

Development of Knowledge Management Model for Developing the Internal Quality Assurance in Educational Opportunity Expansion Schools

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Abstracts

This research for: 1) to study the current situation and problem in KM, 2) to develop the KM Model, and 3) to evaluate the finding usage of the KM Model for developing the Internal Quality Assurance of Educational Opportunity Expansion Schools. There were 3 Phases of research implementation. Phase 1: the current situation and problem in KM, was studied. Phase 2: the KM Model, was constructed, investigated, revised. Phase 3: the findings of usage in the KM Model for developing the Internal Quality Assurance of Educational Opportunity Expansion Schools. The research instruments for data collection were: the Questionnaire, and the Interview Form. The statistic using for data analysis included the Mean, Standard Deviation, and Percentage.

The research findings found that:

- 1) The current situation and problem, found that were 7 Steps of implementation in KM including: the goal setting, the role determination, the knowledge construction, the shared learning, the knowledge selection, and the conclusions in body of knowledge, and the problem of KM, in overall, was in “High” level.
- 2) The KM Model, found that were 7 Steps of implementation in KM including: the goal setting, the role determination, the knowledge construction, the shared learning, the knowledge selection, and the conclusions in body of knowledge, and the delimitation of 8 aspects of Internal Quality Assurance. The findings of investigation in the KM Model, by all of 7 experts, found that the Mean Value was in “High” level.
- 3) The findings of evaluation in usage of KM Model, found that the Mean Value of testing after implementation of KM (posttest), was higher than before implementation of KM (pretest) at .01 significant level. The administrators and teachers had satisfaction in of KM Model, after the usage, found that it was in “High” level.

Keywords: internal quality assurance, knowledge management

1. Introduction

The National Educational Act 1999, and the Revised Issue (the 3rd issue) 2010, specified in Unit 6, the Educational Standard and Quality Assurance, Section 47-51, that there would be Educational Quality Assurance in order to develop every level of Educational Quality and Standard including: the Internal Quality Assurance, and External Quality Assurance for the original affiliation and school to provide the Internal Quality Assurance. In addition, it was assumed that the Internal Quality Assurance would be a part of Educational Administration and Management, and the Office of National Educational Standard and Quality Assessment was the public organization being responsible in developing the External Criteria and Quality. The schools had to collaborate in providing the documents and evidence including the information of school for being evaluated. Furthermore, the Office of National Educational Standard and Quality Assessment had to establish the recommendations continuously in order to be ascertained by those who received the service.

The Office of Basic Education Commission (2010) aimed at the Educational Quality that: every school would have Internal Quality Assurance System, and pass the criterion of evaluation based on standard of the Office of National Educational Standard and Quality Assessment, and provide service in the efficiency of administration and management by the Office of Basic Education Commission, the Office of Educational Standard, School, and

Person Group based in legal, to be ready for and have strength in acting one's duty efficiently and effectively by using the network of collaboration from every division or sector in Educational Administration and Management for serving the decentralization efficiently on good governance in the Educational Service Area, and the Basic Education Commission.

The Educational Opportunity Expansion was important to help in developing one's quality of life since it was the Educational Management for enhancing the Educational Level of people throughout the country to be educated in higher level in order to keep pace with one's adjustment to the rapid changes in economic, social, and political which could affect the livelihood of Thai People in the present (The Office of National Primary Education Commission, 2000). Therefore, the policy of Educational Opportunity Expansion was an emergent policy. The implementation based on that policy, was systematically monitored and evaluated, and performed continuously until now. Data obtaining from the monitoring and evaluation were used for improving the project implementation until the project could accomplish its goal very well. Although the project of Educational Opportunity Expansion was successful in the Quantitative Number, the Educational Quality in the Educational Opportunity Expansion Schools, found that it was in "To be improved," level. It could be seen from the findings of implementation based on the pilot project in following up the implementation in the Educational Opportunity Expansion Schools offering Pratomsuksa 1-3, indicated the problem in Educational Quality relating to the school management system as well. (Sirirat-ampon, 2007)

Consequently, the Knowledge Management Approach was very important for every kind of organization in the present (Wichienpanya, 2004). Since the Knowledge Management was a major instrument for practice by managing the occurred knowledge in organization as well as applying for development, and providing profit for the new social and economic system of the world as society uses knowledge as a leading. The knowledge to be used so that the organization would accomplish its goal, needed to be systematic Knowledge Management. Reuy-soongnoen (2004) in both of the viewpoint for policy establishment, and the practice for efficient organizational development. In addition, it became the important part of strategy in knowledge in organization.

According to the above reasons, the researcher viewed that the implementation in developing the quality of Basic School still was very important as well as necessary in order to prepare the readiness of school, teacher, and staff in school for being certified by external audit from the Office of National Educational Standard and Quality Assessment (Public organization) every 5 years. Therefore, the researcher was interested in studying the Knowledge Management Model for developing the Internal Quality Assessment in Educational Opportunity Expansion Schools, in order to be guidelines for school, teachers, Educational Staff of Basic Schools in developing the Educational Process, Administration Management Process, and Working to be efficient with quality based on Educational Standard.

2. Research Objectives

In this study, the researcher determined the research objectives as follows:

- 1) To study the current situation and problem in Knowledge Management for developing the Internal Quality Assurance in Educational Opportunity Expansion Schools.
- 2) To develop the Knowledge Management Model for developing the Internal Quality Assurance in Educational Opportunity Expansion Schools.
- 3) To evaluate the Usage of Management Model for developing the Internal Quality Assurance in Educational Opportunity Expansion Schools.

3. Conceptual Framework

The researcher synthesized the conceptual framework as follows:

I) The theoretical approach of Educational Quality Assurance consisted of:

- a) The Educational Quality Assurance Included 8 aspects: 1) The determination of Educational Standard in School, 2) The Establishment of Development Plan for Educational Management focusing on Quality based on Educational Standard in School, 3) The Establishment of Administration and Information Technology System, 4) The Implementation according to the Development Plan for Educational Management of Schools, 5) The Monitoring and Following up the Educational Quality, 6) The Internal Quality Assessment, 7) The Establishment of Annual Report of Internal Quality Assurance, and 8) The Continuous Development of Educational Quality.
- b) The principle of Quality Improvement based on Deming's Approach (Arcaro, 1995 cited in Deming, 1986) consisted of 4 Steps: Plan, Do, Check, and Act.
- c) The principle of Quality Improvement based on Juran's (2005) consisted of 3 basic approaches: Quality

Planning, Quality Control, and Quality Improvement.

II) The approach of Knowledge Management consisted of:

a) The approach of Knowledge Management of Panich (2005) consisted of the approach of implementation on Knowledge Management including: 1) Define, 2) Capture, 3) Create, 4) Distil, 5) Share, and 6) Use.

b) The approach of Knowledge Management based on Nonako and Takeuchi' approach (2001) based on the implementation of Knowledge Management including: 1) the Vision created from Knowledge, 2) the Management Team Development, 3) the Intensive Sharing Climate, 4) the Knowledge Management and Activity for developing the new Items or Technique, 5) the Organizational Management by using the tellers, 6) the Changing of various contexts simultaneously, and 7) the Network Development in lined with Outside World.

III) The approach of Model and Model Development consisted of:

a) Brown and Moberg's (1999) approach was synthesized from the System approach as well as Contingency approach consisted of the following factors: 1. Environment, 2. Technology, 3. Structure, 4. Management process, and Decision making.

b) The approach of Model Development Willer (1967), in general, it could be classified into 2 Parts: 1) to construct, and 2) to search for the Validity.

c) The approach of Model Evaluation consisted of: The Guskey's (2000) approach consisted of 4 criteria as follows: 1) the Propriety, 2) the Feasibility, 3) the Congruence, and 4) the Utility.

4. Research Steps

The development of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, was Research & Development including 3 Phases: Phase 1; the study of current situation and problem in Knowledge Management for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, Phase 2; the construction, investigation, and improvement of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, and Phase 3; the study of the effect of usage in Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools.

5. Steps of Research Implementation

Phase 1: The current situation and problem of Knowledge Management for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, was studied by the implementation as follows:

5.1 Population and Samples

1) The population of this study included the school administrators and teachers in the Educational Opportunity Expansion Schools, under jurisdiction of the Office of Primary Educational Service Area, 1 school each area, total of 183 schools.

2) The samples were 369 school administrators and teachers in 123 Educational Opportunity Expansion Schools, under jurisdiction of the Office of Primary Educational Service. The sample size was determined by using Krejcie & Morgan's Table at 0.95 confident level. The samples were selected by Multi-stage Sampling (Srisaad, 2002).

6. The Implementation Steps

1) The School Administrators and Teachers as the Committee of Internal Quality Assurance were asked the current situation and problem of The Internal Quality Assurance regarding to the student's quality, the Standard of Educational Management, the Standard of Development of Learning Society, and the Standard of Measure for Promotion.

2) The Best Practice Schools in Internal Quality Assurance or the Schools that passed the second round External Quality Assurance in "Very Good" level were studied.

3) The Document, National Education Act 1999, the Ministry Rule regarding to the Principle, Rationale, and Technique of Educational Quality Assurance 2010, the Knowledge Management and related research literature both of inside and outside the country, were studied in order to analyze and conclude with the principle as well as theoretical approach obtained from Documentary Review.

7. The Research Instruments

The Questionnaire asking the current situation in work practice of Knowledge Management for developing the Internal Quality Assurance, and the problem situation in order to be used in asking the problem level of

Knowledge Management for developing the Internal Quality Assurance. It was a Check List as 5 Level Rating Scale based on Likert Scale.

Phase 2: the construction, investigation, and revision of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, were implemented by 5 steps of implementation as: 1) the establishment of Tentative Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, 2) the investigation and revision of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, 3) the establishment of Handbook of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, 4) the evaluation in the Propriety of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, and 5) the usage of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools.

8. The Research Instruments

The instrument using in this research phase, was to investigate the Propriety, Accuracy, Feasibility, and Utility of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, developed by the researcher and asked the experts to evaluate the Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools. It was a 5 Level Rating Scale.

Phase 3: The effect on the usage of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools was studied.

The Target Group in using the Knowledge Management Handbook for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, Ban-koke-kong School, under jurisdiction of the Office of Chaiyapume Primary Educational Service Area 2, consisted of 24 school staffs.

The Target Group for Focus Group Discussion in expressing opinion after using the Knowledge Management Handbook for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, included Ban-koke-kong School, under jurisdiction of the Office of Chaiyapume Primary Educational Service Area 2, consisted of 7 school staffs being classified into 1 school administrators and 6 leading teachers.

9. The Instrument Using in This Study

There were 3 kinds of the instrument using in this study:

- 1) The instrument using for this study was the Knowledge Management Handbook for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools.
- 2) The instrument using for data gathering included the Knowledge Test during before and after implementation of Knowledge Management Handbook for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools. It was 4 multiple choices including 50 items.
- 3) The instrument using for data collection included the Questionnaire of Satisfaction on the Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools.

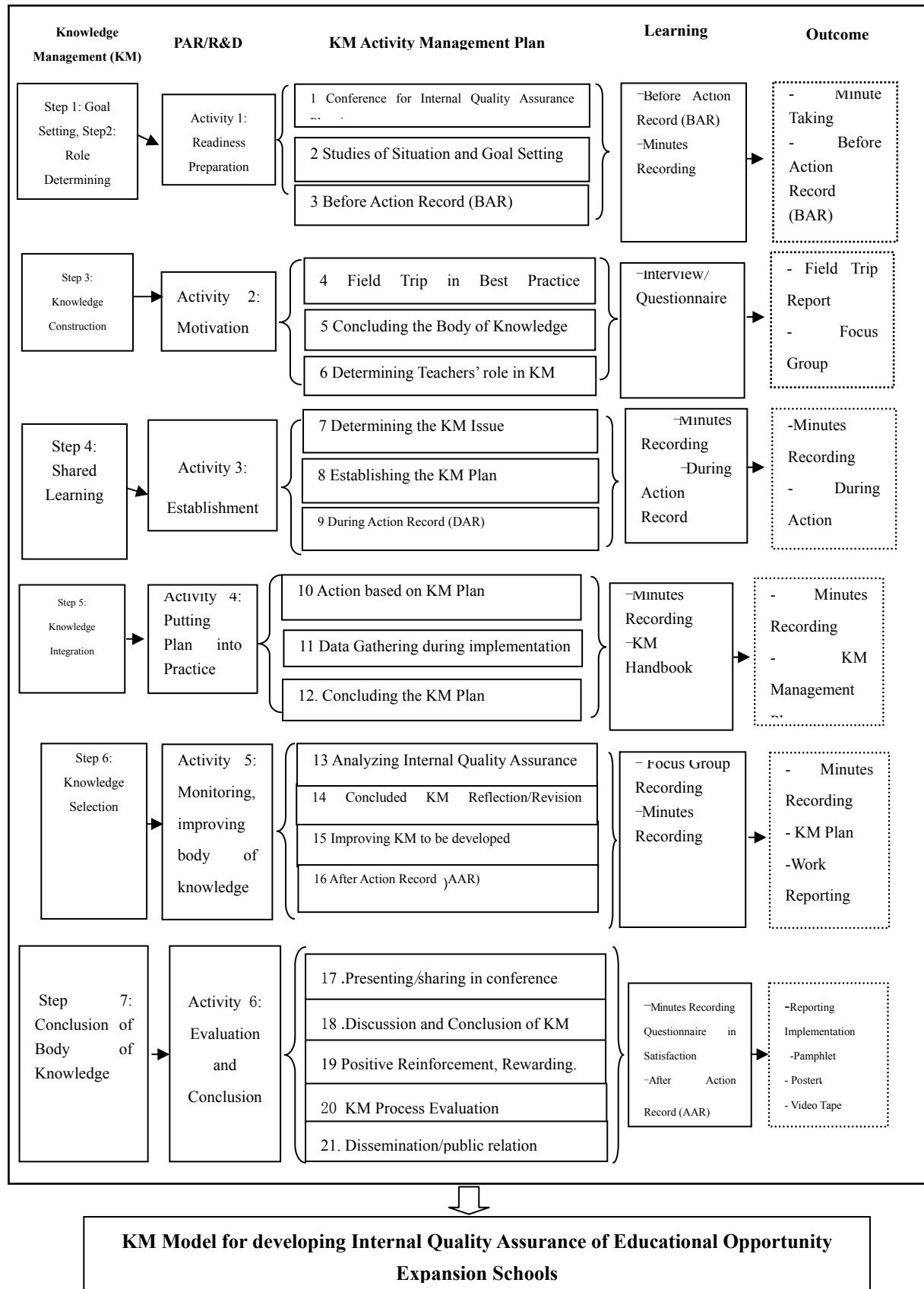


Figure 1. KM Model for developing Internal Quality Assurance of Educational Opportunity Expansion Schools

10. Research Findings

The findings of current situation and problem in Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools could be concluded as follows:

- 1) The findings of current situation and problem in Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, found that the school had work practice in Internal Quality Assurance, in overall, and in the following aspects: the goal setting, role determining, knowledge integration, knowledge selection, and conclusion in body of knowledge, the Mean Value was in “High” level, except the Knowledge Construction and Sharing with the Mean Value in “Moderate” level.
- 2) The findings of the problem in implementation of Internal Quality Assurance for the Educational Opportunity Expansion Schools, found that the school had problem in work practice for Internal Quality Assurance, in overall, and the following aspects: the: the goal setting, role determining, knowledge construction, the knowledge sharing, the knowledge integration, knowledge selection, and conclusion in body of knowledge, the Mean Value was in “High” level, in every aspect.

The findings of Knowledge Management Model Construction for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, could be concluded as follows:

- 1) The findings of Knowledge Management Model Construction for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, found that the Knowledge Management Model Construction for developing the Internal Quality Assurance In the Educational Opportunity Expansion Schools, included 6 Steps as follows: 1. The Readiness Preparation, 2. The Motivation Development, 3. The Action Plan Establishment, 4. The Plan Putting into Practice, 5. The Monitoring to improve the body of knowledge, and 6. The Evaluating, Concluding, and Planning for Learning Activity Management for 21 activities including: 1) the conference for Planning the Internal Quality Assurance, 2) the study of Situation, and Goal Setting, 3) the Before Action Record (BAR), 4) the Field Trip Study of Internal Quality Assurance from the Best Practice Schools, 5) the Concluding in body of knowledge from field trip study, 6) the Determination for Teacher’s Role in Knowledge Management, 7) the Determination of Issues for Knowledge Management, 8) the Establishment of Knowledge Management Plan, 9) the During Action Record (DAR), 10) the Action based on Knowledge Management Plan, 11) the Data Collection during the implementation, 12) the Conclusion of Knowledge Management Plan, 13) the Analysis of findings from the Internal Quality Assurance, 14) the Conclusion, Reflection, and Revision of Knowledge Management, 15) the Improvement of the Knowledge Management to be developed, 16) the After Action Record (AAR), 17) the Conference for presenting/sharing, 18) the Discussion and Conclusion of Knowledge Management, 19) the Positive Reinforcement and Reward, 20) the Evaluation of Knowledge Management Process, and 21) the Dissemination/public relation of performance.
- 2) The findings of Investigation in Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, by the experts, found that, in overall, the Propriety, Accuracy, Feasibility, and Utility were in “High” level.

The findings of evaluation in usage of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools could be concluded as follows:

- 1) The findings from the usage of Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, found that: 1) The co-researchers included the work practitioner, the note taker, group coordinator from all of 3 groups provided the Knowledge Management including the knowledge source from the problem as well as questioning, and problem solving from real practice until the appropriate body of knowledge was occurred. The group work was successful. 2) The co-researchers obtained Learning Process caused by the goal setting, the role determination, the knowledge construction, the knowledge integration, the knowledge selection, and the conclusion of body of knowledge.
- 2) The co-researchers integrated their knowledge in themselves, with new knowledge until the appropriate and congruent knowledge with the need of administrator, teachers, and school was occurred including: 1) the administration and management of Internal Quality Assurance, 2) there was the Knowledge Management Center for the group top share their knowledge in both of inside and outside the school, 3) there were the Knowledge Management Handbook and the co-researchers’ work pieces.
- 3) The findings of comparative analysis in differences of scores between before, and after the implementation of Knowledge Management for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, by the experts, found that, the Mean Value of posttest score (after the implementation of Knowledge Management for developing the Internal Quality Assurance of the Educational Opportunity

Expansion Schools), was higher than the pretest score at .01 significant level.

4) The findings of analysis in the opinion of the school administrators and teachers regarding to the Satisfaction on the Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, found that the goal setting, the role determination, the knowledge construction, the knowledge integration, the knowledge selection, and the conclusion of the body of knowledge, the Mean Value of Satisfaction was in “High” level in every aspect.

According to Research and Development in the Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, the findings could be discussed as follows:

I) The findings of current situation in Internal Quality Assurance of the Educational Opportunity Expansion Schools, was supported by research findings of Pankoi-ngam (2004) in “The Current Situation and Problem of Implementation on Internal Quality Assurance of Primary School, Nong-kee District, Burirum Province,” found that the Current Situation and Problem of Implementation on Internal Quality Assurance of Primary School, in overall, was in “Moderate” level. The first 2 highest problems were: the Educational Standard Development, the Establishment of Educational Quality Development.

II) The findings of development in Knowledge Management Model for developing the Internal Quality Assurance of the Educational Opportunity Expansion Schools, was supported by research findings of Chantarasombat (2008) in “Knowledge Management Model for developing the Internal Quality Assurance, Faculty of Education, Maharakam University,” the research findings found that 1) the Knowledge Management Plan for the Internal Quality Assurance in aligned with Work Development Activity Plan of Faculty of Education consisted of 6 Steps, 2) the Knowledge Management Model for developing the Internal Quality Assurance, Faculty of Education, in overall, its Propriety was in “the Highest” level, 3) the Factors of success in Knowledge Management Model for developing the Internal Quality Assurance, Faculty of Education, were the researcher’s leadership, and the co-researchers’ awareness. It was supported by research findings of Insee (2007) who conducted Research and Development in “Knowledge Management Model, Faculty of Nursing, Rachatani University and Udontani Campus,” found that before developing the Knowledge Management Model, the instructors of Faculty of Nursing, implemented the activity as Knowledge Management in some factors. But, it was not systematic. The Model wasn’t precise. Furthermore, the when the developed Knowledge Management Model, was tried out, found that the administrators and every group of instructors had satisfaction in Knowledge Management, in overall, in “High” level. The evaluation of success in overall Knowledge Management was in “High” level. Moreover, the Propriety of the Knowledge Management Model was in “High” level as well.

III) The findings of testing before and after the implementation of Knowledge Management Model for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools (posttest), was higher than the Mean Value of testing score before the implementation of Knowledge Management Model for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools (pretest) at .01 significant level. The hypothesis was retained. The score after implementing the Knowledge Management for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools (posttest) was higher than the pretest score.

IV) The analysis findings of Questionnaire in the administrators and teachers’ opinion on Knowledge Management Model for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools, was supported by research findings in Knowledge Storage of Hansapiromchok (2007) who conducted Research and Development in Knowledge Management Model for Public Sector, the research findings found that the Knowledge Management Model for Public Sector consisted of 7 steps as: 1) the knowledge determination, 2) the knowledge searching, 3) the knowledge construction, 4) the knowledge storage, 5) the shared learning, 6) the knowledge application, and 7) the monitoring and evaluation. It was supported by research findings of Yiemsang (2007) who conducted research for developing the Knowledge Management Model for the Office of Maharakam Educational Service Area 1, the research findings found that every group of staffs had satisfaction in Knowledge Management Process in “High” level. In addition, every group of staffs viewed that the Knowledge Management Implementation was successful in “High” level.

The implementation of Knowledge Management for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools of this study, was the implementation in work responsibility based on school staffs’ role and duty. It could be stated that the implementation was to provide human development as well as work development simultaneously. It was congruent with Panich’s (2005) statement that the Knowledge Management emphasized on human development through the work development. Since the human development

and work development were performed at the same time. The developed persons would be “Learning Persons.” The persons who had their skill in constructing the knowledge from their work, would have skill in sharing their knowledge together. As a result, the participants in Knowledge Management Activity for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools, would obtain knowledge and comprehension in Internal Quality Assurance very well. Consequently, their testing after implementation of Knowledge Management Activity for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools, (posttest) was higher than before implementing the Internal Quality Assurance, the Educational Opportunity Expansion Schools, (pretest) as well as able to predict the Internal Quality Assurance efficiently.

According to the above reasons, they were factors for the implementation of Knowledge Management for developing the Internal Quality Assurance, the Educational Opportunity Expansion Schools, was efficient. As a result, the experimental group of this study obtained better knowledge and comprehension in Internal Quality Assurance. Besides, their posttest average score of Knowledge Management Implementation for developing the Internal Quality Assurance, in higher level than the pretest score before the Knowledge Management Implementation for developing the Internal Quality Assurance, as the above.

11. Recommendations

- 1) According to the research findings of current situation and problem in Knowledge Management for developing the Internal Quality Assurance in the Educational Opportunity Expansion Schools, found that in overall, all of 7 Steps in Knowledge Management Process, the work practice was in “High” level. Therefore, the school administrators should use the other Models besides all of 7 Steps of Knowledge Management Model in order to apply with Internal Quality Assurance to be more efficient.
- 2) According to the research findings of current situation and problem in Knowledge Management for developing the Internal Quality Assurance in the Educational Opportunity Expansion Schools, found that in overall, all of 7 Steps of Knowledge Management Process included the problem in “High” level. Therefore, the administrators should apply the Model for developing the Internal Quality Assurance to be useful in school. Since it was very important as the guidelines for developing the school staffs to obtain knowledge and comprehension in Internal Quality Assurance in higher level
- 3) According to the development of Knowledge Management Model for developing the Internal Quality Assurance, found that in overall, it included the Propriety, Accuracy, Feasibility, and Utility in “High” level. Therefore, it was necessary for the school administrators to understand the activities very well, and apply with congruency with the school context.
- 4) According to the findings of usage in the Knowledge Management Handbook for developing the Internal Quality Assurance, found that the evaluative findings were in “High” level. Therefore, the school administrators should comprehend and study the technique from introduction in Handbook of Knowledge Management for developing the Internal Quality Assurance efficiently.

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