

Chapter 5

Conclusion and Discussion

The purposes of this research were to 1) analyze factors and indicators for teachers' roles to promote lifelong learning skills of students in basic education level, 2) develop the evaluation model to teacher's promote lifelong learning skills of students evaluation model at the basic educational level and 3) try out and find the quality of the model. The process can be divided into three step are as follows. The sample was divided into two groups as follows. The first group was 550 sample teachers for Exploratory Factor Analysis. The second group was 550 sample teachers for relational model analysis and the validity of model consistency. They were selected by Two - Stage Sampling. First stage by Stratified Random Sampling by department. Second stage by Simple Random Sampling in proportion to the population of teachers in each province. Implement the evaluation model 11 schools, 42 people. Research instruments included questionnaires an interview form. Content analysis, mean, standard deviation, content analysis, concurrent validity, rater agreement index and generalizability coefficient.

Step 1 : Analyzing factors and indicators of teachers' roles to promote lifelong learning skills of students at the basic educational level. From studying relevant documents, journals, concepts, and researches on teachers' roles to promote Lifelong Learning skills of students at the basic educational level, the researcher synthesized the indicators applying content analysis technique and content validity from the experts. Verifying the Construct Validity, determined the proportion of factored and analyzed relational model. The sampling groups were divided into two groups: the first group was 550 sample teachers for exploratory factor analysis while the second group was 550 sample teachers for relational model analysis. Both groups were randomly selected by Two - Stage Sampling. The first stage was Stratified Random Sampling relying on regions and the second stage was Simple Random Sampling relying on the proportion of the population of teachers in each province. The research instrument in this step was the survey towards the indicators of teachers' roles in promoting students' lifelong learning

skills. The criteria was that the factors should have Eigen value more than 1.00 and each factors indicators must have factor loading more than 0.30. The analysis of factors and indicators of teachers' roles to promote the Lifelong Learning skills of students at the basic educational level employed the Exploratory Factor Analysis: EFA to examine the grouping of indicators. Model validity and model correlation by analyzing relational model and verify the relational model of LISREL 8.72. The criteria was that Chi-Square Statistics was to test the hypothesis of relationship of function whether its value was at zero. Goodness of fit index (GFI) value is almost at 1.00. Root Mean Square Resident (RMR) value is almost zero or less than 0.20. Root Mean Square Error of Approximation (RMSEA) value is less than 0.05.

Step 2 : The model development of the teacher's role evaluation to promote lifelong learning skills of students at the basic educational level. As following to the first step, the researcher could have factors, indicators, proportion of an importance of factors and indicators for the teacher's roles to promote lifelong learning skills of students at the basic educational level. In addition, the researcher studied and synthesized the model based on the concept and theory of evaluation model development. The researcher employed those results as the basic information to develop the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational. In addition, the researcher studied and synthesized the model based on the concept and theory of evaluation model development and the evaluation model's quality was examined by the experts to develop the model before tryout as the following detail. In this study the samples were 26 experts. The instruments for collecting the data was the fourth instrument: the survey to the expert in considering the evaluation model for teacher's roles to promote lifelong learning skills of students. Verify the quality of the evaluation model for teacher's roles to promote lifelong learning skills of students at the basic educational level in four aspects: Utility, Feasibility, Propriety and Accuracy by creating the fourth set of instrument

Step 3 : Testing and finding quality of evaluation model for teacher's roles in promoting lifelong learning skills of students at the basic educational level. The researcher had tried out and examined the quality of the developed evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic

educational level which was qualified from the experts. The tester were 42 administrators and teachers from 11 schools. Research instruments was the survey to ask the experimenters' ideas in aspects of using an evaluation model to of teachers' roles to promote lifelong learning skills of students at the basic educational level. Analyzing of Concurrent Validity was applying by Known groups method with the statistics of Mann-Whitney U test. Analyzed the quality of the evaluation results agreement by calculating Rater Agreement Index: RAI and examine the evaluation results' reliability quality by applying Generalizability Theory or G-Theory to analyze G-Coefficient and develop the model after trying out by program GENOVA.

5.1 Conclusion

The research results were conclusion in three parts:

Part 1 Result of analyzing factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level.

1.1 Result of analyzing factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level.

There were five factors and 40 indicators for teachers' roles to promote lifelong learning skills of students at the basic education level. The order was ranked based on the sum of factor loading for the variables as follows: Firstly, Instruction consisted of 11 indicators; Secondly, Support & Reinforcement for Active Learning consisted of 11 indicators; Thirdly, Teacher Attributes consisted of 9 indicators; Monitoring, Inspection and Assessment consisted of 5 indicators; and Classroom Management consisted of 4 indicators. Lifelong learning skills one factors and 13 indicators. All factors could explain 58.38% of the variance in observed variables as follow.

Factor 1- Setting study plan, had 11 indicators which were setting study plan to promote self-learning (Instru1), promoting peer learning (Instru2), integrating various contents and skills (Instru3), based on research methodology to set study plan (Instru4), setting content and activities to be consistent with the interest and individual differences (Instru5), organizing activities for the learners to practice thinking process skill (Instru6), organizing the practical activities (Instru7), organizing activities to learn from the variety of sources (Instru8), giving the importance to the learning process by

reflecting what the learners had learnt rather than what they had been instructed (Instru9), update learning content (Instru10), and organizing the activities for the learners to study (Instru11).

Factor 2 - Learning support and setting atmosphere for learning, had 11 indicators: promoting the learners to pursuit knowledge (Support1), organizing or simulating the situation to motivate learning participation (Support2), advising learning sources both inside and outside classroom (Support3), providing the guideline of pursuit the sources of knowledge to the learners (Support4), organizing activities to promote thinking, practicing, and learning processes (Support5), providing learning media for the learners (Support6), setting classroom atmosphere to support the learners based on their potentialities, interests, and requirements (Atmos1), supporting learning cooperation and experiences exchange among the learners (Atmos2), providing the chance to explain or present the works in classroom (Atmos3), providing the chance to ask questions and show opinion (Atmos4), and being friendly and took care of the learners (Atmos5).

Factor 3 – Teachers Attributes, had 9 indicators which were having knowledge of setting atmosphere to support Lifelong Learning(Teacher1), having teaching knowledge to promote self-learning (Teacher2), being aware of the importance of ongoing learning (Teacher3), having positive attitude and value the learning (Teacher4), applying technology to develop themselves and the learners (Teacher5), knowing the learning centers and advise to the learners (Teacher6), being the role model in learning and pursuing knowledge (Teacher7), facilitating the learning (Teacher8), and studying the information to apply to the leaning constantly (Teacher9).

Factor 4 – Observing, Monitoring, and Assessment, had 5 indicators which were teacher evaluated the learners based on the actual situation (Assess1), having many types of assessment such as learners evaluated themselves, evaluated by teachers or peers (Assess2), reporting evaluation result for the learners' development (Assess3), identifying the evaluation as a part of the learning (Assess4), evaluating the learning both during and after learning in order to set the development plan for the next academic year (Assess5).

Factor 5 – Class Management, had 4 indicators which were setting up classroom to support learning activities (Manage1), giving importance to learners' differences and constraints (Manage2), governing the classroom with the regulations (Manage3), having punishment system based on the regulation and promoting learners' discipline (Manage4).

Analysis result of the factors of Lifelong Learning skills of students disclosed that there were one factor and 13 indicators had the Eigen value at 9.348, which was the quadratic of the total correlation of co-factors in each factor explained the variance of Lifelong Learning skills of students' variable at 71.999%. The detail of the indicators in each factor were pursuing knowledge(Life1), love reading, writing, and listening for questioning (Life2), being self-learning (Life3), being able to learn continuously (Life4), being able to communicate with language, transfer knowledge, understanding, and attitude via speaking and writing (Life5), being able to analyze (Life6), being able to synthesize (Life7), being creative (Life8), be critical thinking (Life9), being able to predict (Life10), being able to set purpose and make decision (Life11), being able to work in group (Life12), being able to apply technology for learning (Life13).

1.2 Result of verifying the quality of factors and indicators and analysis of model of relationship between factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level.

Results of verifying the validity of the six models of relationship between factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level was that all models was in accordance with empirical data.

Study plan model found that Chi-square = 40.74, df = 29, p = 0.073, GFI = 0.99, AGFI = 0.97, RMSEA = 0.027. This meant the model was in consistent with empirical data. Considering the factor which different from zero with statistical significant .01, factor loading was positive between 0.34-0.58. Study plan model had 11 indicators which were setting study plan to promote self-learning (Instru1), setting study plan to promote peer learning (Instru2), setting study plan to integrate various contents and skills (Instru3), applying research methodology to set study plan (Instru4), setting content and activities to be consistent with the interest and individual differences

(Instru5), organizing activities for learners to practice thinking process skill (Instru6), organizing the practical activities (Instru7), organizing activities to learn from variety of sources (Instru8), giving the importance to learning process by reflecting what the learners had learnt rather than what they had been instructed (Instru9), updating the learning content to be up-to-date (Instru10), and organizing the activities for the learners to study (Instru11).

Learning support and setting atmosphere for learning model was that Chi-square = 46.62 , $df = 23$, $p = 0.0025$, $GFI = 0.98$, $AGFI = 0.96$, $RMSEA = 0.043$, though Chi-square value had the statistical significance P-value less than or at .05 which was affected from the uncertainty of the harmony test model applying Chi-square which likely to deny the hypothesis even though the model was completed because of the size of sample group and the number of variables in the model (Garbing & Anderson, 1993). This was because Chi-square value possibly increased when the sample group was getting bigger and had more variables to analyze, and other index were acceptable. Therefore, the model was in consistent with empirical data. Considering the factor loading which different from zero with statistical significant .01, factor loading was positive between 0.34-0.62. Learning support and setting atmosphere for learning There were 11 indicators: promoting the learners to pursuit knowledge (Support1), organizing or simulating the situation to motivate learning participation (Support2), advising learning sources both inside and outside classroom (Support3), providing the guideline of pursuit the sources of knowledge to the learners (Support4), organizing activities to promote thinking, practicing, and learning processes (Support5), providing learning media for the learners (Support6), setting classroom atmosphere to support the learners based on their potentialities, interests, and requirements (Atmos1), supporting learning cooperation and experiences exchange among the learners (Atmos2), providing the chance to explain or present the works in classroom (Atmos3), providing the chance to ask questions and show opinion (Atmos4), and being friendly and took care of the learners (Atmos5).

Teachers' attributes model was that Chi= 17.64 , $df = 15$, $p = 0.27$, $GFI = 0.99$, $AGFI = 0.98$, $RMSEA = 0.018$. Therefore, the model was in consistent with empirical data. Considering the factor loading which different from zero with statistical

significant .01, factor loading was positive between 0.37-0.82. Teachers' attributes model had 9 indicators: having knowledge of setting up atmosphere to support Lifelong Learning(Teacher1), having teaching knowledge to promote self-learning (Teacher2), being aware of the importance of ongoing learning (Teacher3), having positive attitude and value the learning (Teacher4), applying technology to develop themselves and the learners (Teacher5), knowing the learning centers and advise to the learners (Teacher6), being the role model in learning and pursuing knowledge (Teacher7), facilitating the learning (Teacher8), and studying the information to apply to the leaning constantly (Teacher9).

Observing, monitoring, and assessment model was that Chi= 0.70 , $df = 3$, $p = 0.87$, $GFI = 1.00$, $AGFI = 1.00$, $RMSEA = 0.000$. Therefore, the model was in consistent with empirical data very well. Considering the factor loading which different from zero with statistical significant .01, factor loading was positive between 0.34-0.68. Observing, monitoring, and assessment model had 5 indicators: teacher evaluated the learners based on the actual situation (Assess1), having many types of assessment such as learners evaluated themselves, evaluated by teachers or peers (Assess2), reporting evaluation result for the learners' development (Assess3), identifying the evaluation as a part of the learning (Assess4), evaluating the learning both during and after learning in order to set the development plan for the next academic year (Assess5).

Class management model was that Chi-square = 1.73, $df = 1$, $p = 0.19$, $GFI = 1.00$, $AGFI = 0.98$, $RMSEA = 0.037$. Therefore, the model was in consistent with empirical data very well. Considering the factor loading which different from zero with statistical significant .01, factor loading was positive between 0.04 -0.53. Class management model had 4 indicators: setting up classroom to support learning activities (Manage1), giving importance to learners' differences and constraints (Manage2), governing the classroom with the regulations (Manage3), having punishment system based on the regulation and promoting learners' discipline (Manage4).

Lifelong Learning skills of students model was that Chi-square = 46.50, $df = 21$, $p = 0.001$, $GFI = 0.99$, $AGFI = 0.94$, $RMSEA = 0.047$, though Chi-square value had the statistical significance (P-value less than or at .05) which was affected from the uncertainty of the harmony test model applying Chi-square which likely to deny the

hypothesis even though the model was completed because of the size of sample group and the number of variables in the model (Garbing & Anderson, 1993). This was because Chi-square value possibly increased when the sample group was getting bigger and had more variables to analyze and other index were acceptable. Therefore, the model was in consistent with empirical data. Considering the factor loading which different from zero with statistical significant .01, factor loading was positive between 0.41 – 0.80. Lifelong Learning skills of students model had 13 indicators: pursuing knowledge (Life1), love reading, writing, and listening for questioning (Life2), being self-learning (Life3), being able to learn continuously (Life4), being able to communicate with language, transfer knowledge, understanding, and attitude via speaking and writing (Life5), being able to analyze (Life6), being able to synthesize (Life7), being creative (Life8), be critical thinking (Life9), being able to predict (Life10), being able to set purpose and make decision (Life11), being able to work in group (Life12), being able to apply technology for learning (Life13).

Result of analyzing the model of relationship of teachers' roles to promote Lifelong Learning skills of students. Results was the relationship model was consistent with the empirical data, Chi-square = 954.93, df = 1,306, p = 1.000, GFI = 0.94, AGFI = 0.93, RMSEA = 0.000. The factors of teachers' attributes in setting study plan (Instru) had direct effect on Lifelong Learning skills (Life). The factors of learning support and setting atmosphere for learning (SupportA), class management (Manage), observing, monitoring, and assessment (Assess), and teachers' attribute (Teacher) had indirect effect on Lifelong Learning (Life) as detail below.

1) Factors of teachers' roles in study plan (Instru) had direct effect on Lifelong Learning(Life) which the effect size was different from zero with the statistical significance .01 and had positive direct effect on the factors of Lifelong Learning skills (Life) with the effect coefficient 0.64.

2) Factors of learning support and atmosphere of learning (Support A) had indirect effect on Lifelong Learning(Life) by transferring through latent variable of factors of study plan (Instru) which the effect size was different from zero with the statistical significance .01 and the effect coefficient was 0.87.

3) Class management (Manage) in observing, monitoring, and assessment (Assess) had indirect effect on Lifelong Learning(Life) by transferring through latent variable of factors of learning support and atmosphere of learning (Support A) transferring through latent variable of factors of study plan (Instru). The effect size was different from zero with the statistical significance .01 and the effect coefficient was 0.48 and 0.30 respectively.

4) Factors of teachers' attributes (Teacher) had indirect effect on Lifelong Learning (Life) by transferring through latent variable of factors of learning support and atmosphere of learning (Support A) and transferring through latent variable of factors of study plan (Instru). The effect size was different from zero with the statistical significance .05 and the effect coefficient was 0.20.

Considering predictive validity coefficient (R^2), the factors of Lifelong Learning (Life)'s value was 0.40, which meant all 5 independent variables: factor of teachers' roles in setting study plan (Instru), learning support and setting atmosphere for learning (Support A), class management (Manage), observing, monitoring, and assessment (Assess), and teachers' attributes (Teacher) were able to explain the co-variance of the variables of factors of Lifelong Learning skills (Life) at 40% as detail below.

Part 2 Result of developing the evaluation model for teacher's roles to promote Lifelong Learning skills of students

2.1 Result of developing the evaluation model for teacher's roles to promote Lifelong Learning skills of students

Results from Part 1 were the factors, indicators, factor loading of factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational. The researcher employed those results as the basic information to develop the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational. Lifelong Learning skills of students consisted of 1) evaluation objectives 2) evaluation subjects 3) evaluation method 4) evaluation criteria 5) evaluation reporting and implementing the evaluation result for development.

1) Evaluation Objectives : To allow the teachers to gain reversed information to be the guideline for development their roles to promote Lifelong Learning skills of students

2) Evaluated Subjects : Subjects Evaluated based on the factors and indicators of Teacher's roles to promote Lifelong Learning skills of students at the basic educational level: 5 factors and 40 indicators, Lifelong Learning skills: 13 indicators

3) Evaluation Method consisted of rater, evaluation process, evaluation tool, evaluation timeline, and evaluation method. Raters : teachers evaluated themselves and two concerned persons: colleague and/or Head of Department and Head of Academic and/or administrator. Evaluation process: preparing evaluation, processing evaluation and summarizing evaluation results. Evaluation Tools: Teacher's roles to promote Lifelong Learning skills of students at the basic educational level evaluation form. Timeline : at least once for each semester. Data Collection : observing, interviewing and examining empirical information

4) Evaluation Criteria : Absolute criterion, which was the criteria had been developed from the principles of teachers' roles to promote Lifelong Learning skills of students at the basic educational level, related document, and the experts' opinion was applied. It was the Rubrics criteria.

5) Reporting Evaluation Result and Implementing Evaluation Result. The researcher created the evaluation program to facilitate the users to access. Reporting the evaluation result to teachers, administrators, and other concerned staff, they would be able to learn the reversed information in order to improve their roles in promoting Lifelong Learning skills to the students. There were two types of the evaluation result reports: the report on the overall evaluation result of each factor, and the report of evaluation result of each indicator in the factors. The detail and the sample of evaluation result report.

2.2 Result of verifying the quality of evaluation model for teacher's roles to promote Lifelong Learning skills of students by the experts

The experts strongly agreed on the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level as a whole, which the average was 4.51. Considering each aspect, they strongly agreed on utility and accuracy and agreed on propriety and feasibility respectively.

Part 3 Result of the tryout to examine the quality of evaluation model for teacher's roles to promote Lifelong Learning skills of students

3.1 Results of evaluating teacher's roles to promote Lifelong Learning skills of students at the basic educational level

The overall evaluation result of teachers' roles to promote Lifelong Learning skills of students at the basic educational level was excellent, which the average was 3.54. Considering each aspect, the opinion was in the good and excellent level. Teachers' attributes, learning support and setting atmosphere for learning, class management, observing, monitoring, and assessment were excellent while setting study plan was good.

3.2 Result of verifying the quality of the evaluation model for teacher's roles to promote Lifelong Learning skills of students.

3.2.1 Result of verifying the quality of the evaluation model for teacher's roles to promote Lifelong Learning skills of students in utility, feasibility, propriety, and accuracy by the testers. The researcher had tried out and examined the quality of the developed evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level which was qualified from the experts. The tester were 42 administrators and teachers from 11 schools; 3 small schools, 4 of each medium and large schools applied to all grade levels and departments. First, conducting the tryout with one of the small, medium, and large schools to obtain the suggestion for improving the model. Then, implementing the model to eight schools to examine the quality of the model on utility, feasibility, propriety, and accuracy. The testers were very satisfied with the evaluation model for teacher's roles to promote Lifelong Learning skills of students at the basic educational level in utility, feasibility, propriety, and accuracy of the model, which had the average at 4.42. Considering each aspect, they were very satisfied with all aspects.

3.2.2 Result of verifying the quality of the evaluation model for teacher's roles to promote Lifelong Learning skills of students at the basic educational level from the testers in terms of Concurrent Validity, Rater Agreement Index: RAI and Reliability of

the evaluation results. The overall evaluation result of teachers' roles to promote Lifelong Learning skills of students at the basic educational level was excellent. Considering each aspect, the opinion was in the good and excellent level. Teachers' attributes, learning support and setting atmosphere for learning, class management, observing, monitoring, and assessment were excellent while setting study plan was good. Analyzing the quality in terms of concurrent validity by Known group method and General group. Teachers from Known group had the different score of evaluating teachers' roles to promote Lifelong Learning skills of students at significant level .05. The average evaluation score of teachers from Known group was higher than the score of teachers from General group. It indicated that the tool was valid. Results of analyzing the quality of evaluation result agreement by Rater Agreement Index. Rater agreement index was 0.81 – 0.93 which indicated that the raters were able to score the evaluation coherently. Results of examining the quality of reliability of the evaluation results by applying Generalizability Theory or G-Theory to analyze G-Coefficient, which was the statistical theory to analyze the reliability or the confidence of evaluation tools and design in order to obtain the reliable results. GENOVA (Crick; & Brennan, 1983) was used to design Two Facet Design, R : P X I Design, when each teacher (P) was evaluated by each question indicators (I) by the different sets of raters (R). The reliability of evaluation results of teachers' roles to promote Lifelong Learning skills of students at the basic educational level was high. G- Coefficient was 0.9726. This was to say the difference of evaluation score 48.38% caused by the relationship between question indicators and the evaluated persons of each rater and the unsourced sampling error, and 23.35% caused by the roles of evaluated teachers. Regarding the raters, there was no difference in evaluation rating.

5.2 Discussion

The research results were discussed as followed.

The research on the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level aimed to analyze the factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level in order to develop the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level and try out to examine the quality of the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level. The research applied research and development method to obtain the factors and indicators and the model of relationship of factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level, which was in consistent with the empirical information that was a significant factor of the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level. Results of the tryout to examine the quality of the evaluation model were that the model had benefits, accuracy, and propriety at high to the highest level. The raters had the understanding that was in line with the details of the evaluation model and resulted in the results consistency. Furthermore, the evaluation results had high level of reliability which indicated that the developed model had qualified quality because:

1. Results of the analysis on factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level indicated that there were five factors; setting study plan, learning support and setting atmosphere for learning, teachers' attributes, observing, monitoring, and assessment, and classroom management. The factor of teachers' role in setting study plan had direct influence on Lifelong Learning skills because it was the significant factor to develop the learners' skills. This was in consistent with the concept of Model Anonuevo (2001, p. 12) that there were many factors of Lifelong Learning skills, both internal and external factors. One of the external factors was the setting study plan which had great effect on Lifelong Learning skills. This also was in line with Nittaya Samrej (2004), who studied the development of educational management for Lifelong Learning indicators. She stated that setting the study plan was very important for promoting Lifelong Learning skills.

There were two stages. The first stage was the beginning of learning which consisted of the continual learning from the basic educational level to the learning and training after the basic educational level, which the researcher called higher education level. This learning stage was very important to prepare the persons for the next learning stage. The second stage was the learning after completing the basic stage. It was the learning in the adult which was a long time learning which the learners initiated and pursued knowledge themselves. The learners had been preparing the learners' attribute since the beginning stage.

The factor in learning support and setting atmosphere for learning had positive indirect influence on Lifelong Learning skills by reflecting through the latent variable of the factor in setting study plan. These factors help supporting the study plan. The good supports affected setting study plan which led to Lifelong Learning skills of students. This was in accordance with Charles Hummel (1998) that learning support and setting atmosphere for learning was one of the important factors to set up study plan which help promoting Lifelong Learning skills. Students should be encouraged, motivated and developed their creativity, and promoted to apply knowledge out of school to develop their attitudes. Further, students should start integrating the subjects and learning methods. This was in line with Kulwadee Phaijit (2001, p. 66) who studied Mathematic Teachers' roles. National Education Act of B.E. 2542 explained that setting study plan would be successful unless the teachers' roles in encouraging and support the learners to be alert and eager to learn by themselves. Moreover, the teachers should create the friendly environment and surrounding, listen to the learners' opinion which would support the learning and resulted in effective setting up study plan.

Classroom management and observing, monitoring, and assessment had positive indirect influence on Lifelong Learning skills by reflecting through the latent variable of the factor in learning support and setting atmosphere for learning and transferred to the factors of setting study plan. If class management was well organized to support learning and supported by the observation, monitor, and assessment for the learners to develop themselves, Lifelong Learning skill would be originated. This was in line with Knowles (1975, p.18) who presented that classroom management to support learning, classroom administration, the trustworthy and rule respect, and the evaluation on

learning activities between the learners and the instructors should be focused to promote students' Lifelong Learning skills.

Teachers' attributes had positive indirect influence on Lifelong Learning skills by reflecting through the latent variable of the factor in learning support and setting atmosphere for learning and transferred to the factors of setting study plan. If the teachers always studied and pursued knowledge for setting study plan, applied technology to develop themselves and the learners, pursued sources of information, and motivated the learners, this would help supporting the learning and setting study plan which would generate Lifelong Learning skills. It was in accordance with Knapper; & Cropley (2000, p. 1, 11–12) regarding Lifelong Learning skills behaviors that the learners would have Lifelong Learning skills unless they were interested in and motivated to learn what they were learning, loved to learn constantly which would become the Lifelong Learning behavior. Lifelong Learning skills were different from learning skills in general. Whereas learning skills was the learning took place at the period of time, Lifelong Learning skills were the consistent learning process and became the behavior in the end.

In addition, this research was in accordance with Four Step Approach of Modeling of Mulaik & Millsap (2000) which presented the four steps of structural equation modeling which were: explorative factor of latent variables analysis, verifying measurement model, verifying the relationships of latent variables, and structural equation modeling analysis. Results of analyzing model of relationships of factors and indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level indicated that all models was in consistent with empirical information. It pointed out that five factors of teachers' roles were very important to promote Lifelong Learning skills to students. This was possibly because the researchers applied the empirical definition, that required the researches-based to define what the sub-variables of the indicator were, the combination of sub-variables to become the indicator, and the determination of each variable loading to become the indicators (Rattana Buason, 2007, p. 210), by applying the empirical information which verified by the experts. Furthermore, the quality of the indicators was verified based on the theoretical frameworks. This was very important because if the development of

indicator based on the low qualified theories, no matter the statistical techniques were applied, the development results would have low quality.

2. Results of developing the evaluation model, which consisted of 1) evaluation objectives 2) evaluation subjects 3) evaluation method 4) evaluation criteria and 5) reporting evaluation results and implementation for development, was in accordance with the concept of evaluation model development by Nevo (1983, p.117-126) and Sirichai Kanjanawasee (2000, p. 55-56) which defined the structural model to show the relationship of evaluation factors to plan the evaluation activities; evaluation definition, the identification of evaluation function, the evaluation subjects, what kind of information expected from the evaluation, what criteria to be used to verify the value, the in charge persons in the evaluation, what the evaluation process is, the method to proof the answers for the evaluation, and the criteria for verify the evaluation quality.

The evaluation aimed to provide the reversed information to the teachers in order to be able to apply as a guideline to develop their roles to promote Lifelong Learning of students. It was in line with Sirichai Kanjanawasee (2009, p. 8-9) who reported that the evaluation led to the development focusing on the utilitarianism. It could provide the information that was beneficial for the administration. The evaluation subjects were in line with the factors of indicators development of Johnstone (1981, p. 33-38) which the indicators had been developed by the empirical definition from the analyzing teachers' roles to promote Lifelong Learning. Then, verifying with the empirical information from the concerned persons. The indicators development was very important because the indicators were the first step of theory development. The reliable indicators obtained from studying researches systematically by various studying methods; analysis, synthesis, theories, concepts, documents, textbooks, journals, and related researches, to study the development possibility through the verifying the structural validity, defining the factors and indicators loading, and verifying the agreement of the relationship model based on the actual condition and the empirical information from the experts to obtain the quality factors and indicators.

The evaluation methods, which consisted of the raters, evaluation process, evaluation tools, evaluation time and method, were in accordance with the standard quality assessment of the basic educational level to assure the internal quality of the

educational institutes (National Institute of Educational Testing Service (Public Organization), Ministry of Education, 2011) which defined the guideline of evaluation that the methods and tools should be diverse to obtain intensive information. Regarding the evaluation method, it was in consistent with the research of Preecha Samakkhi (2009) who studied on the evaluation model for plan and project in the educational institutes, Mattayomsuksa Level which had three steps; evaluation preparation, evaluation processing, and evaluation report. Further, the model had the clear evaluation criteria, Rubrics, which was in line with the criteria of Bureau of Academic Affairs and Educational Standard (2007). One important part of the model was the evaluation result reporting and the implementation for development. The researcher set the evaluation program to assess the evaluation results to facilitate the users by designing the program online. Moreover, the researcher created the program on Microsoft Office Excel by set the calculation formula to facilitate the school in the remote areas which had the problem on access the internet. The reversed information was reported in various forms by individual person, by department, by grade level, and the overall of the school to be convenient to apply the results. Glass (1978) mentioned that providing reversed information was very important because it reflected the teachers' roles and supported the roles development efficiently. It was in consistent with the concept of Millman (1990) which presented that the evaluated person should be informed the results along with the guideline for development such as the information on the aspects which should be developed, the reasons, the factors supported the development, the indicators which indicated the development, and the concerned persons with monitoring the development results evaluation. Moreover, the evaluation results should be informed to the evaluated persons and the administrators as a reference for setting the efficient administrative plan. The researcher also presented the guideline for development, the detail of activities, the in charge persons in development, the support teams, and the operation timeline to be the guideline to the concerned persons.

Results of verifying the evaluation model, which were in line with the standard of educational quality evaluation of Committee on Standards for Educational Evaluation presented by James R. Sanders. et al (1994), revealed that the experts strongly agreed with the evaluation model which could be said that the model provided useful

information which responded the concerned persons' requirement. The manual was easy to use. The related factors were accurate, intensive, and adequate to apply for developing teachers' roles. The model was also appropriate based on the rule and regulation, ethics which considered the concerned person and the affected person as a priority. Moreover, the model was applicable to the current situation. The raters and the evaluated persons provided full cooperation which was consistent with the evaluation paradigm by the experts concept by Worthen and Senders (1987) which stated that evaluation was the accessible value unless the human has the proficiency in valuing things. This was in consistent with the concept of model evaluation by the experts proposed by Elliot W. Eisner (1976) which noted that evaluation by the experts focused on the analysis, synthesis, in-depth criticize the topics. Some topics applied quantitative evaluation to other considerable factors such as judgement, experiences, and proficiency in order to obtain the summary of propriety, efficiency, and the quality of what was being evaluated.

3. Results of the tryout to verify the quality of the evaluation model disclosed that the testers were very satisfied with the model. They agreed that the model was beneficial, propriety, had the feasibility and accuracy which was closed to the opinion of the experts who were strongly satisfied with the model because the model was applicable to the actual situation and suitable for all schools size, grade levels, and all departments. However, there might have some constraints from the different context. The reason why both the testers and the experts strongly agreed on the benefit, feasibility, propriety, and accuracy of the model might cause by the research and development method the researcher applied in to this research. It based on the concept of Borg, Walter R. and Gall, Meredith D. (1983) which conducted the research systematically, applied the innovation or created model and kept developing until obtain the highest quality innovation. This was in line with this research methodology which had the systematic process consisted of three steps; analyze factors and indicators of teachers' roles to promote Lifelong Learning skills, develop the evaluation model for teachers' roles to promote Lifelong Learning skills and, try out and verify the quality of evaluation model. All steps based on the concepts and theories, verifying the quality of evaluation model inclusively and diversely. The suggestions from the experts were

applied to develop the model before the tryout. During and after completing the tryout, the quality was verified and improved. All these processes resulted in the high and the highest satisfaction of the benefit, feasibility, propriety, and accuracy of the model. Furthermore, the researcher analyzed the quality of other aspects such as the agreement of the evaluation results by calculating the Rater Agreement Index or RAI and the reliability of evaluation results by applying Generalizability Theory or G-Theory to analyze G-Coefficient. Results of analyzing Rater Agreement Index: RAI pointed out that RAI was high which indicated that the raters were highly consistent in scoring the evaluation. Regard to the reliability of the evaluation results, the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level has high reliability. G-coefficient was at high level. It indicated that applying the evaluation model obtained the high reliable results and the raters were consistent in understanding the detail of the evaluation model from studying the manual. The simple and understandable criteria resulted in the consistency of the results. This was in line with the concept of Hintze & Matthews (2004) which stated that there should have few evaluation errors from the raters if the evaluation tools, methods, and design were quality. Thus, it could be concluded that the evaluation model for teachers' roles to promote Lifelong Learning skills of students at the basic educational level in this research was quality.

5.3 Recommendations

From the researcher results, some recommendations were recommended.

Recommendations to Implementation

From the results, the evaluation model consisted of evaluation objectives, evaluation subjects, evaluation method, evaluation criteria, and reporting the evaluation results and implementation for development. Thus, there are some recommendations for implementing the model as follow.

1. Evaluation objectives - To obtain the reversed information to the guideline for developing teachers' roles to promote Lifelong Learning skills, the users must study the detail on the manual in order to achieve the evaluation objectives. Moreover, the model should be implemented constantly in order to gain the results for the development.

2. Evaluation subjects and evaluation method - This evaluation model is for elementary education level. The users who are interested in applying the model to other levels should study the plan and adapt the indicators and some evaluation methods to suit with the educational level context.

3. Evaluation criteria - The overall criteria is for applying to elementary level. The users who are interested in applying the model to evaluate the specific department and education level should study the plan and adapt the criteria to suit with the educational level context.

4. Reporting evaluation results and implementation to development - The concerned persons should analyze the evaluation results and the development path to find the causes and solutions for development. Moreover, the administrators should utilize the received information to set the plan, supervise, and monitor to develop quality of the study plan.

5. Evaluation program facilitates the evaluation reporting. Thus, the interest users are able to apply the model to other tasks evaluation.

6. Implementation evaluation model - The users should study the model from the manual to achieve the objective. Moreover, the indicators of teachers' roles to promote Lifelong Learning skills of students at the basic educational level in this research link to some indicators of quality assurance in education in the educational institute which will be very beneficial for education quality development.

Policy Recommendations

1. Results of analyzing the relationship model revealed that teachers' roles in setting study plan had direct influence on Lifelong Learning skills. Teachers' roles in learning support and setting atmosphere for learning, classroom management, observing, monitoring, and assessment, and teachers' attributes had indirect influence. Therefore, the educational concerned departments should apply the obtained information to set the plan, policy, and the machinery for developing teachers in each aspect to set the study plan which promote Lifelong Learning to the students.

2. This research obtained the information of evaluation and Lifelong Learning which points out its importance to the concerned persons. Therefore, the concerned

department should have clear evaluation policies, strategies, and procedures as a educational development mechanism. Besides, the administrators must give the importance to the evaluation by having clear supportive policies to promote and motivate the application to pursue knowledge and understanding of all concerned sectors to be aware of the importance of evaluation.

Recommendations for Further Researches

1. This research studies in the basic educational level context. Thus, there should have the further researches which study in other levels such as higher education level, vocational educational level, and non-formal education level to strengthen the efficient and effective educational development plan.

2. The model tryout has obtained the reversed information as the development guideline so the further study on the implementation the evaluation results to develop teachers' roles to promote Lifelong Learning skills would be very beneficial.

3. This research has obtained the evaluation model which the concerned persons are able to develop to other models or studies that will be useful and quality such as the study on the factors affecting the achievement of implementing the evaluation model for teachers' roles to promote Lifelong Learning skills to develop the factors of evaluation success, the study on the model of students development to generate Lifelong Learning skills to obtain useful information for students development, and the study on development model for teachers' roles to promote Lifelong Learning skills of students to obtain the development model for teachers' roles.

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