

Chapter 3

Research Methodology

This research utilizes the method of Research and Development. There are two research objectives which are to develop indicators and quality criteria in administration in Basic Educational Entity School and to find efficiency level of the indicators and the quality criteria for administration in the School. The details are as the followings.

Population and Sample Groups Used in the Research

1. Population used in this research is Basic Educational Entity Schools under 23 Offices of Educational Service Area in eight provinces in Upper North Region of Thailand. There are around 3,559 schools in the Region that open in the year of 2009 (Information Technology, Office of Basic Education Commission 2009).

2. Population used for data collection to check the construct validity of indicators in administration in Basic Educational Entity School are 207 persons consisting of directors of Offices of Educational Service Area, deputy directors of Office of Educational Service Area (responsible for administration on technical, budget, personnel, and general administrations), and heads of supervisory, budgetary, personnel, and administration units (responsible in 23 Offices of Educational Service Area in eight provinces in Upper North Region in 2009).

Sample Groups in the Research

For the samples in this research, the researcher identified the sample size from the Table of the sample group with the Confidence Interval of 95% Tay Chiangchee (cited in Kietsuda Srisook, 2006). The steps for getting these samples are as the followings.

1. The samples in the research are 346 Basic Educational Entity Schools under 23 Offices of Educational Service Area in eight provinces in Upper North Region of Thailand. Details are as follows.

1.1 Identification of the number of the sample schools is based on the ratio of number of the school under each of 23 Offices of Educational Service Area.

1.2 Selection of the samples through the Simple Random Sampling method.

The selection of samples is done through the use of Random Number Method based on the ratio of number of the school identified under each of 23 Offices of Educational Service Area. The details of this ratio are shown in Table 1.

Table 1 Number of Sample Groups based on Ratio of School per Office of Educational Service Area

Office of Educational Service Area	Number of school under the Office Educational Area	Number of school Identified as samples
Chiang Rai Area 1	123	12
Chiang Rai Area 2	205	20
Chiang Rai Area 3	157	15
Chiang Rai Area 4	165	16
Chiang Mai Area 1	129	13
Chiang Mai Area 2	200	19
Chiang Mai Area 3	193	19
Chiang Mai Area 4	142	14
Chiang Mai Area 5	108	10
Chiang Mai Area 6	108	10
Nan Area 1	227	22
Nan Area 2	170	17
Phayao Area 1	139	14
Phayao Area 2	160	16
Phrae Area 1	145	14
Phrae Area 2	144	14
Mae Hong Son Area 1	147	14
Mae Hong Son Area 2	187	18
Lampang Area 1	161	16
Lampang Area 2	178	17
Lampang Area 3	101	10
Lamphun Area 1	167	16
Lamphun Area 2	103	10
Total	3,559	346

2. Samples selected to check construct validity of indicators for administration in Basic Educational Entity School are the directors of Offices of Educational Service Area, deputy directors of Office of Educational Service area who are responsible on the administration on technical, budget, personnel and general administration, and heads of supervisor unit, budget unit, personnel unit and administration unit who perform duties in 23 Offices of Educational Service Area in eight provinces in Upper North Region (all 138 persons). These 138 samples are chosen with a Simple Random Sampling method through Lottery Method to get six samples from each of the Offices of Educational Service Area.

Phase 1 The Development of Indicators and Quality Criteria for Administration in Basic Education Entity School

The implementation is done through the following steps.

1. The Study of Administration Condition in Basic Educational Entity School (Preliminary).

This step of research is a preliminary survey. The researcher analyzes and synthesizes the secondary data related to the administration in Basic Educational Entity Schools in these following topics. These are the implementation guideline for educational management in Basic Education Entity School under the Office of Educational Service Area and the Office of Basic Education Commission and the guideline for decentralization of administration and educational management for the school board in the Office of Educational Service Area and the school. Ministry of Law had identified criteria and methods of decentralization of administration of education and educational management in 2007. The Office of Basic Education also had announced the decentralization of administration and educational management of Secretary General of the Office of Basic Educational Commission to the Board Committee of Office of Educational Service Area and the school under Office of Basic Education Commission in 2007 along with the rule for educational reform, the principle of legal entity, the concepts of school-based management, and good governance principle. The detail of research implementation is given as the follows.

1.1 Sample groups in the research

The sample groups for the study of administration condition in Basic Education Entity Schools are the administrators of schools and chairpersons of the committee board in the selected schools under 23 Offices of Education Service Area in eight provinces in Upper North Region Thailand in 2009. The number of sample is 46 and they are selected through simple random technique and Lottery Method.

1.2 Tools and research

The main tool in this study is a questionnaire with five-rating scale of Likert. This questionnaire is shown in Appendix B.

1.3 Seeking for quality of research tools

1.3.1 The quality of the questionnaire on administration in Basic Education Entity School on the Content Validity is checked by five experts and knowledgeable people on educational management and measurement and evaluation of education. The experts and knowledgeable people are chosen through a purposive sampling method. The identification of criteria is considered from the analysis through the Index of Item-Objective Congruence or IOC from the questionnaire items with IOC values between 0.6 and 1.00.

1.3.2 Reliability of the questionnaire set on the administration in Basic Education Entity School by trial administered to the school directors, chairpersons of school board in the school, and chairpersons and school board in Basic Education Entity School who are not selected as the samples (20 people taken with the lottery method). The questionnaire trial results are tested to calculate the levels of Cronbach's Alpha Coefficient of the items.

1.4 Data Collection

The researcher asked for permission letters from Faculty of Education Chiang Mai University and sent them to directors of the schools under 23 Offices of Educational Service Area in eight provinces in Upper North Region Thailand to

collect data from the sample group (schools) in this research. The researcher collects data both directly on her own and through mails.

1.5 Statistics used in data analysis

The data analysis of administration condition in Basic Educational Entity Schools is done by calculating the average (in \bar{X}) and standard deviation (S.D). The statistical program used is the SPSS for Windows Version 11.

2. Identification of Indicators for Administration in Basic Educational Entity School

In this research the researcher utilizes the results from the study of administration in the Basic Educational Entity School and from the analysis and synthesis of related secondary data based on the implementation guideline of educational management of Basic Education Entity School as a legal entity. These data are used to identify the indicators for administration in Basic Education Entity School through classification of duties in educational management to be components on technical affairs (with 71 indicators). The components of budget administration have 60 indicators. The components of personnel administration have 54 indicators, and the components of general administration have 70 indicators.

2.1 Checking the Content Validity of indicators of administration in Basic Education Entity School. The researcher implements the following steps.

2.1.1 Set the constructed indicators for administration in Basic Education Entity School to construct the questionnaire by experts and knowledgeable people on educational management and on measurement and evaluation of education (five persons). These experts and knowledgeable persons are selected through a purposive sampling technique. They assess the questionnaire through the identification of criteria from analysis on Index of Item-Objective Congruence or IOC. The items of the questionnaire that have the IOC value between 0.6 and 1.00 are considered to be included in the questionnaire.

2.1.2 Selection of the indicators for educational administration in Basic Education Entity School that pass the criteria of experts and knowledgeable people.

2.2 Checking the Construct Validity of indicators on administration in Basic Educational Entity School.

The researcher brings the indicators for administration in Basic Education Entity School which have passed the test on the content validity by the experts and knowledgeable people to check the construct validity in order to confirm that these indicators for administration in the school have the four components to the method called Exploratory Factor Analysis (or EFA) using the SPSS for Windows Version 11. The details are as what follows.

2.2.1 Reliability and Discrimination power for administration in Basic Education Entity School.

The sample group who provide information during data collection and helping to calculate reliability and discrimination power of indicators for administration in Basic Education Entity Schools are directors of the Office of Educational Service Area, deputy directors of the Office of Educational Service Area (who responsible for administration on technical, budge, personnel administration, and general administration), and the head of supervisor Unit, budget unit, personnel unit and administration unit who perform the duty in the 23 Offices of Educational

Service Area in eight provinces in Upper North Region (a total of 30 people). Some 30 people are chosen with the Simple Random Sampling and Lottery Method. The questionnaire's items are taken to test for their reliability measured with the Cronbach's Alpha Coefficient and for their discrimination power for each item by testing to find the differences of the means by using the Student's t-test in the SPSS for Windows Version 11.

2.2.2 Exploratory Factor Analysis or EFA

The sample groups recruited for data collection provide data to check the Construct Validity of the indicators for administration in Basic Educational Entity School through an analysis called Exploratory Factor Analysis or EFA. These samples are directors of Office of Educational Service Area, deputy director of Office of Educational Service area who hold responsibility for the administration on technical, budget, personnel and general administrations, and the head of supervisor unit, budget unit, personnel unit and administration unit who perform duties at 23 Offices of Educational Service Area in eight provinces in Upper North (total 108 people). They are taken by a simple random sampling through Lottery Method.

2.2.3 Tools used for data collection

2.2.3.1 Tools used for data collection are tested for reliability and discrimination power for indicators of administration in Basic Education Entity School. The researcher selects the indicators for the administration in Basic Educational Entity School that have passed the test on content validity by the experts and knowledgeable person. Then the researcher constructs the questionnaire based on the appropriateness of indicators for administration in Basic Education Entity School. This type of questionnaire item can be answered in Likert's five-rating scale.

2.2.3.2 Tools used for data collection in order to analyze EFA

Exploratory Factor Analysis or EFA is the same tool that is used for finding the reliability and discriminating power in each indicator and item. The researcher omits the indicators for administration in Basic Education Entity School that has no discrimination power in each component. Then the researcher prepares them to collect data from the sample groups used for the research according to Section 2.2.2.

2.3 Selection of Indicators for Administration in Basic Educational Entity School

For selection of indicators, the researcher uses the Multiple Regression analysis through the Enter Method. Details are given as the followings.

2.3.1 The researcher brings indicators for administration in Basic Education Entity School that passed the test for construct validity in Item 2.2 with four components found in the indicators. The researcher tests them with the analysis called Exploratory Factor Analysis or EFA using the method called Regression (REGR Factor Score) using the SPSS for Windows Version 11.

2.3.2 The researcher processes the constructed variables through the Exploratory Factor Analysis or EFA through the method of Regression (REGR Factor Score) from Section 2.3.1 to analyze the multiple regression through the Enter Method using the SPSS 11 Program.

2.3.3 Sample groups used for data collection to select the indicators for administration in Basic Education Entity School are directors of Office of Educational

Service Area under 23 Offices of Educational Service Area in eight provinces (some 300 people are taken by simple random sampling and lottery method).

2.3.4 Tool used for data collection. The tools used for data collection to select indicators for administration in Basic Education Entity School are brought by the researcher to settle the indicators for administration in the school that passed the construct validity in Section 2.2 and registered the weight value or Factor Loading of above .30. Then the indicators are used to construct the questionnaire for administration in Basic Education Entity School. The questionnaire is set in items set in five-rating scale of Likert. The tools have the same items as the tools for data question in Section 2.2.3.2.

3. Identification of Quality Criteria for Administration in Basic Education Entity School

The method to identify quality criteria for administration in Basic Education Entity School as applied by the researcher runs as the followings.

3.1 Study the concepts, related theories to the construction of quality criteria.

3.2 Bring the indicator for administration in Basic Education entity school that passed the selection through the Multiple Regression with the Enter Method to construct the quality criteria for administration in Basic Education Entity School in each indicator. The researcher creates quality criteria in each indicator in four components. The constructed quality criteria can measure the low quantity and quality that is acceptable of the indicators for administration in the Basic Education Entity School by identifying the value of quality criteria of indicators for administration in these schools. The values are given as the followings.

- 5 means the implementation based on quality criteria of indicators is in the highest level.
- 4 means the implementation based on quality criteria of indicators is in a high level.
- 3 means the implementation based on quality criteria of indicators is in a moderate level.
- 2 means the implementation based on quality criteria of indicators is in a low level.
- 1 means the implementation based on quality criteria of indicators is in the least level.

Criteria to Evaluate the Level of Quality in Administration of Basic Education Entity School

The average scores between 4.51 and 5.00 mean the school have the administration and the educational management based on the implementation guideline of Basic Education Entity School in the highest level.

The average scores between 3.51 and 4.50 mean the school have the administration and the educational management based on the implementation guideline of Basic Education Entity School in high level.

The average scores between 2.51 and 3.50 mean the school have the administration and the educational management based on the implementation guideline of Basic Education Entity School in moderate level.

The average scores between 1.51 and 2.50 mean the school have the administration and the educational management based on the implementation guideline of Basic Education Entity School in low level.

The average scores between 1.00 and 1.50 mean the school have the administration and the educational management based on the implementation guideline of Basic Education Entity School in the lowest level.

3.3 Check the appropriateness and possibilities of application of the quality criteria for the administration in Basic Education Entity School by three experts who have knowledge on educational management. The experts are selected from a purposive sampling method and their consistency in their advice (two experts out of three) is weighted.

4. Setting a Manual for using Indicators and Quality Criteria for Administration in Basic Education Entity School

The researcher constructs a manual for using indicators and quality criteria for administration in Basic Educational Entity School. The details and steps are given as the followings.

4.1 Concepts for developing indicators and quality criteria for administration in Basic Educational Entity School are prepared.

4.2 Relationship of indicators and quality criteria for administration in Basic Educational Entity School and the system of inner quality assurance in the school is found out.

4.3 The guideline to use manual for the inner quality assurance in the school is prepared.

4.4 Data source and guideline for evaluation of the quality of administration in the Basic Educational Entity School are spotted.

4.5 The evaluation form on the quality of the administration in Basic Education Entity School is set.

4.6 Criteria on the quality level for administration in Basic Educational Entity School are decided.

4.7 Check the appropriateness and feasibility of application of the manual of using indicators and quality criteria for administration in Basic Educational Entity School by three experts and knowledgeable person with knowledge on educational management. The experts are taken by a purposive sampling method, and the criteria for judgment of the experts and knowledgeable person is what two out of three experts agree.

4.8 Review based on advice of the experts and knowledgeable person and setting indicators and quality criteria for administration in Basic Education Entity School.

Phase 2 Measuring Efficiency of Indicators and Quality Criteria for Administration in Basic Education Entity School

In measuring the efficiency of Indicators and Quality Criteria for administration in Basic Education Entity School, the researcher used the method to find the validity called Criterion-related Validity through finding the Concurrent Validity and the Pearson's Product Moment Correlation and testing the significance in term of Pearson Coefficients. The researcher uses of the ready-made Table for Pearson Coefficient Values to juxtapose between the score of quality of administration score in Basic Education Entity Score against the score of evaluation of the sampled schools' quality by ONESQA. The details are given as follows.

1. Samples solicited in data collection to find the efficiency of indicators and quality criteria for administration in Basic Education Entity School are those under 23 Offices of Education Service Area in eight provinces in the Upper North Region. Some 20 samples are taken through the lottery method.

2. The utilization for data collection

2.1 The researcher brings indicators and quality criteria for administration in Basic Education Entity School that have passed the development in Phase 1 to construct the quality evaluation form for the administration in the Schools, which is classified into four components. The items in the questionnaires are set in the Likert's five-scale. The manual for using the indicators and quality criteria for administration in Basic Education Entity School is shown in Appendix D.

2.2 Checking of Content Validity and Construct Validity of the evaluation form of the quality evaluation of administration in Basic Education Entity School by three experts on educational management selected by purposive sampling.

2.3 Make the final evaluation form.

3. Data collection

3.1 The researcher asks permission letter from the Faculty of Education Chiang Mai University to the school directors to ask permission to collect data in the sample group schools in the research.

3.2 Identification of manual for using indicators and quality criteria for administration in Basic Education Entity School to the sampled school director along with a teacher who is responsible for quality assurance in that school.

3.3 Hand over the manual for using indicators and quality criteria for administration in Basic Education Entity School to the school for utilization in quality evaluation of the administration in the school.

3.4 Collected data are sent back to the school to the identified sample groups by the researcher.

4. Statistical Methods used for Data Analysis

The researcher calculates the values of Pearson's Product Moment Correlation of the data collected using the SPSS for Windows Version 11.