through evaluation and methods of evaluation in various ways and appropriate to the learners.

The process for curriculum development was proposed by Beauchamp (1981) who proposed the curriculum development as a systematic concept through the innovation of the model for developing the curriculum of Taba. Beauchamp's process is composed of the followings.

- 1) Input factors. This process tests whether or not the preparation is done by using intellectual motives such as educational foundation, character of community, experience, value, culture, priorities on learning contents, the previous course and other information such as supply, data from research, technological information, discrimination of the needs, and the interest of the learners.
- 2) Process is selection of subject areas, steps for curriculum activities, selection of relevant personnel regarding decision making, selection of personnel related to classification, priorities for the steps, judgment plan for judging the objectives of the

curriculum, design development, and curriculum writing. There is planning for incorporating the system of curriculum development into the system of instructional management. This step is the trial-use of the curriculum which has the evaluation plans that utilize the data for improving the curriculum.

3) Output is the planned curriculum in printed form, book form, or other products such as the learners can have more knowledge, change attitude, and use these products to check/supervise the product of the curriculum which is the reflective data for improving the curriculum further.

The process of curriculum development of Oliva (1992) proposed 12 steps for the curriculum development (Oliva's 1992 Model). It comes from adaptation of the concept on Tyler's curriculum development and then addition of the planning process later after the identification of objectives of the instruction as the followings.

Step 1 is identification of target and philosophy for instructional management (similar to Tyler who utilized philosophy and psychology in identifying targets).

Step 2 is analysis of the needs of the communities where the educational institution is located.

Steps 3 and 4 are identification of the details of target and curriculum's objectives.

Step 5 is the management and the implementation of the curriculum.

Steps 6 and 7 are writing up of more details about targets and objectives of the instruction of each subject and in each level.

Step 8 is the selection of teaching method which will be used in the classroom at the steps number 9 A and B. This is the guideline suggestion for evaluating the learning achievement of the learners.

Step 10 is bringing the teaching technique to implementation.

Step 11 is the step for evaluating the teaching.

Step 12 is the completion of cycle of evaluation.

For the curriculum development in complete cycle, Wichai Wongyai (1990) proposed that the curriculum development in complete meant the system for drafting the curriculum and the system for evaluating the curriculum. It can be summarized as following Diagram.

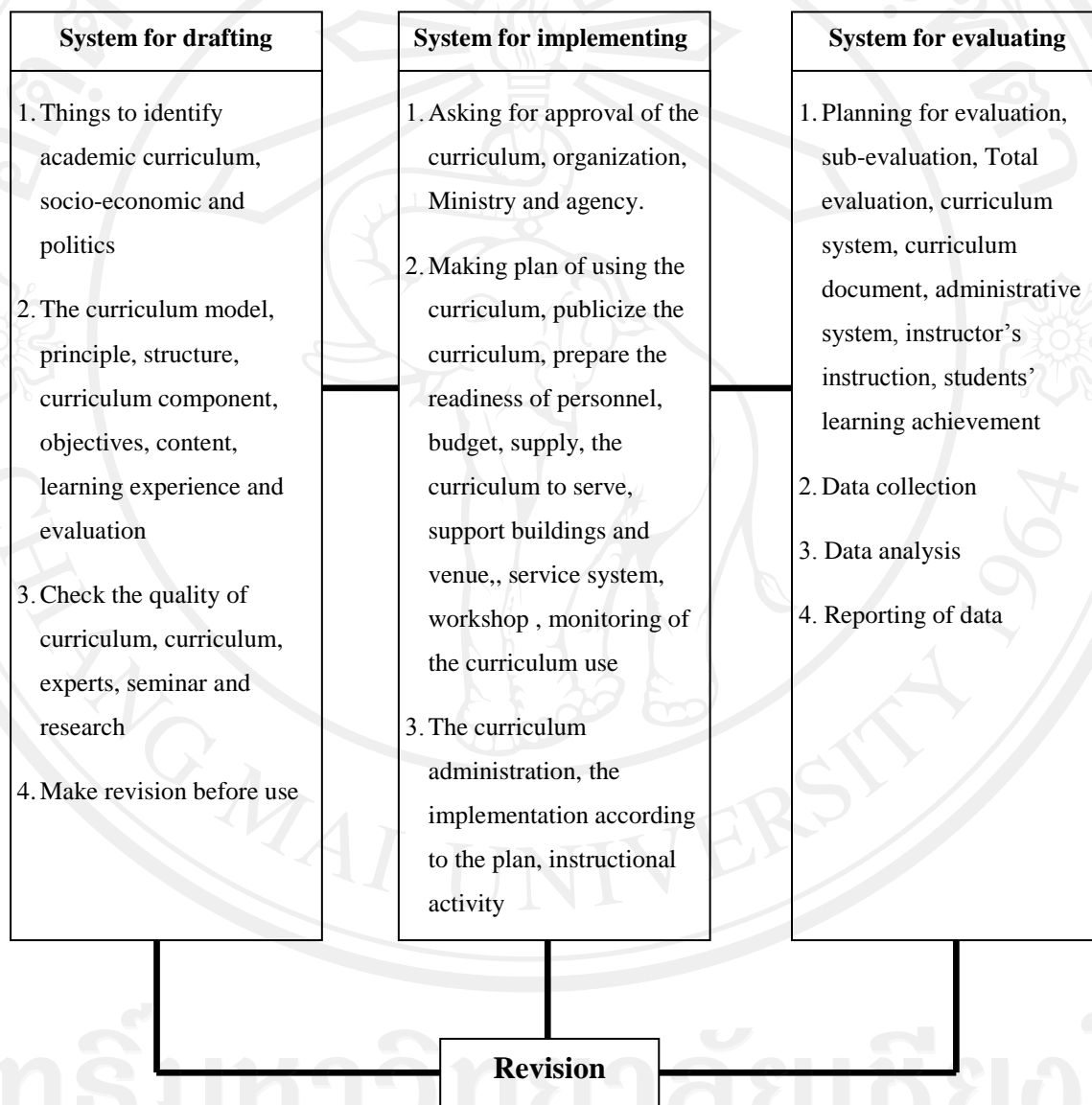


Figure 2.3 The curriculum development in complete cycle of Wichai Wongyai

Source: Wichai Wongyai, 1990.

The curriculum development in each step has the concept that is consistent with the curriculum development of the curriculum developers. The study of the curriculum development of the educators reveals that there is the concept that is consistent and can be summarized in the Table below.

Table 2.1 Steps for curriculum development and the concept of curriculum developer

Steps for curriculum development	Concept of curriculum development					
	Tyler	Taba	Beauchamp	Saylor, J.G., et al.	Oliva	Wichai
1. Study the demographic data	-	★	★	★	★	★
2. Identify the objectives of the curriculum	★	★	★	★	★	★
3. Select the content	-	★	★	★	-	★
4. Select the teaching method	★	★	★	★	★	★
5. Select the method for measurement and evaluation	★	★	★	★	★	★

★ Means the step that the curriculum developer proposes in the process or the steps for curriculum development of oneself.

The review of literature on the concept of curriculum development reveals that in the construction and development of a new curriculum, the researcher must launch the preliminary study on the instructors, learners, society, and experience before analyzing the experience on various aspects to bring the derived data to be the basic data for developing the curriculum. In sum, the curriculum developers propose for consistency in curriculum development. In developing the training kits, the researcher applies the concept of Taba as the guideline for developing the training kits for

developing the competency for research conduction of the faculty of Physical Education Institute in the North. This kit is composed of five steps as the followings.

- 1) Study the contextual data of the physical education institute on research and the needs for developing the competency of the faculty in order to use it as the guideline for developing the training kits.
- 2) Identify the objective of the training.
- 3) Select the contents.
- 4) Select the teaching methods.
- 5) Select the methods for measurement and evaluation.

7. Concept on attitude

The researcher proposes the concept on attitude which is divided into three topics as what follows.

7.1 Definition of attitude.

7.2 Measurement of attitude.

The detail is as the followings.

7.1 Definition of attitude

The study on the definition of attitude reveals that some academics define it consistently as the followings (Surang Kowtrakul, 2009; Natthaphan Khecharanan, 2008; Yont Chumjit, 2007; Supanee Saritvanich, 2009; Thurstone, 1967; Good, 1973).

Attitude means the tendency that influences behavior and opinion that respond to environment or stimuli. It may come from human beings, certain objects, or opinions. The attitude may be positive or negative. If the person has positive attitude to something, the person will have positive behavior when faced with the thing. If the person has negative attitude, the person will avoid the thing. Attitude is something a person learns as the expressions of the values and beliefs of such person.

The definition of attitude shows that it is a feeling of a person or an opinion of a person to something (stimulus) which can be either positive or negative. Attitudes toward something can be created and changed from the learning.

7.2 The measurement of attitude

The tools to measure attitude which Chaovarat Temiyakul (2009) stated about the measurement of a person's attitude of the person are as the followings.

1) Osgood's Scale is composed of topics or conceptualization that need to be studied and more than a pair of opposites of adjective such as good and bad, just and unjust, like and dislike, etc. In the middle of the pair of these adjectives, there will be the figure/number to express the levels of different feelings.

2) Likert's Scale uses the method of a rating scale to use with the agreement on the response of the message or the list of items in the topic which is measured in stable condition. The total of the stable condition of the response in all items of each individual/respondent will be in linear mode. The total result will represent to the value of a certain measurable habitual character. The answer is based on the agreement of Likert which is used to be the main measuring means in constructing the measurement of attitude on certain things after several questions. The person expresses opinion on what is the person's feeling toward certain statements. These levels of feelings, for example, can be extremely agree, agree, uncertain, disagree, and extremely disagree. Then, the researcher assigns the scores of 5, 4, 3, 2, and 1 (for responses to positive statements) and 1, 2, 3, 4, and 5 respectively (for responses to negative statements).

3) The measurement of Thurstone is composed of the statements with some sub-statements which are related to the topics to study. It classifies the levels of attitude according to its concentration into 11 levels. The best attitude stands equal to 11 and then the scores diminish bit by bit to reach the lowest level of attitude stands at 1. After gathering the statement, the interviewers then bring the statements for the decision makers to judge. Then the interviewers bring the answers of each respondent to calculate the scale value. The scale value is the median position of each scale range for

measuring the attitude. Likert constructed the form for attitude measurement which is widely used more or less about the same as the form for attitude measurement of Thurstone. In his form of attitude measurement, Likert identifies that all statements in every items in the form of attitude measurement is the total of score in every item in the form of attitude measurement. The persons with positive attitude will have opportunity to agree with the statements that they support a great deal. And if one has negative attitude, the opportunity to agree with the statement is considered unlikely. The opportunity to disagree to the statements that stand against a respondent's position will be high. The total score of all items will be the indicators to show the attitude of the respondents as the form of attitude measurement of each respondent. The method to construct the form of attitude measurement of Likert is as the followings. First is to gather the statements that are related to the items to be asked as much as possible. Then the interviewer brings the gathered statements to trial use with a group of samples by allowing this group only one of these following answers: highly agreed, agreed, uncertain, disagreed, and highly disagreed to each of the statements. The respondents do not need to make their mind to be neutral but they answer truly with their own feeling. The attitudes will be scored: on the supporting answer of "highly agree" will get 5 scores and gradually reduced until it reaches the answer "highly disagree" that will get 1 score. For the disagreeing statements, the answer of "highly disagree" will get 5 score and the answer of "highly agree" get 1 score.

The review of literature reveals that the measurement of attitude can be measured through three main methods which are observation, interview, and measurement method. The attitude of the faculty of Physical Education Institute toward the competency development of competency in research conduction is general feeling of satisfaction, interest, motivated, and worried. After measuring the experience on knowledge, skills, and experience in various forms in the situation to stimulate the faculty to show their behavior, the researcher classifies the feeling towards competency development on research conduction as positive and negative, like or dislike. In this research, the researcher will measure the attitude toward research conduction before and after the development through the measurement on the use of questionnaire on attitude constructed by the researcher. The researcher selects the method of attitude

measurement of Likert which is widely used and able to measure the attitude of the sample groups accurately, conveniently, and quickly.

8. Concept on Training

The researcher would like to present the concept of training which is divided into five topics as the followings.

- 8.1 Definition of training
- 8.2 Objective of the training
- 8.3 Benefit of training
- 8.4 Concept on training

The detail is as the followings.

8.1 Definition of training

The study of the definition of training shows that academics and trainers have defined the meanings of training consistently, which can be summarized as the followings.

Training means the process that the organization has arranged or implemented with the objectives to enhance the knowledge, skill, experience, and ability to work among the personnel and to change the undesired attitude and behavior of personnel that the personnel reach quality and qualification that the organization expect or wants (Chuchai Smitikrai, 2013; Petcharee Rupavijetra, 2011; Worawat Sriyapai, 2011).

Somkid Bangmo (2010) and Goldstein (1993) define the training as the process of learning arrangement with systems to enhance knowledge, skills, ability, and attitude of the personnel. Training should improve the performance to be more efficient.

From the definition of training, it can be summarized that the training is the process to change behavior with some systems. The organization is the organizer with the objectives to develop knowledge, attitude, and skill appropriately to the tasks.

8.2 Objectives in the training

In each of the training arrangement, the organization must have clear objectives or have certain objective for what the training is held for. Each of training session cannot be expected or meant to cover all topics that the organization wants. Some academics identify the objective of the training in various ways as the followings.

Somkid Bangmo (2011) identifies the objective of trainings into four purposes, or shortened as “KUSA” with the following details.

- 1) To enhance the Knowledge (K) , to impart knowledge, principle, theory and concept on the topic in the training for later use in work performance.
- 2) To enhance the Understanding (U), to spread in a continuous manner a knowledge sharing scheme; after knowing the principle and theory, a trainee can interpret, translate, expand, and explain to others to know, including to be able to apply the set of understanding.
- 3) To enhance skill (S) which is competency or agility in performing a task automatically such as using tools, driving, or cycling.
- 4) To change the attitude (A) which can be good or bad feeling toward things or tasks. The training aims to create or enhance the knowledge toward the organization, superiors, colleagues, and their assigned responsibilities such as loyalty to the company, pride to the institution, harmony in the team, responsibility to the work, and attention or enthusiasm to the work, and enthusiasm in fulfilling the tasks given.

Aniwat Kaewjomnong (2011) has stated that the objective of the training can be classified into four purposes as the followings.

- 1) To get the right learning (job learning). After accepting personnel into the organization, the organization must give advice to personnel regarding the rules and

regulations as well as policy of the organization on proper behavior, and personnel can later transfer these things correctly to other people inside and outside the organization.

2) To enhance the knowledge (or know-how) . Both old and new employees of an organization should have proper knowledge on their jobs, duties, and responsibilities. The assigned jobs later can be performed successfully. The organization can be part of the enhancement of knowledge on these things for all employees to act beneficially to the organization.

3) To adjust the behavior (Behavior Changing). The objective of training is to change the behavior of individuals into the desired behaviors within the organization, especially on attitude, knowledge, understanding, and culture in the organization.

4) To develop organization (Organization Development). The increased abilities of employees will improve the implementation value of the organization as well. The organization must prioritize the learning through training employees continuously that they can develop themselves.

Petcharee Rupavijetra (2007) proposes the concept on the objective of training that it can be divided into five parts as the followings.

1) To improve self-awareness because personnel who have worked for a long time tend to refuse to analyze themselves. The personnel are not aware of their levels of knowledge, ability, skill, or valued targets in their lives. Therefore, the objective of the training is to implant in the participants of the training a self-awareness to learn on other things or to improve themselves.

2) To stimulate the personnel potential that it can be expressed fully. Most of the personnel, both the ones working for a long time or the newcomers, dare not show their knowledge, ability, skill, or opinion while they are working. This timidity may be caused by the working culture. In the working culture of the East or Asia, there will be the patronage system, family system, the elderly system, and personal relationship system while the working culture of the West will be the merit system that relies on ability on making contract or working based on the specialty on certain skills.

3) To integrate the knowledge, ability, skill, and positive attitude among the participants of the training because the old or new employees will not have sufficient knowledge from their educational institution or they may not be able to apply it to their real work situation. Therefore, the training arranged by the organization must allow the participants of the training to apply and integrate both theory and the real working situation.

4) To enhance the working skill, especially for the participants of the training who have been working for a long time and may not catch up with innovation and new technology.

5) To enhance the motivation in working because the majority of people may not understand themselves or lack of self-awareness that they actually can make a life plan or life target. When there is training, it can stimulate the participants to have motivation to develop themselves and their work skill.

From such objective of training, it is shown that the organization that arranges the training will allow the personnel of the organization work efficiently and effectively. The organization sets that the participants of the training can enhance their knowledge in the working areas, experience, the working skill, the attitude, the motivation for working, and the self-awareness on the good future when they have to work in the organization for a long time. From such concept, the researcher constructs the model for competency development of the faculty of physical education institute in the North through the network system that will promote, support, and consult for research conduction to create sustainable research development.

8.3 Benefit of training

The training plays vital role on personnel development in the organization. To enhance the efficiency of implementation in the organization and effectiveness in personnel work, some academics and trainers have summarized the details of benefit of the training consistently as the followings (Petcharee Rupavijetra, 2011; Chuchai Smitikrai, 2011; Somkid Bangmo, 2011).

1) To increase knowledge, ability and value-added to oneself.

- 2) To reduce mistakes or accidents during work performance.
- 3) To create positive attitude toward the work/task implementation, colleagues, and organization.
- 4) To increase opportunities to progress on various ways such as progress in the position, better income, or to improve job quality.
- 5) To help reducing learning hours when getting to work in the organization.
- 6) To create moral support and self-confidence in working.
- 7) To know more people with more connection and higher convenience to work.
- 8) To broaden knowledge, catch up with new technology and changing society.
- 9) To heighten competitive abilities of the organization.
- 10) To increase productivity and productions in organization.

The above benefits show that such integration will affect/influence the whole organization. It would increase the organization's effectiveness and security, including organization's being able to create reputation and good implementation. These advantages allow the organization to launch good practices according to the mission efficiently.

8.4 Concept on the model for training

For the better concept on the model for training, some academics and trainers try to think of the efficient training steps and then propose these steps in similar and different ways as the followings.

Petcharee Rupavijetra (2011) has stated in a training management that there is a model of training implementation that can be summarized into eight steps as the followings.

- 1) Training Need Analysis
- 2) Planning for Training
- 3) Objective Setting
- 4) Training Designing
- 5) Staff for Organizing
- 6) Conducting Training
- 7) Evaluation of the training
- 8) Summary of the report on training

Chuchai Smitrikrai (2011) has stated that the systematic training should have the process for training implementation as what follows.

- 1) The analysis of needs for the training
- 2) Identification of training's objectives
- 3) Selection and design of the training project.
- 4) Creating criteria for evaluation
- 5) Training arrangement
- 6) Evaluation of the training

Aniwat Kaewjomnong (2011) stated that training by the organization can be implemented in several ways. Training must have the training process which can be divided into three steps as the followings.

- 1) Needs Assessment for the training
- 2) Development and Conduct of Training
- 3) Evaluation of training

Dessler (2005) stated that the training process is composed of five steps as shown below.

- 1) The step for the need analysis for training
- 2) The step for the design for curriculum and the instruction
- 3) The step for trial use
- 4) The step of implementation of the training through the training on the target group.
- 5) The step of evaluation

Swanson & Holton (2009) proposed the concept on the training process into five steps as what follows.

- 1) Analysis by considering the desired working behaviors that the organization can improve through the training.
- 2) Designing by searching for unique strategy that is appropriate to the personnel.
- 3) Development for the period for developing or getting the participants, trainers, supplies, and necessary media for the training.
- 4) Implementing the period of implementation of the three steps of the training.
- 5) Evaluation is the step for making judgment and reporting the result of the training arrangement.

The review of literature on the process and steps for training reveals that academics and trainers have identified the steps for training differently. However, after the details of the process and steps for training are checked, the contents are consistent. In this research, the researcher applies the principles and concepts of academics and trainers on the training steps into five steps as the followings.

- 1) Analysis on the context and needs for development
- 2) Identification of the objectives of development
- 3) Designing and developing the model
- 4) Implementation of the development
- 5) Evaluation and monitoring on the result after the development.

The analysis step to find the necessity for development will analyze the knowledge on research conduction of the faculty of the physical education institute in the North. The measured levels of ability of conducting research at present will be compared with the expected levels. After the analysis, the objectives of the development will be identified by using the data from analysis as the guideline for the objectives identification. Afterwards, the development model, including the content development for the training, will be constructed to keep it consistent and responsive to the objectives of the development. Arrangement for the implementation according to the identified plan is accomplished at the later stage before the evaluation and monitoring over the training development.

9. Concept on evaluation

The researcher proposes the concept on evaluation which can be divided into three topics as the followings.

- 9.1 Concept on evaluation
- 9.2 The model to assess the project
- 9.3 The assessment model by Stufflebeam

The details are given as the followings.

9.1 Definition of evaluation

Evaluation is important for the implementation of a training project. Some academics define the evaluation consistently among themselves that can be summarized

as the followings. The evaluation means the process for data gathering, data processing, and comparison with the standardized criteria that the information will be useful for making decision (Sirichai Kanjanawasee, 2009: 9 ; Yaowadee Rangchaikul Wibulsri, 2009; Phichit Ritcharoon, 2009; Pitsanu Fongsri, 2008; Aimorn Jangsiripornpakorn, 2007; Somwang Pitiyanuwat, 2010; Tay Chiengchee, 2006).

Stufflebeam and Shinkfield (1990) defined that the project evaluation is the process of making inquiry, setting description to set data, preparing the useful information for decision making, and searching for the appropriate alternatives for the project implementation.

Rossi and Freeman (2004) define the project evaluation that it's the applied research that apply the systematic and social research process to study about the efficiency of the public project, made in order to lead to the improvement of the environment of the organization and give social service.

From such definition, it can be seen that evaluation is the process for data gathering, data analyzing for making decision, and analyzing or summarizing the behavioral qualities and activities to check whether the activities respond to the set objectives or not. The definition of this evaluation covers the test and evaluation.

9.2 The model for evaluating the project

From the study and review of literature on evaluation, some models evaluate only certain components such as objective evaluation or production evaluation, and some models have the evaluation that covers the whole system. Each of the evaluation models shows the principles and reasons of evaluation of the curriculum. At the same time, the principles and reasons will identify the total evaluation method, including identifying the tools to be used in data gathering. A careful study of the evaluation models reveals that there are three groups of evaluation model which are widely used in evaluating the project (Somwang Pitiyanuwat, 2010; Pichit Ritcharoon, 2012; Somkid Promjouy, 2007; Supamas Aungsuchoti, 2012; Sirichai Kanjanawasee, 2005).

1) Objective-based Model is the evaluation model that emphasizes the checking of the result of implementation of the project whether the set objective of the

project is reached or not. The evaluation model that emphasizes the objective-based model is the evaluation model of Ralph W. Tyler (1943) and Kirkpatrick (1998). Therefore, the evaluation will be the process that checks the occurring results against the identified project's objectives. Thus the evaluators play an important role in judging the project's values that aim to evaluate the project objectively.

2) Judgmental Evaluation Model is the evaluation model that has the objectives to gather information for identifying and analyzing the value of the project such as the evaluation model of Stake (1967) and Provus (1971). With regard to the concept on evaluating the model that emphasizes on the judgmental evaluation model, the evaluation is the process through which the evaluators set judgment about the value of the project if such project has appropriate budget or period. Therefore, the most important role of the evaluator is to make judgment on the value of the project. If the evaluators do not take part in the process of making judgment, the evaluators do not perform completely.

3) Decision-Oriented Evaluation Model is the evaluation model that aims to inquire the information about the project in order to help the administrator or the authority in making decision on the alternatives correctly and reasonably such as the evaluation model called CIPP Model of Stufflebeam (1968) and the evaluation model of Alkin (1967). The evaluation here is the process for inquiring information for the decision-making of the administrators or the authorities who have authority to make decision on the project implementation project. The evaluators play an important role in responding to the needs of information of the administrators. These administrators can use the information for making decision on the project. The administrators must identify the context of decision-making and criteria for judging the success of the project. The evaluators should have roles only on making inquiries and presenting the information about the project that aim to be evaluated to help the decision making of the administrators.

In this research, the researcher selects the evaluation form that emphasizes on decision making which is called Decision-Oriented Evaluation Model. This model utilizes the evaluation of CIPP Model of Stufflebeam (1968) to apply and to study the information according to the model, constructed by the researcher to check the result

after the implementation on the model's achieving the objective of the research and on its levels of efficiency. The results will influence the decision making that such model can be later publicized and developed to improve the competency of researchers who are also the faculty of physical education institute.

9.3 The evaluation model of Stufflebeam

Stufflebeam and Shlinkfield (2007) propose the evaluation model which is called "CIPP Evaluation Model". The evaluation function is classified into four aspects which are Context Evaluation, Input Evaluation, Process Evaluation, and Product Evaluation. This is a systematic and continuous approach that emphasizes on the ability to use the evaluation results along with the project management to seek for information for decision-making all the time. The objective of the evaluation is to give information for decision making and to emphasize the differentiation of the working roles between the evaluation and administrative bodies. The evaluators are responsible for identifying, seeking, and presenting information to the administration body. The administration body will retrieve the data and bring the evaluation result to use in decision making for implementation of each of the activities. To prevent negative feedback toward evaluation, the evaluation issues have identified four aspects as the followings.

1) Context Evaluation or C is the evaluation to get important data to help in identifying the project's objectives and feasibility. It is to check whether the implementation of project responds to the problem or the needs and whether the objective of the project is clear, appropriate, and consistent with the policy of the organization or not.

In this context evaluation method, the evaluators may use several methods such as conceptual analysis, empirical studies, and theories and experts. The context evaluation will help getting useful information which is useful for decision making of the planning (planning decisions).

2) Input Evaluation or I is the evaluation before the implementation of the project. It is done through the consideration on the feasibility of the project, project appropriateness, and sufficiency of the resources that will be used in the project

implementation. The data will be used for making decision on the existing resource use such as personnel, budget, supply and equipment, administration and management, implementation plan and technology to achieve the objectives. If the resources are not sufficient, there might be the inquiries for some external resources.

This approach of input evaluation can be done by the researcher through several methods such as meeting with committee, the use of review of literature, consultation with experts, pilot study, etc. This method of input evaluation will help to get the useful information for making decision on the structuring decisions.

3) Process Evaluation or P is the known process during the implementation of the project. It is done by considering the implementation process of each step, including the related components to seek for unexpected flaws or mistakes in the implementation as well as to check the activity, time and resources used in the project, leadership factor, and participation of the people in the project. This set of data will be recorded as evidence in all steps. This process evaluation will be very useful for finding the strong points or the strengths and the weaknesses of the project which cannot be studied later after the end of the project. Then the evaluators bring the data to assist decision making in the implementation further to be more efficient.

The method that has been used in the process evaluation by the researcher is the combination of several methods such as participant observation, interactive analysis, interview, questionnaires with rating scale, and open-ended questionnaire.

4) Product Evaluation or P is the evaluation after the implementation of the project to compare the actual products with the planned objectives of the project or needs, including the consideration on the issues of dissolution, stoppage, project expansion or adjustment, project evaluation, project impact and outcomes, environmental evaluation of the policy/project by using the data from the evaluation of environment, of inputs and of participation process.

The product evaluation method can be done through comparisons with the absolute criteria, relative criteria or other criteria, depending on each case. This product evaluation will give information to help making decision on the outcomes after

completing the project to find how it should be implemented further and when to improve or suspend the project (recycling decisions).

According to the results of evaluation or the checking of quality of the constructed model which the researcher has developed, the researcher reviews the literature on the checking of quality of the model. The findings reveal that the supervision of the quality of the model by the Joint Committee on Standards for Education Evaluation is appropriately used as the principles or the guideline for judging the quality of the model. It is composed of checking on the standardized quality on four aspects as what follows (Ratana Buason, 2007).

- 1) Utility Standards is the standard on utilization benefit with the target to ensure that the evaluation program will provide the information that responds to the needs of the users. The details are as what follows.
- 2) Feasibility Standards is the standard on feasibility. The target is to be sure about the evaluation program, i.e., if it is consistent with the real situation, accomplished carefully, well-connected, and economized.
- 3) Propriety Standards is the standards on correctness and accuracy to the targets through supervision that will lead to the correctness legally and ethically. The standards also consider on justice for the users' benefits and the affected persons after the supervision that will apply the evaluation result to make reference.
- 4) Accuracy Standards is the standard on correctness, accuracy, stability, and dependability to ensure the supervision or check whether it leads to the methods that can give clear information which can classify mistakes or advantages of the constructed model.

Somsak Phuvipadawat et al. (2013) proposed the concept on quality evaluation of the model by using the six following standards.

- 1) On the feasibility of the model
- 2) On the appropriateness of the model

- 3) On the model's adequacy
- 4) On the model's utility
- 5) On agreement
- 6) On the model's propriety

The review of literature on the quality control of the model reveals that the quality check of the model of Somsak Phuvipadawat et al. (2013) has complete components and will be useful for the model evaluation. In this research, the researcher applies the quality check of such model as the guideline for evaluating the model for developing the competency on research conduction of the faculty of physical education institute in the North.

10. Concept on power base

The researcher proposes the concept of power base which can be divided into three topics as the followings.

- 10.1 Definition of power
- 10.2 Source of power base
- 10.3 Using the power base according to the situation

The detail is as the followings.

10.1 Definition of power base

Some academics define Power Base consistently that can be summarized as the followings.

Winter (1973), Coser (1976), Lukes (1980), Yukl (1981), and French & Raven (1951) defined the meaning of power base as ability of the person who already makes decision to influence others to change their attitudes or behaviors toward certain implementation that the common targets are achievable.

In sum, the power base means the ability of a person or group of people who influence others to act or change their behavior, attitude, value, opinion, and needs to achieve their common targets.

10.2 Source of power base

The power base comes from several sources. The basic origin of the power base is widely known as the source of power base of French & Raven (1959). These authors propose five sources of power base as the followings.

The base of Reward Power comes from the ability of administrators or managers to reward other people for the achievement or work. It is believed that joining activities in implementation leads to rewards. It appears in form of the raise of salary, wages, promotions, or simple complimentary words.

The base of Coercive Power comes from fear for the administrators or managers that forces the subordinates follow or avoid the punishment according the rule and regulation such as the reprimands or suspensions.

The base of Legitimate Power comes from the normal managers' ranks or positions who get promoted to higher ranks for achievements; when the legitimate power increases, such legitimate person is more influential to the subordinates to behave accordingly or to avoid breaching the law.

The base of Referent Power comes from special qualities of the managers. It is the kind of power base that gears the subordinates to follow the behavior of the high quality managers. The managers who have referent power will be loved and respected by others due to their uncommon characteristics or qualities which influence the subordinates.

The base of Expert Power comes from the managers or administrators who are competent, skillful, and knowledgeable. These things will mesmerize the subordinates. The administrators or managers who are competent will lead the subordinates to follow them because the subordinates believe that these managers have tremendous abilities.

Etzioni (1961) studied the power bases according to the guideline for implementing the organization which are the followings.

- 1) Coercive Power is the power that comes from force or authority to punish.
- 2) Remunerative Power is the power base that comes from authority figures that have resources that can provide benefits for other people or can give remuneration such as wages, salary, or overtime wages.
- 3) Normative Power is the power base which comes from the human environment such as human needs for friendship, acknowledgment for achievement, group values, or stimulation by others to follow or implement and act as others want.

Peabody (1962) classified the power base into four bases which are the followings.

- 1) Legitimacy base is the rule or regulation which identifies power base to that position by authority to create orders and to demand obedience.
- 2) The power base that comes from position since each organization sets the work line and line of Hierarchy. This arrangement informs the subordinates who they must follow and who has authority to give rewards or punishment. The persons who are in right positions that can fulfill the wishes of the subordinates are considered to have this power base.
- 3) Power base at the person is the person who has good relationship and good morality who therefore other people respect. This kind of person is considered as the holder of power base only certain people can achieve.
- 4) The power base of the individual competence is not limited into any hierarchy line such as consultants with several specialties.

Robbins (1979) gave the concept on the power base which is classified into four bases which are the followings.

- 1) Coercive Power base relies on fear and thus results in following the others because these others can depose or degrade the subordinates from position.

2) Reward Power base is the power base of capacity to give rewards. The superiors can give rewards such as salary, wages and incentives.

3) Persuasive Power base is the power base that is induced by the individuals who can make decision to hire people, to publish something for public, or to influence the dominant norms of the group.

4) Knowledge Power base comes from knowledge of people who can control information that is necessary for decision making. The decision making mostly is based on knowledge and competency.

Tosi Rizzo and Carroll (1986) defined the concept on the power base that it has four power bases as what follows.

1) Reward Power base comes from the ability of the manager/administrator to give reward to others for the success of the work. It is believed that following orders or implementation will lead to getting rewards through increased salary, promotion or compliments.

2) Coercive Power base comes from the fear toward the managers or administrators who have authority to give benefit or punishment. The authority can coerce the subordinates to follow order and avoid punishment according to the rule and regulation such as reprimands or power degradation.

3) Expert Power base comes from the managers or administrators who are competent, skillful, and knowledgeable. These competent managers get respect. These will induce the subordinates to follow them because the subordinates trust that the superiors have superior abilities.

4) Charismatic Power base comes from the administrators or managers who have special quality called charisma. The leaders can govern people in the society because they have special qualities beyond ordinary people, especially the ability to create the feeling of awe among subordinates toward their superiors.

Tosi Rizzo and Carroll (1986) propose the concept on using authority that using authority will create good result only when there is compliance of the

subordinates. This phenomenon can be represented by the Diagram 2 of authority use in order to create the compliance as the followings.

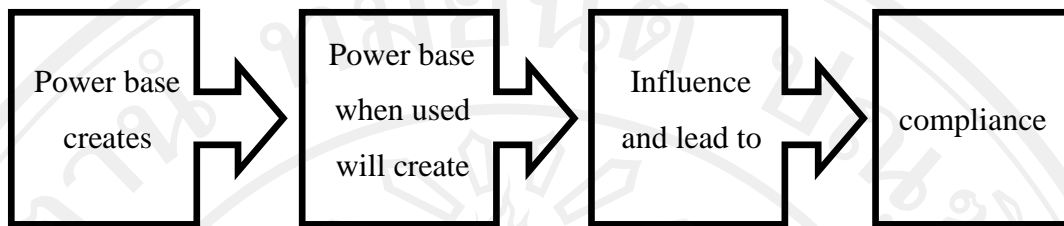


Figure 2.4 The use of authority to create compliance

Source: Tosi Rizzo and Carroll, 1986.

The study on the concept on Power Base reveals that the Power Base according to the concept of Tosi Rizzo and Carroll (1986) is appropriate and consistent with the context of physical education institute in the North. The researcher can bring such concept into application to be used for motivating the development model for competency of the faculty of physical education institute.

10.3 The use of power base according to the situation

The leadership according to the situation can provide the basic understanding on the impact of power base in each base. The maturity of the followers not only identifies the leadership and the possibility of the success but also recognizes the power base which the managers or administrators utilize to provoke compliance or to influence the behavior of the followers. Although the leaders may use appropriate leadership techniques that are appropriate to the maturity level of the followers, the leaders may not reach the highest achievement if they fail to use the most appropriate power base. Therefore, the efficient leaders or administrator not only display the most appropriate leadership style to the maturity levels of the followers but also wield the power base that is appropriate to the maturity of the followers. The power base influences the behavior of the followers which have different maturity levels in the following manners (Hersey & Blanchard, 1985).

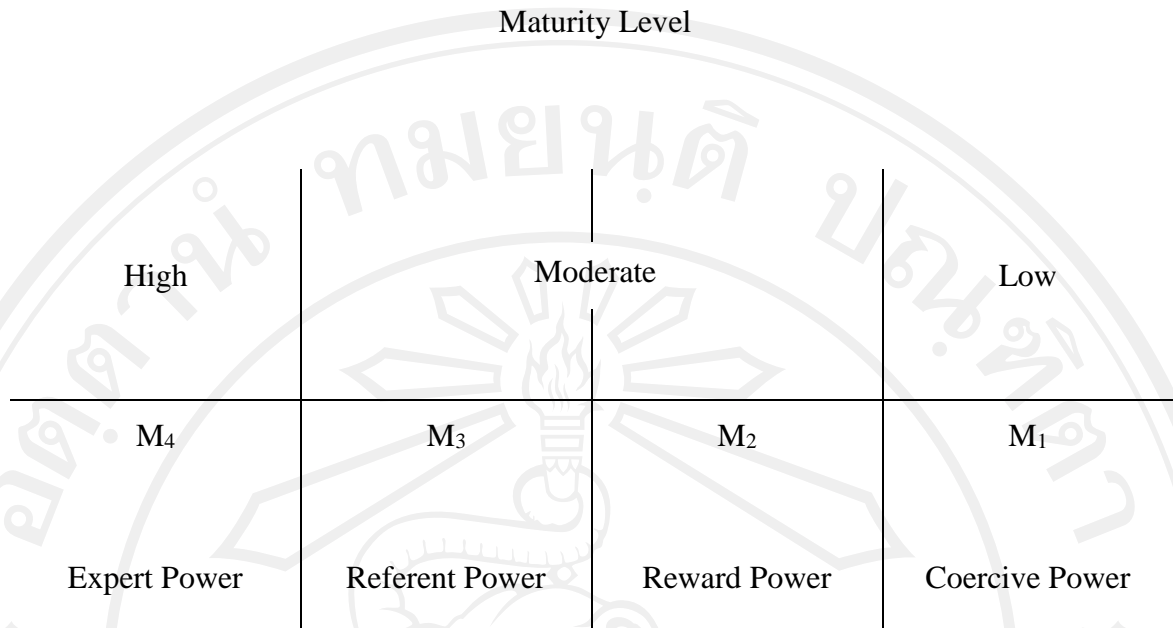


Figure 2.5 Different power bases influence the behavior of the persons who have different maturity levels

Source: Hersey & Blanchard, 1985.

Figure 2.5 shows the relationship between the power base and certain maturity levels. Besides, the diagram also shows the direct relationship between types of power base which the leader has and the efficiency level of leadership who are influential to the persons who have different maturity levels. It can be summarized as the following.

- 1.) Person with low maturity level emphasizes brute force to make people follow
- 2.) Person with moderate maturity level emphasizes using reward and use referent power as motivation.
- 3.) Person with high maturity level emphasizes using expertise to motivate people

Therefore, for developing the model for developing competency in research conduction for the faculty of Physical Education institute in the North, the researcher applies the concept of Power Base to use in the development process. The study on the

context of the physical education institute in the North shows that in a strong organizational culture subordinates believe their superiors. In such context, the researcher attempts the application of the concept of Power Base of Tosi Rizzo and Carroll (1986) or the mechanism-driven model.

Related literature

The researcher studies the related literature on research to bring it as guideline for the development of the competency in research conduction of the faculty of Physical Education Institutes in the North as the followings.

Thippawan Sriprom (2011: Abstract) studied on An Analysis of Causal Factors Influencing the Motivation toward Research Work of the Lecturers in the Upper Northern Rajabhat Universities. The research findings can be summarized as what follows.

- 1) The causal factors that influence the motivation in research conduction are shown to be consistent between the total whole of the data according to the model criteria and the empirical data. The value of R-square ($R = .96$) explains the variation of the variables in training for research conduction.
- 2) The variable with highest influence in the Model to the variable of motivation in research conduction is the personal qualities or identity.
- 3) The direct variables with highest and second highest influence in the Model to the variables of motivation in research conduction are the variable on the environmental condition and the variable on the attitude toward research conduction, respectively.
- 4) The variable with highest indirect influence in the Model to the variable on the motivation in research conduction is the variable on personal qualities or identity (through the variable of attitude toward research conduction).

Kanyarat Phuengbunhan (2010) studied the development of the Model to enhance the competency in evaluating the health personnel and revealed that the Model to enhance the competency in enhancing the evaluation for Health personnel is at best composed of three components which are the study on the context of the organization,

the process to enhance the competency in evaluation, and the creation of the sustainability in evaluation. The result of the trial use of the model for enhancing the evaluation reveals that all projects enable the personnel to be able to exchange or share the learning on evaluation together. The personnel who get enhancement on the competency on evaluation can increase their competency on evaluation and the attitude toward the evaluation higher than the score before the participation in the enhancement of competency on evaluation (statistical significance at $P < .001$). The result of evaluating the Model for enhancing the competency on evaluation reveals that the model is important for enhancing the competency of evaluation at the levels of personnel, team, and organization. It enhances the personnel to use the evaluation result to develop the project and to develop other organizations.

Bunsit Chaichana (2009) studied the result of using the self-esteem promotion program in the competency of classroom research promotion program. The objective of this research is to study the effect of interaction between self-efficacy and self-esteem in classroom research and classroom research competency of teacher trainees. The comparison between the levels of knowledge on classroom research before using the research program and those after the research program proves that the knowledge level on classroom research of the teacher trainees who use the program increases with statistical significance at the level of $P < .001$. The knowledge level on research conduction of the teacher trainees who are allowed to use the program is higher than the student who did not use the program. The effect size is equal to $.180$ while the differences in levels on attitude toward the research conduction among the students group who use and not use the program increase with statistical significance at the level of $P < .001$. The level of attitude toward the classroom research conduction of the students group who use the program is higher than that of student group who do not use the program. The effect size is equal to $.252$. The differences on levels of classroom research skill of the student who use and not use the program increase with statistical significance at $P < .001$. The classroom research skill level of students who use the program is higher than that of the students group who do not use the program with the effect size equal to $.821$.

Kanungnit Anuroj (2008) studied the factors that influence the competency of human resource developers in the Royal Thai Air Force and revealed that the factors that have direct influence to the competency of the human resource developers has statistical significance at $P < .05$. These factors are flexibility, learning support, and the factors on the readiness on self-learning. The factors that have indirect influence to the competency of human resource developers in the Air Force have statistical significance at the level of $P < .05$. These factors are flexibility, responsibility and learning support. All of these factors can predict around 77 percent of competency increase. The responsibility factor is influential to the readiness factor for self-learning.

Rungnapa Inpuwa (2008: Abstract) conducted the research entitled the Study of Motivation to Conduct Research of the Personnel at Ramkamhaeng University. The finding revealed that the personnel first motivation in conduction research is on developing the knowledge and ability of the researcher (in a “high” level). The second highest cited motivation is the progress in career, on the organizational support and on the general environment which have the motivation in a “moderate” level.

Supisara Suwannachart, Rampai Munsraket and Apiradee Sooksangdow (2008: Abstract) studied on Problems and Obstacles in Conducting Research among Instructors at Boromarajonani College of Nursing, Nakhornratchasima. The finding reveals that the problems and obstacles on the attitude towards the research on knowledge, on skill, on experience on research, on the source of research financial support, on personal activity and on motivation of the teachers appear in a “low” level. The suggestion in this research is that there should be solution for the problems and obstacles that influence to the research conduction of the teachers to stimulate the teachers to conduct more research. This simulation ranges from allotting the work or tasks appropriately, minimizing the hierarchical governmental process, and monitoring on the result of problem and obstacle management and on the teachers’ conduct in research. From the document and research, the finding found personal supporting character composed of four observable variables which are responsibility, knowledge on research, experience in conducting research and time spent for the research. The environmental supportive condition is composed of six observable variables which are budget in conducting research, climate in conducting research, relationship with colleagues, the governing

supervision, burden and the support, and administrative policy. The attitude toward research conduction which is composed of one observable variable is the causal factor that influences the research conduction of the faculty of Rajabhat University in Upper North. Such motivation in conducting research consists of four observable variables which are progress in the career, getting acceptance, research achievement, and self-development.

Sirirat Suearoj (2007) studied the factors that influence the efficiency of the performance of the civil servants: case study of Office of the Teacher Civil Service and Educational Personnel Commission (OTEPC) and found the factors that influence the efficiency of performance namely the work accomplishment, acceptance, type of work, responsibilities, progress in work, and opportunity to grow in the career. Besides, the quality of work, amount of work and working hours also influence to the efficiency of the performance.

Puntipa Sangchang (2007: Abstract) conducted research entitled A Development of Causal of the Variables Influencing Classroom Research Conduction of the Teachers Working under the Office of Chiangrai Education Service Area 3. The finding reveals the followings.

- 1) The Model for conducting the classroom research is consistent with the empirical data.
- 2) The total highest influence in the Model is the influence which comes from the variables on satisfaction and performing the work that influence the motivation variables. The second highest variable that motivates is the variable of the group that performs the work together which influence the motivation variable. The variable of person quality has influence on the motivation variable. The variable of the organization influence the variable on the classroom conduction. The variable of motivation from others influences the level of motivation. The person variable influences the variable of satisfaction toward work performance. The person variable influences the variable of classroom research conduction. The variable on the factor on organization influences the variable of motivation.

3) The highest direct influence in the model appears as the variable on satisfaction toward the performance which influences the variable on classroom research conduction. The next highest is the variable on satisfaction on performance that influences the motivation level on motivation factor. The variable of person influences the variable on motivation. The variable on person influences the variable on satisfaction to perform work. The organizational variable influences also the motivation level. The motivation variable influences the variable on classroom research conduction.

4) The highest indirect influence in the Model is the one which comes from the variable group that perform the work together that influences the motivation variable on satisfaction to work. The next highest is the indirect influence due to the variable of the group that works together influences the variable of classroom research conduction through the motivation variable.

Udomporn Ponphoonga (2007: Abstract) studied the research quality of the governmental teachers who have professional status under Office of Maha Sarakham Educational Service Area. The findings reveal that the important factors that support research conduction of the teachers with professional status are policy on research, readiness on the materials used for research, budget, compensation, family, colleague, data resources and advisors who advise on research. The factors that become the problem and obstacles for the research conduction of the teachers are lack of skill in research conduction, a lot of work burden, no time to do research, lack of budget, and lack of specialists on certain issues. The suggestions to be the guideline for developing research are teacher development to have research skills, adjustment of attitude towards research, identification of clear policy on research, support on the materials or equipment used in research, allotment of the budget for research, and freedom for personnel to help in research.

Thrisadee Sukyod (2006) launched the study of behavior and problems of research conduction in the classroom of the teachers in Military Cadet, Army Training Command Supreme Command Headquarters. The objective of this research is to study the behavior and problem on the classroom research conduction of the teachers in Military Cadet, Army Training Command, Supreme Command Headquarters. The findings reveal that first, the behavior and problems on research conduction in the classroom of the teachers

from different units will be different with statistical significance at $P < .05$. The behavior and problem on classroom research conduction of the teachers with different educational levels show no difference. Second, the teaching experience has positive correlation with the behavior of classroom research conduction in quite low level ($r = .293$) with the statistical significance at $P < .05$. For the attitude towards classroom research conduction shows negative correlation with the problem on classroom research in quite low level ($r = .335$) with the statistical significance at $P < .05$.

Nongkran Yanthongyu (2006) stated that the factors that influence the facilitation of classroom research are the knowledge of the teachers, type of work, administrative system, and the structure of organization of other relevant personnel (the consultants who give suggestion on the factors on basic components of the research and other relevant factors on the context of the research).

Kesorn Kunamai (2006: Abstract) conducted a research entitled Factors Affecting Classroom Research Conducting of Basic Education Teachers, Phayao Educational Service Area 1. The finding reveals that the factors that influence the conduction or not conduction of classroom research of the teachers are mostly the personal characters such as the level of knowledge on the research model and research plan, the motivation to use the research result to get promotion of professional status, the attitude to conduct classroom research, and the values of research result for professional progress. The environmental factors appear on the policy and support which include having research advisor to conduct classroom research of the teacher, getting supports on workshop on classroom research from the director of the school, and getting promotion to conduct research to apply research result to perform in the instructional activities. Also influential are the factors related to the burden of work, working hours, and the allotment of working hours in the classroom.

Chokchai Suksanit (2005: Abstract) conducted the research entitled The Condition and Problem of Conducting Classroom Research of the Teachers under the Office of Educational Service Area 2. The findings revealed that the general problems in conducting classroom research and in each aspect appear in a "high" level. The aspect with the highest average score is on the data sources for studying; the next highest aspects are on the role of the administrators and on the teachers who conduct the

classroom research. For the guideline to promoting classroom research, the finding reveals that teachers should share knowledge and experience on classroom research regularly. The administrators should fully support the teachers to conduct classroom research. Furthermore, the data resources for studying, the materials, textbooks, magazines that publish the knowledge about classroom research, new publication, and sufficient internet searching system should be supplied to teachers.

Napat Danklang (2006: Abstract) studied individual factors such as sex, age, and working quality of the environment (hygienic, safe, secure, guaranteed progress in career, and relationship of people in organization) influence the efficiency of the implementation of civil servants in Silpakorn University (statistical significance at $P < .05$). The other individual factors such as educational levels, the work duration in Silpakorn University, the work quality on the sufficient and fair compensation the potential development of the persons, democratic atmosphere in working, and the pride in the organization do not influence the efficiency of the work of the civil servants in Silpakorn University.

Lathasak Phraesaitong (2005: Abstract) studied the guideline to promote classroom research conduction of teachers in basic educational schools of Photharam District, Ratchaburi Province. The research findings reveal that the guideline to promote classroom research conduction of teachers in Basic Educational Schools is based on five aspects as the followings. First, on promotion for the success of classroom research conduction, the administrators identify policy to support and monitor evaluation the classroom research conduction continuously. Second, on giving acceptance and respect to the teachers who conduct the classroom research, the researcher gives compliment to the teachers who conduct classroom research. Third, on giving importance to the teachers who perform classroom research, the administrator promotes the teachers who do the classroom research successfully and publicize the work. Fourth, on the responsibility of the teachers who conduct classroom research, the administrator promotes the teachers to work together in teams. Fifth, on the promotion on the progress in profession of teachers who conduct classroom research, the administrator supports, promotes, gives advice, and helps the teachers on opportunity to progress in their career by using the process of classroom research conduction. For other problem like teachers'

having heavy burden and a lot of responsibility, having no time for searching for data, lacking confidence and skills in using technology, lacking monitoring skill, and getting no support from parents in providing real data of the students, the implementation of the classroom research of the teachers is not efficient.

Warisa Saenphet (2005) studied the conditions of primary school teachers' classroom research in Li District, Office of Lamphun Educational Service Area 2. The findings show that the majority of teachers have needs and problems on classroom research conduction in a "high" level in every listed aspect. The suggestion given is that the teachers are lacking knowledge and understanding clearly on the classroom research conduction.

Samrej Tienthong (2005: Abstract) launched a research entitled The Factors Influencing the Production of Research of Nursing Teachers under Praboromarajchanok Institute, Ministry of Public Health in the Northeast Area of Thailand. The findings show that the qualification on the sociobiology, the quality of qualification on sociobiology, and qualification on psychology and the factors that facilitate the research conduction (namely the highest educational degree, the time for conducting research, work experience after completion of highest degree, the duty that facilitate research conduction, the attitude towards science, and the habits that facilitate the research conduction) can work together to predict the production of research of the nursing teachers with statistical significance at $P < .05$.

Suthana Tangtrakul (2005: Abstract) conducted a research entitled The Development of Research Conduction Process in the Classroom of the Teachers at Saint Dominic School Bangkok. The findings show that the teachers have problems in conducting research as what follows. First, the teachers do not appreciate the values of classroom research conduction. Second, the teachers have no knowledge on classroom research conduction. Third, the teachers have no advisors in classroom research conduction. Fourth, the teachers have no materials and research samples for study. Fifth, the teachers do not have time to conduct the classroom research. The process for classroom research should be interesting, easy to understand, and convenient to conduct which aim to solve the problem or develop further the students and teachers. The research should be having research title, objective of research, clear implementation

plan, data gathering, data analysis, simple methodologies, easy to understand, and consistency between the report of research and the objective of research.

Pornwan Chantasuk (2004: 81-83) researched the factors that influence efficiency in performing the work of the personnel at the provincial treasurer office of Provincial Treasury Offices, Central Account Treasury Office. The findings show that the factors that influence the efficiency of implementation of the personnel are factors on implementation and factors on promoting the human resources. The individual factors do not appear to influence the efficiency of implementation of the personnel at Provincial Treasury Offices. The implementation factors on knowledge about accounting system at the Provincial Treasury Office and on the knowledge about computer and network system influence the efficiency on the performance of personnel in Provincial Treasury Office in a “low” level. Additional factors on human resources on training, on environment to perform the work, and the welfare influence the efficiency of performing the work of the personnel in Provincial Treasury Office at a “high” level. The efficiency in performing of the personnel of the Provincial Treasury Office related to the loyalty to the organization is in a “high” level. On the progress on the teamwork the correlation is in a “moderate” level.

Uraivan Prongmark (2004: Abstract) conducted a research entitled factors influential to the efficiency in performing the work of the personnel on the policy and plan analysis, Office of Policy and Planning Bangkok. As the whole picture the factors are in a “moderate” level but when considered per aspect it shows that on the planning and the evaluation both have effects on efficiency in a “moderate” level. Calculation on individual factors which are sex, age, marital status, educational levels, position levels and factors on performance or implementation (duration in performing, satisfaction in performance, knowledge and understanding on roles and duties, and getting training) reveal that only one factor which is duration in performing that influences the efficiency of implementation of the personnel of policy and planning analysis in the Office of Policy and Plan Bangkok.

Ungsinun Intarakamhang and Tasana Thongpukdee (2004) studied the development of the model of competency on academic leadership of the faculty in state and private universities under the supervision of the government. The findings show that the

competency on four aspects which are instruction, research, academic service, and the promotion of Thai arts and culture influence directly and indirectly through the competency on academic service and academic leadership of the faculty. The causal relationship model of the academic leadership according to the assumption or hypothesis has a correlation with the data on the opinion of the faculty in three groups. The samples stand in a “very good” criterion. The causal relationship model can explain the values of variations of the academic leadership of the faculty in the government universities, private universities, and those under the supervision of the government into 69.0, 83.0 and 85.0 respectively.

The review of related literature reveals that the factors on the research conduction of the teachers and faculty in the higher education institute is composed of main factors as the followings.

- 1) Individual characters which are composed of knowledge, abilities (skills), attitude, interests, giving importance and cooperation in research activities.
- 2) Promotion of research or about the policy to support the research conduction such as the activities to develop and promote research conduction.
- 3) The environment that relates to research conduction such as time allocation, work burden, source of inquiry data, consultation or advice, and network that facilitates the research conduction.
- 4) The amount of research must be appropriate and achieve good ratio against the number of teachers.

From the study on the factors related to the context of research conduction in the higher education institute, the researcher uses the guideline in studying the context of the physical education institute in the North related to the research in four aspects which are (1) on promotion of the research, (2) on the environment that supports research conduction, (3) on personnel who conduct research and (4) on amount of research by constructing the question items to ask the faculty at the physical education institute in the North about the context of research conduction.

Summary

The review of literature and related research in order to construct and develop the model for developing the competency in research conduction of the faculty of physical education institute in the North reveals that the developed model must be composed of the related concepts to achieve efficient development of the model. In this research the researcher brings the concept to construct and develop the model as what follows.

1) The concept on evaluation of the context which uses the SWOT analysis process which is the important data for developing the model to keep consistency with the context with the highest benefit in developing competency for research conduction of the faculty at physical education institute in the North.

2) The concept on development of the model of this concept uses the construction and development of the model that the process of constructing and developing such model is efficient and correct according to the academic principles for construction and development of the model which is the objective number 2 of this research.

3) The concept on evaluating the needs. Such concept will be used for Gap Analysis on the competency in research conduction of the faculty of physical education institute in the North to find the existing problems at present from such gap. It will lead to the proper development. Besides, developing any competency must begin from the needs for development or the apparent gap between the competency of research conduction at present and the expected competency level. Such gap is called the needs.

4) The concept on the development of human resources. Because the physical education institute is ruled under the Physical Education Institute Act of 2005 which sets the physical education institute as the educational institute in the higher education level. The history of physical education institute shows that it originally was a physical education college that arranged education in the level lower than undergrad level. Therefore, the faculty of physical education institute in its early period recruited mostly graduates with bachelor degrees. This fact reduced the faculty's research competency as expected in the real competency level of the faculty in graduate institutions. The concept in developing competency is important and necessary for developing the

resources of the organization to set better consistency with context and the changes in order to add the value on the human resources of the organization. The resources then become valuable resources and they can move the organization to achieve its missions.

5) The concept on developing competency is the concept that will be used in developing competency for research conduction. Such competency is necessary and important for the faculty at graduate level who are responsible for teaching and conducting research. The competency in research to be developed will be composed of the knowledge on research (knowledge or affective domain), attitude and psychomotoric skill in research conduction.

6) The concept on social network. Because the physical education institute is located in four locations in the region (except in the Central Region that has five). Because the physical education institute is a small undergraduate institute that has limited number of personnel, the development of competency in research conduction must rely on the cooperation to exchange the limited resources. There is the target and common benefits in forms of the competency in research conduction to reach results to achieve the development to achieve the target and common benefits.

7) The concept of training is the concept that is used as the guideline for the training arrangement to develop the competency for research conduction of the faculty at physical education institute in the North. To set the training implementation most effectively, the researcher follows the proper steps of the training.

8) The concept on evaluation is the concept which is used in the steps composed of the evaluation of the context to study the context of physical education institute in the North on research conduction at present. For example, the inquiry looks at the condition of research conduction at present. Furthermore, have the faculty in physical education institute in the North revealed the needs to develop their competency in research conduction and what attitude they have towards the research conduction. Studying the context is an objective of this research. Evaluating the input factors which consist of the evaluation of the model, evaluation of the training kits, evaluation of the process such as the process, and method used in the training is the data source for developing the model. Evaluating the production is an evaluation of the production

since the competency in research conduction of the faculty of physical education institute in the North is composed of the knowledge on research conduction measured with the evaluation form through self-assessment. And the measurement of skill in research conduction is done through the psychomotor skill evaluation by the experts who check the research report. The evaluation of the production is one objective in the research or to find efficiency level of the model.

9) The concept on power (or power base) is used as mechanism to drive the model for development of competency in research conduction of the faculty of physical education institute in the North.

The development model for competency of the research conduction of the faculty of physical education institute in the North has been constructed and developed. It is composed of the followings.

- 1) Input. This component is composed of policy, network committee, training kit, the participant of the training, trainers, budget, venue and audio visual equipment.
- 2) Process. This component is composed of the process that is used in the training, monitoring, consultation, giving advice to researcher, and the monitoring and evaluating process of the research.
- 3) Driven Mechanism. This component is the steps which are very important to drive the functioning of mechanism to achieve the set target.

11. Research conceptual framework

In the construction of the research conceptual framework, the researcher utilizes the concepts to create the research conceptual framework as the followings: (1) the concept and development of the Model, (2) the concept on evaluating the needs, (3) the concept on developing human resources, (4) the concept on competency, (5) the concept on social network, (6) The concept on the development of curriculum (7). The concept on attitude (8) the concept on training, (9) the concept on evaluation, and (10) the concept on power base. The researcher can create the research conceptual framework as following.

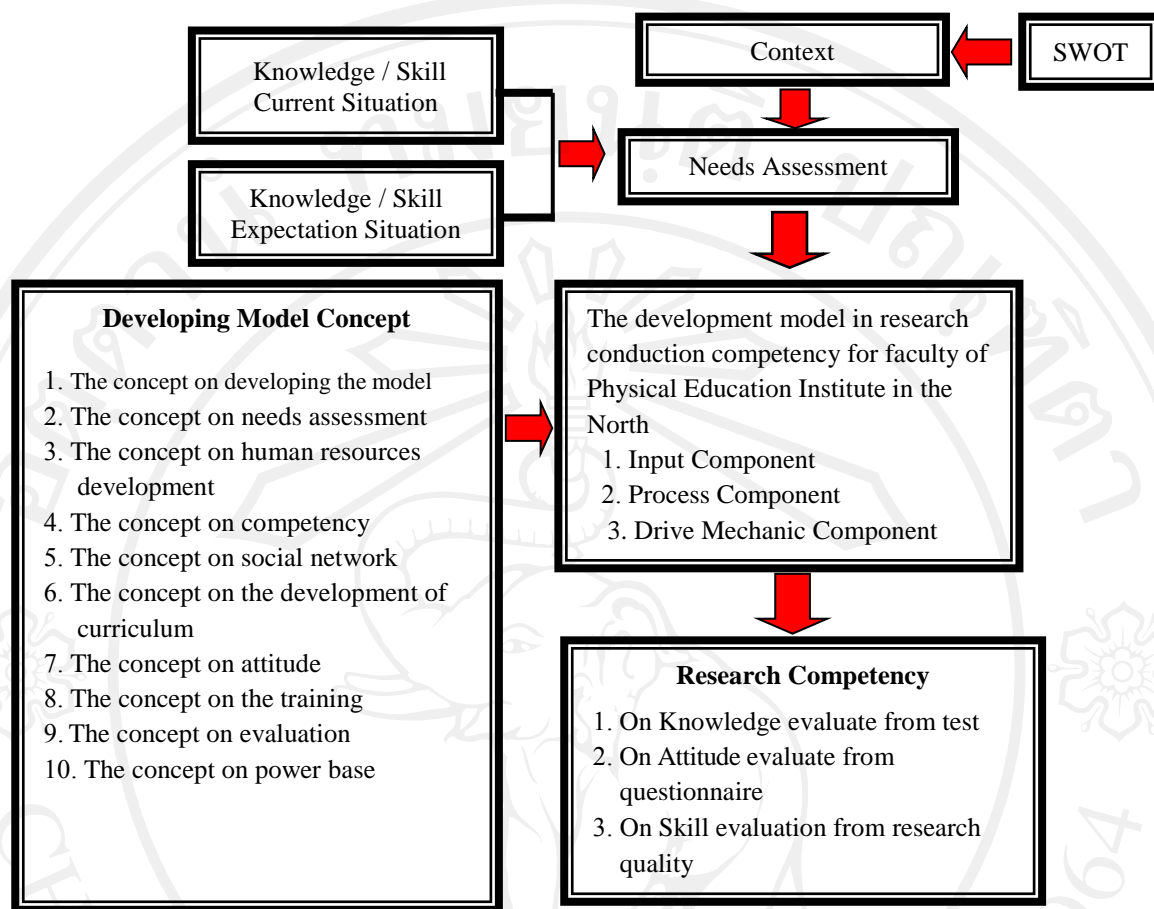


Figure 2.6 Research Conceptual Framework