

## **Developing a Knowledge Management Model for Educational Quality Assurance in Faculty of Education, Mahasarakham University**

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### **Abstract**

The goal of this study is to implement knowledge management (KM) for educational quality assurance (QA), specifically in the divisions of the Faculty of Education, and to identify factors of success of KM for QA. The sample for this study, using the purposive sampling technique, consisted of 19 members of the operational committee of the Division of Research, Academic Service and Educational Quality Assurance according to the Faculty of Education's order No. 248/2006 dated on May 2006. Participation was voluntary. Mixed methods were used including participatory action research (PAR), research and development, qualitative research and quantitative research. Findings: 1) The model of KM development in QA consisted of these 6 states: (1) team/core-leader preparation, (2) building motivations and participatory working, (3) making the plans and developing team potentials, (4) putting the plans into practice and developing work, (5) follow-up and upgrading the body of knowledge, and (6) evaluation for conclusions. Furthermore, in developing and testing the KM model for QA, the following were found: The KM model as a whole was appropriate at the highest level. Groups of people, known as "communities of practice (CoPs)", operated KM according to the 6 aspects of the learning process. Sources of Knowledge were from problems, raising questions concerning development including building knowledge, classifying knowledge, storing knowledge, implementing knowledge, sharing knowledge, and assessing knowledge. The Faculty of Education had a KM center responsible for this process. Finally, factors of success in KM for QA of Faculty of Education were: the use of leadership of the researcher, participants, and administrators. Faculty of Education administrative committee members were

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learners and instructors. Leaders in KM had to create positive awareness of organizational development, provision of opportunities for participants to have participation from the beginning and to be responsible for conducting the research, learning by practicing and improving and sharing learning at the levels of persons, community groups and practitioners.

**Keywords :** knowledge management model, educational quality assurance

## Introduction

External education quality assessment of the Office of Educational Standards Certification and Quality Assurance in round 2 in 2006 has differences from round 1. Assessment in round 2 has high objectivity in terms of standards, indicators, and more importantly, has criteria for judging the results of assessment based on the basic principle that the institute has been developed to have excellence according to its own identity. The study assessed

the goals of official performance based on Maharakham University's plans, emphasizing production of graduates and research by giving the total weight to these specific indicators: 1) the quality of graduates to have specific weight higher than or equivalent to 35 percent, 2) research work and creative work to have specific weight higher than or equivalent to 30 percent, 3) academic services to have specific weight higher than or equivalent to 20 percent, and 4) nurturing arts and culture to have

specific weight higher than or equivalent to 10 percent (Office of Educational Standards Certification and Quality Assurance. 2006: 5)

Grouping higher educational institutes

according to performance impacted groups of institutes and study majors, which had to adjust themselves. It was regarded as a new issue at the levels of faculty, department, and major field. There had to be determination of internal and external QA systems which originated with the administrator, plan-makers, practitioners, and involved persons to share learning continuously change organizational culture for participatory working. The result was a learning organization and KM in the type of organizational quality and efficiency assurance.

The Faculty of Education had adjusted its Strategic Plan (2006-2009) focusing on 10 purposes. Purpose 9 guides internal QA for developing education continuously to receive quality standards certification as well as to disseminate information to the public to meet Strategy 1. The QA system was promoted and developed with these 4 major goals: 1) having projects to provide additional knowledge concerning QA for staff at least 2 projects a year, 2) all agencies in the Faculty must have complete systems and mechanisms for internal QA within the year 2006, 3) providing quality improvement plans from the assessment and having operation in each development plan





with completion at least at 75 percent, and 4) having systems of assessing instructors' instruction in every course with online assessment within the year 2006 (Faculty of Education. 2006: 20)

Thus the research staff was interested in conducting a study of developing a knowledge management model of educational quality assurance in Faculty of Education, Maharakham University. If an appropriate and efficient method of KM would be found, it would lead to staff development, work and organization development to have quality.

### **Purposes:**

1. To make KM plans in QA together with activity plans for work development of Departments and Divisions in the Faculty of Education,

2. To examine KM models for QA together with activity in the Faculty of Education with efficient working mechanisms, and

3. To examine conditional factors of success in KM in QA for the Faculty of Education, Maharakham University.

### **Procedure**

#### **1. Sample**

The sample for this study was selected by using the purposive sampling technique comprising 19 operational committee members of the Divisions of Research, Academic Services, and Quality Assurance according to the order of the Faculty of Education No.248/2006 on 2 May 2006, and interested persons who volunteered to participate in the activities.

#### **2. Methodology**

This was a joint research among KM team, representatives of organizational efficiency, groups from each department/major field, and the researcher himself. The methodology included participatory action research (PAR), qualitative research and quantitative research. The stages of conducting the study were: 1) preparing team of core leading researchers, 2) building motivations and participation, 3) making plans, 4) putting plans to practice, 5) follow-ups and upgrading knowledge, and 6) evaluation in summary.

#### **3. Method**

This study was divided into 3 phases:

1. Phase 1 studied related literature and determined the research conceptual framework: theories and concepts of knowledge and KM, concepts of developing models and a conceptual framework in KM, the KM cycle, and factors affecting KM.

2. Phase 2 selected research participants.

Six focus Departments were: Educational Administration Department, Curriculum and Instruction Department, Educational Technology and Media Department, Educational Psychology and Guidance Department, Educational Research and Development Department, and Health Science and Sport Department. The following were criteria for consideration:

- 1) The Departments in the Faculty of Education, Maharakham University were selected by using the following criteria: The Department had more than 1 major field. The instructors graduated from various educational



institutes. There were continuous development activities but KM had not been implemented together with work development, and the departments volunteered to participate in learning and developing work. As for the department secretary, all Divisions in the Faculty of Education were regarded as team of participants as practitioners and 10 knowledge managers from all the Departments.

2) The Departments selected to conduct this study were Educational Administration Department with 2 major fields: Educational Administration major field and Non-formal Education major field with totally 9 persons.

3. Phase 3 developed the KM model, divided into 2 stages.

1) Constructed a tentative model of KM in OA based on the research conceptual framework in terms of the scope of important activities for KM according to the concepts of Nonaka & Takeuchi; Vicharn Phanich; and Wiig's process of KM; and importantly, His Majesty The King Bhumibol's principle of work involving participatory work performance and knowing, love, and unity. These principles were integrated into techniques of development to be a tentative KM model of OA of the Faculty of Education. The tentative model was then submitted to 3 experts for considering appropriateness and possibility in practice and congruence with group development plans.

2) Tried out the tentative KM model of OA and improved the model.

(1) Held a meeting for planning with the administrative team and the team of par-

ticipants who were actual knowledge managers in OA for leading to behavioral adjustment.

(2) Built the team to originate awareness by using the learning process, participatory work performance, cooperative research and development, PAR, meeting for explaining, study visits, making visions of KM in OA

(3) Made work group development plans in the organization together with KM in at least 4 parts: vision, performance process, sharing learning, and extracting the body of knowledge.

(4) Acted according to the plan together with KM in OA of the focus Faculty/Departments involving participatory work performance, teamwork, participatory evaluation, and KM in OA.

(5) Summarized the lessons, reflected, planned for improving and developing work together with KM in OA at the department, major field and division levels in the Faculty.

(6) Piloted important activities according to the issues of strategic plans, strategic goals, and purposes of OA of the Faculty/major fields together with KM in OA.

(7) Evaluated KM operation in OA of the Faculty/Department to compare with Faculty/other major fields both on and off university campus.

(8) Praising, appreciation and giving interest were more important than rewarding with money or things. They were divided into 2 dimensions: 1) rewards for success in work performance, and 2) rewards for building knowledge, sharing knowledge, and extracting knowledge pool.





## Results:

1. Based upon results, the researcher made plans for KM in QA together with plans of work development activities of Departments and Divisions. Knowledge analysis and KM of the Faculty of Education according to PAR and organizational KM model were divided into 6 phases: 1) preparing team/core leaders, 2) building motivations and participatory work performance, 3) making plans and developing team potentials, 4) putting plans to practice and work development, 5) follow-ups and upgrading the body of knowledge, and 6) evaluation in summary. The KM model was submitted to the committee for QA of the Faculty of Education for review. After review, changes were made and implementation for developing community groups of practitioners could begin. However, implementation at each stage could be flexible based on the period of time of the QA cycle.

2. Developing and testing the KM model in QA

2.1 Developing the KM model was based upon the conceptual model of KM of Nonaka and Takeuchi, Vicharn Panich, and the KM process of Wiig. The model was submitted to deputy Dean for administration and plan; Deputy Dean for personnel, student affairs and alumni relations; and 3 representatives of the QA committee to consider appropriateness, possibility in practice, and operational plans with the model of administration in QA. From the committee's consideration, the following results were found: 1) The KM model as a whole was appropriate at the high-

est level. 2) Possibility in practice of the KM model as a whole was at the highest level. 3) The congruence between the operational plans and the KM model as a whole was at the highest level.

2.2 Testing the tentative KM model in QA and improving the model was divided into 2 phases. Phase 1 operated according to group activity plans together with KM: 1) Preparation and readiness training; 2) Building motivations for voluntary participation; 3) Awareness campaigns and team building; 4) Plans were put to practice by using participatory action research (PAR) for building the learning process and KM on easy activities and in accordance with QA of each Division. 5) Follow-ups and revisions included quality team development activities and upgrading the focus of QA at the department level. The Department interested in participation in KM in QA was the Department of Educational Administration which developed the model with the administrator, teaching staff, and Department secretary. Participants were Division practitioners. 6) For evaluation in summary, there were building knowledge, classifying knowledge, storing knowledge, implementing knowledge, sharing knowledge, and evaluating knowledge. In Phase 2, the results of a trial of KM model in QA were as follows:



| Stage  | Major Activity   |
|--|--|
| 6. Evaluation in summary                                   | 15. Evaluating the KM process  |
|  | 14. Positive reinforcement, Rewarding, and disseminating   |
|  | 13. Establishing Faculty KM Center   |
| 5. Follow-ups and upgrading the body of knowledge          | 12. Operating KM together with QA in the pilot Department in terms of building, classifying, storing, implementing, sharing and evaluating knowledge |
|  | 11. Holding a meeting for planning and determining indicators of developing QA in the voluntary piloting departments                                 |
| 4. Putting plans to practice and work development          | 10. Summarizing lessons, reflecting and reviewing KM plans   |
|  | 9. Operating KM in QA together with work development in departments/divisions  |
| 3. Making plans/developing team potentials                 | 8. Developing basic knowledge of computer and making web site and Bog  |
|  | 7. Planning and presenting KM together with activities for developing QA   |
|  | 6. Determining issues in KM and activities for developing QA in individuals, Department secretaries and Divisions                                    |
| 2. Building motivations and participatory work performance | 5. Determining goals and KM plans together with Faculty QA plans   |
|  | 4. Summarizing and reviewing outcomes of study visits and case studies   |
|  | 3. Study visits to organizations with outstanding KM in QA   |
| 1. Preparing team/core leaders                             | 2. Studying KM conditions and determining goals and visions of KM at the Department level  |
|  | 1. Holding meeting for planning together with the administrator and team of research participants  |





Figure 1. KM Model in QA of the Faculty of Education

2.3 Testing the KM model according to the stage, activity work plan, period of time, and readiness of team of participants will achieve the research purposes with quality. The results can affect HR development, and organizational development. The results of testing the KM model in QA of the Faculty of Education could be summarized as follows:

1) Building knowledge: before building or seeking actual knowledge for their own Departments/Divisions to be sustainable and to perform work consistently, a common body of knowledge had been built but it was not put into practice. It still lacked knowledge of using and connection of data. After conducting this research, having experiences in study visits, and training from staff who had outstanding QA work, the participants were motivated to improve the process of work performance. Participants were motivated by using teacher satisfaction evaluations each semester. This was regarded as important information for work development. The new body of knowledge was regularly integrated. Also, the construction of learning networks focused on long-term goals.

2) Classifying knowledge: before conducting the research, knowledge of the groups was not systematized. The importance of the common body of knowledge was not systematized. Seeking knowledge depended upon the stream of popularity with imitations of products. After conducting the research, the body of knowledge was more clearly sys-

tematized. They participants cooperated in thinking and performing in every process of work. They also had more individual note-taking on information.

3) Storing knowledge: before conducting the research, the participants stored little knowledge of individual and group documentation, media, and printed matters. There was no digital storage. Operational outcomes and the body of knowledge were inconsistently summarized. After conducting the research, they stored more group knowledge in the forms of documents, printed matters, and electronic documents. They had note-taking in their individual books based on functional roles. There were data note-takers according to types of activities. Information was stored in computer database and on web site of the Faculty of Education.

4) Implementing knowledge: before conducting the research, knowledge was implemented in the form of hard-copy documentation. Electronic media had not yet been used. Knowledge connections from outside were limited. After conducting the research, knowledge was shared in meetings, hard-copy, and electronic media. These media could connect more with inside and outside the Faculty. The Faculty had direct KM Coordination Division of the organization.

5) Sharing knowledge: before conducting the research, sharing knowledge took place in meetings. After conducting the research, knowledge was shared between people in and outside their own work lines in meetings, and then transcribed into impor-



tant lessons on the web site of the Faculty KM. There were persons who stored data and updated data in the type of virtual on the web site. It was easy and convenient to access data and the body of knowledge in the issues in which they were interested.

6) Evaluating knowledge: before conducting the research, learning persons in the organizations worked individually. They thought differently and decided differently and always waited for orders from the administrator and group leader. There were neither working standards nor database to connect data. They occasionally worked together by using his/her own data without sharing data. There were unclear KM Coordination Division of any organization. After conducting the research, the team and participants in each community of practice became more enthusiastic about learning. They worked as a team with goals, and began implementing standards of the Practitioner Division by having more databases for recording data and for connecting data from inside and outside the Faculty of Education. There was a clear administrative structure for thinking together to determine visions and goals of working together. They worked together as a community of practice to create sustainability.

The body of knowledge could be classified into individuals, communities of practice, and Departments as follows:

1) Individuals combined their own knowledge with the knowledge gained from outside to put to improve and develop their work. Also, they documented shared

learning in real and virtual forums. It was noted that participants became enthusiastic about learning together when it was in line with established visions.

2) The Faculty of Education's group of KM had management, structure, analytical thinking, determination of goals, cooperation, and standards. Group members raised challenging questions to improve and develop themselves. They managed resources and used human resources, including secretaries of all Departments and Division involved: Administration and Planning Division, Academic Affairs and Foreign Relations Division; Personnel, Student Affairs, and Alumni Relations Division in terms of techniques and QA management of the Faculty of Education.

3) The Faculty of Education had its own KM center beginning directly from QA activities of the Faculty. It maintained itself with follow-up activities on QA and shared lessons from the focus groups through its web site.

4) For the factors of KM success in QA of the Faculty of Education, the following were found:

4.1 The use of leadership of the researcher, participants, administrator, and administrative committee of the Faculty of Education as learners, instructors, external managers, and synergy providers could generate participatory work performance. The researcher called himself "Facilitator 1."

4.2 Leaders in KM of QA of the Faculty of Education intended to create a climate of success based on functional roles in





KM and to present their own works according to the issues of interest. The participants called themselves "Facilitators 2". Group work performers included: Department secretaries, Division representatives, summary note-takers, and KM center web site maker in the team of participants. In the first phase, Department heads, teaching staff and Department secretaries, and deputy deans involved participated in learning and work performance. The coordinator organized groups and personnel to participate in this study.

4.3 From the beginning, participation was encouraged to generate a good work climate: thinking together, planning together, performing together, checking together, and taking responsibility together. It was an important factor to generate a sense of belonging, initiation, visions, participatory work performance, better management, continuity, and commitment to operate by themselves. Also, confidence in the body of knowledge of their own organizations could emerge with more self-reliance.

4.4 Learning by doing, improving and developing work, raising new questions, and putting to practices to achieve the goals would result from PAR. It was regarded as the way of life, causing interactions with one another within their own group and with other groups. There occurred sympathy, love, and care of one another. They were proud of human dignity. This could be regarded as integrated KM of QA in Departments and the Faculty.

4.5 Persons in the team of par-

ticipants were enthusiastic about learning, performing work in their own group, and sharing learning at the personal level. The community groups of practitioners tried to implement tacit knowledge through practice, creating confidence, summarizing and transcribing lessons, and note-taking. These could be regarded as the meaningful and identical body of knowledge of the organization. It could be seen from the Department of Educational Administration which was revising functional roles of the teaching staff and personnel to originate integration of organizational management with quality in all work, personnel, finance, and time. It was in conformity with the focus on the results of summaries on 29 May 2007. There also occurred acceptance of work development in other different Departments of the Faculty of Education. The academic year 2007 could be regarded as an important focus of each Department on QA. All the Departments had to apply all the 10 major indicators and had to have learning goals together with forming work together. The Department of Educational Administration acted as the pilot Department as follows:

1) For Indicator 2.2, there was the learner-centered learning process, with a forum for sharing knowledge of the teaching staff each semester. Each instructor told his/her interesting and proud stories. A schedule was set up for meeting and presenting concrete issues. This indicated continuity and sustainable development by setting up the goal of having models of this indicator at 50 percent.



2) For Indicator 2.16, articles from Master theses would be published and disseminated per the number of all the Master theses by setting up the goal of this indicator at 50 percent.

3) Indicator 2.19 was the level of students' satisfaction with the teaching quality of the instructor and learning support. The purpose was to have students evaluate the teaching staff each semester. At the first stage of the academic year 2006 the overall information of the Administrative and Plan Division was used for operation.

4) Indicator 4.4: percentage of research and creative works published and disseminated, patented as intellectual property or sub-patented, or of benefit to the national and international community per the number of full time instructors. The goal of this indicator was set up at 80 percent.

5) Indicator 4.5: percentage of research articles cited in refereed journals or national or international level database per the number of full -time instructors (only the institutes emphasizing production of graduates and research) The goal of this indicator was set up at 40 percent.

6) Indicator 4.6: percentage of full-time instructors receiving funds for research or creative works from the institute per the number of full-time instructors. The goal of this indicator was set up at 100 percent.

7) Indicator 4.7: percentage of full-time instructors receiving funds for research or creative works from outside the institute per the number of full-time instructors.

The goal of this indicator was set up at 10 percent.

8) Indicator 5.2: percentage of the full-time instructors participating in providing academic services in the society, acting as advisors, thesis committees for external institutes, academic committees, and working on professional committees at the national or international level per full-time instructors. The goal of this indicator was set up at 60 percent.

9) Indicator 5.3: percentage of academic service activities or projects and professional projects responding to the needs for developing and creating strengths of the society, community, nation and international community per full-time instructors by emphasizing clinical research in formal, nonformal, and informal education. The goal of this indicator was set up at 25 percent.

10) Indicator 5.6: knowledge and experiences in academic services and professional services implemented in learning-teaching development. Emphases were on documents in supplement to instruction, textbooks, hand books, training, meetings and seminars, and publishing and disseminating works, The goal of this indicator was set up at 60 percent.

## Discussion

In this study of developing a KM model for QA the following issues were discussed:

1. For the outcomes of a trial of the KM model for QA, it was found that this model was successful. It could generate the





expected outcomes because in developing the model the researcher used conceptual frameworks by analyzing the concepts and results of the research conducted by internationally qualified persons in terms of KM and techniques of deployment. The researcher used the KM concepts of Nonaka Takeuchi, and Vicharn Phanich, and the KM process of Wiig to integrate into techniques of development. Importantly, the researcher used the principle of working of H.M.T. King Bhumibol Adulyadej involving participation, knowing, love and unity (Office of Special Committee for Coordination in the Projects Following the Royal Ideas, Unknown date: 2-32) together with such other principles as after-action review (AAR), raising questions and sharing knowledge in real and virtual forums. Supporting mechanisms, such as the Faculty of Education KM Center and its web site, helped integrate KM from Departments and Divisions. Some important evidence indicating success is as follows:

1) There were 4 groups of knowledge managers: facilitators, practitioners, note-takers, and network managers. This was in congruence with Nonaka and Takeuchi (1995: 20-25) The organization members understood functional roles in KM. Real knowledge managers were major practitioners. The group of medium-level managers interpreted and transformed knowledge into knowledge on paper. The group of knowledge managers determined goals, to foster knowledge sharing, and extracted knowledge to create value. This was in congruence with Vicharn Phanich (2005: 23-48). Important KM managers in the organi-

zation included: Khun Amnuai who promoted creativity and a culture of sharing knowledge; Khun Kit was group practitioner, regarded as an activity operator at approximately 90 percent of all the activities; Khun Likhit who was a note-taker of data in KM activities; and Khun Prasan who was the KM network manager among organizational groups.

2) The sources of knowledge were from problems, raising questions, and solving problems using real practices leading to KM. They were building, classifying, storing, implementing, sharing, and evaluating knowledge. This was in congruence with H.M.T. King Bhumibol Adulyadej's principle of working (Office of Special Committee for Coordination in the Projects Following the Royal Ideas: 32). The King's idea about working may be concluded as "Knowing, love, unity" Individuals and groups must know that before doing anything, they needed to know all the factors, all the problems, and how to solve those problems, They must have love to begin solving those problems. Unity means that one cannot work alone and must work cooperatively as an organization or a staff of people.

This approach will have power to solve problems well. This is in accordance with Prawet Wasi (2002: 21) who says that individual learning is not sufficient for success because other people, organizations and institutes involved do not learn, Only learning together in practice will be successful. It is also in congruence with Naowarat Phlainoi (2003: 2-5) who says that after-action review is regarded as important learning in extract-



ing the essence and findings of an appropriate person or organization.

3) There was a KM Center administrative committee for following up through monthly meetings and virtual forum on the web site to disseminate KM outcomes and resources. This is in accordance with the concepts of Nonaka and Takeuchi (1995: 71-72) and Vicharn Phanich (2005: 1-4) who found that that KM had to rely on utilization of IT and communications for support. It was also in accordance with the concept of Senge (1990: 13-14) who says that there should be sharing of knowledge, concepts and worldviews of people in the organization to support the visions of the organization. Everyone in the organization should participate in building these visions and should help one another build future image of the organization. Everyone should devote their physical and mental strengths to achieve the goals of the organization.

2. When practitioners of the Departments and Divisions were classified, it was found that they showed their satisfaction with KM operation at a high level. It was because everyone improved and developed the selves. Everyone worked according to the functional roles of the KM Center. This was in congruence with external quality assessment in Round 2. As for the Faculty of Education, its standards were certified and the results of assessment by the committee as a whole were at a very good level (The Office of Educational Standards Certification and Quality Assessment. 2006: 33)

3. Some important factors of success of the KM model of QA were as follows:

1) The team of participants intended to work to generate success according to the functional roles, and demonstrated a sense of belonging through activities and work plans, and sought more cooperation from persons and internal and external organizations

2) From the beginning there were opportunities to participate: thinking together, planning together, planning together, checking together, and taking responsibility together in conducting research. This was in line with Paitoon Sinlarat (1999: 22-24) concerning the principle of administration of the organizational leader: trusted leaders had high power over and influence upon the organization. Therefore, if understanding was built and if agreements on participatory working were cooperatively determined, it would cause high job satisfaction and a positive work climate, and foster success.

3) Learning by practicing was a way of life. The new body of knowledge would help in real applications. Connections and relationships between organizational groups emerged. Integrated KM and participatory research could occur. This was in congruence with the results of the research conducted by Yuwanut Thinnalak (2006: 1-7). She found that building knowledge was appropriate to Thai society which values self-reliance. Practices, developing innovations, and learning what one had aptitudes for could build the body of knowledge for solving problems and living joyfully in the society. Also, there was a trend toward





sustainable development.

4) The Faculty of Education KM Center, under management of the team of participants, would follow up progress of the community of practice in Divisions and Departments to create continuity and connections and relationships with one another. The web site was used as a source for seeking knowledge and disseminating KM works. It was used as a source for storing and sharing knowledge among people in and outside the organization. This was in congruence with Chalard Chantarasombat (2007: 260-265) who encouraged a driving mechanism: the community organization KM Center should be used as the center for coordination, the place for meeting, the forum for sharing knowledge, the channel for communication and working together, and for storing the body of knowledge of the team of participants and interested people. The members of tambon administrative organizations at every village became partners in work performance at every stage.

## **Recommendations**

1. Recommendations for implementing the KM model

1.1 Implementation of the developed KM model of QA in full outcomes needed operation in all the 6 stages and 16 major activities. If the Faculty and Department would continue operation, they could begin from Activity 6.

1.2 If the team of participants was regarded as the team of important persons in KM, the Department should promote

and support Department administrators, teaching staff, and Department secretaries to facilitate learning together to achieve the purposes of internal and external QA. The 10 indicators were regarded as the focus on work development to build an outstanding body of knowledge generated from practices on the basis of problems of authentic work development.

1.3 The Faculty KM center should be promoted and supported to generate a variety of clinics, revolving leadership in each section, and sharing knowledge on the monthly forum and the virtual forum on the web site.

1.4 Practitioners, Department secretaries, and Division officials in the Faculty still had potential in participatory work performance for creating QA at a medium level. Training, practices, and study visits should be continuously developed.

2. Recommendations for further research

2.1 Programs of study, activities for development, potentials of teamwork, and research across the sciences should involve master program and doctoral program students. This would make research and development of KM and in other aspects to be more efficient.

2.2 There should be research and development of QA together with total quality management (TQM) at Department and Faculty levels.

2.3 There should be action research at the Department level using the working principle of H.M.T. the King involving sufficiency economy, self-reliance, and participa-



tory working; knowing, love, and unity to connect with the organization, students, and service users in a concrete form.

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