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Abstract: Knowledge management systems (KMS) are commonly tacit patterns practiced in Thai communities. Effective KMS is essential to successfully implement knowledge management (KM) and sustainable development organization. Appropriate model of total quality management (TQM) for Thai community's knowledge management systems will be designed. This study incorporated the concepts and theories of TQM models, KM and KMS in Thai communities. Index and standard of knowledge quality are analyzed and integrated concept of analytical TQM and Delphi technique are applied.

Keywords: Total Quality Management (TQM), Knowledge Management (KM), Community Development.

I. Introduction

The ability to manage quality of knowledge is becoming an essential core process sustainable development of today's organizations. Knowledge management (KM) theories and approaches have been adopted that they are the processes and strategies for continuing improvement [1], [2]. Knowledge management is large and complex issue includes management and operational practices and philosophies, technologies, strategies and human behavioral traits. Though they are different ways in working and results of KM implementations [3].

Creation, transferable, usability, storing and reusability of the knowledge are the most important notion of knowledge activities in knowledge management systems (KMS). An organization's KMS to provide competitive advantage needs both cognitive and social components, interconnected with individual member's cognition and social practices. The structural index which identify knowledge agents, evaluate knowledge sharing among organization members, and objectively assesses the contribution of knowledge agents are the benefits of KMS application [4].

Total Quality Management (TQM) is a mindset and a set of continuous and keeps on improvement processes for individuals, groups and whole organizations by understanding and discovering better process. Its major techniques provide a set of general governing principles; delight the customer, people – base management, continuous improvement, and managements by fact. And produces the excellence achieving results that delight all the organization's stakeholders (this includes employees, customer, suppliers, society in general and those with financial interests in the organization) [5].

Both KM and TQM are improving processes of the organizational qualities. The similarities of them include: result orientation, people base management, teamwork, leadership and delighting the customer. The differences are distinctive focus; approach of TQM is improvement base on fact, while KM is base on building a culture to support knowledge creation and sharing. Practical philosophy of TQM is "understanding and discovering" better process, while KM is "invented or identified" what people were doing and try to doing best practice and radical reinvention[5][6]. Though complement TQM with KM is possible and with properly TQM model planned KM process will be more effective and efficiencies.

Quality of life and sustainable of communities development, administrators as well as population will know what are the core value, core competency, and core knowledge of their living style and environment. They will know what critical knowledge of community is lacking or losing, and what are essential. These want suitable KMS, is powerful tool and important strategy KM implementation. This study is based on these concept (1) belief in community potential, (2) the TQM and KM theory which posits that tacit KMS has been in each communities, (3) concept of TQM can applied in public service organizations and (4) KM is effective in developing communities. Using TQM analytical techniques, knowledge of Thai community are identified and knowledge quality index and standard are established. By identifying the steps in famous TQM models, TQM model for KMS in Thai communities are designed. The model are tested and developed by integrated TQM and Delphi

technique. The model will serves as a theoretical framework and pragmatic foundations for identifying and categorizing knowledge qualities, management and measurement of community's knowledge assets; this assured the effective of KM activities and KM feedback.

II.   Literature Review

II. 1   KM and KMS

Although knowledge and knowledge management concept is practice as early as 4000 years ago. Knowledge management systems (KMS), which involve the application of IT systems and other organizational resources to manage knowledge strategically, are a relatively recent phenomenon. It is generally accepted that knowledge come from individual learning experiences and also comes from the meaningful organized accumulation of information through experience, communication, or inference. The adequate knowledge management processes is considered of a key factor for improving the organization's performance and long-term survival.

Definition of knowledge management means different in understanding of the term knowledge. In the past KM has been focus on information technology and information systems, but the new focus is on knowledge as distinct from the data-centric and information- centric. In perspective of process, the four basic activities: creating, storing, transferring, and applying are regarded, a complex mix of business processes, people, and technology is KM successful [7], [8], [9].

Adoption and diffusion of KMS are studied in the context of some Australian organizations factors and variables are identify, and they are found four major variables affecting KMS diffusion as: organizational culture, top management support, benefits to individuals, and dream of KMS [10].

In KMS 'Knowledge Management Gaps' that might occur when implementing the KM system. The reasons for these gaps and several fundamental approaches for avoiding them are the mismatch between the capability and greatly enhance the effectiveness of implementation of the KM system [11].

The KM development surveys using a literature review and classification of articles from 1995 to 2002 with keyword index in order to explore how KM technologies and applications have developed in this period. KM technologies using the seven categories as: KM framework, knowledge-based systems, data mining, information and communication technology, artificial intelligence/expert systems, database technology, and modeling, together with their applications for different research and problem domains. Some discussion is presented, indicating future development for knowledge management technologies and applications as the followings: (1) KM technologies tend to develop towards expert orientation and KM applications development is a problem-oriented domain. (2) Different social studies methodologies, such as statistical method, are

suggested to implement in KM as another kind of technology. (3) Integration of qualitative and quantitative methods and integration of KM technologies studies may broaden our horizon on this subject. (4) The ability to continually change and obtain new understanding is the power of KM technologies and will be the application of future works.

II. 2   Quality and TQM

The success of quality management is base on several quality models. Much of perspective and popular literature on TQM subscribes that TQM is "universal" in its application ability. This appears on many levels the institutional, national and certification schemes.(e.g. European Quality Award, the Malcolm Baldrige National Quality award, QS 9000, IS 9000). The proposed TQM model can serve as a prototype for implementing quality improvement programs in manufacturing and service-sector settings.

II. 3   TQM and KM

Research on Total Quality Management (TQM) and Just-in-Time (JIT) find that there is evidence supporting the compatibility of the practices in these programs and that manufacturing performance is associated with the level of implementation of both socially- and technically-oriented practices of the three programs.

TQM is an organizational culture dedicated to training, continuous improvement, and customer satisfaction. Empirical studies which have examined the relationship between TQM and organizational performance have investigated the impact of each dimension of TQM on performance separately. These studies have indicated that only a handful of the soft aspects of TQM (i.e.,' human factors' like commitment, team work and so on) contribute to organizational performance. Our contention is that soft TQM actually plays a number of roles. One is to create an environment where seamless dimension and implementation of hard TQM can take place, and the other is to directly aspect organizations' performance in the same way that traditional human resource management (HRM) practices can impact on an organization. The previous attempts to identify the relationships between elements of TQM are suggested. The first approach conceptualizes TQM as a limited set of technical tools (such as statistical process control and Pareto analysis) while the second approach views TQM as part of broader changes to human resource (HR) practices. Through examining computer, automotive, health care and banking industries in four countries, they found that the use of hard TQM tools tends to be more profound in companies that adopt strategies to increase stakeholder commitment and incorporate

III.   Research Methodology

In this study, survey and analysis and Delphi Technique are integrated. Research processes are designed as following:

1) Documentary investigates on philosophical definitions, concepts, theories, and some examples of successful implementation on quality, TQM models, information standard, and measurement of knowledge assess, KM, and KMS.

2) Local Thai communities' structure, ways of public solving concept, wisdom and communities' life are analyzing for finding Thai communities' KMS framework. Survey and analysis Techniques are used.

3) In order to Thai communities' culture and environment, knowledge quality index and standard are settled. And the model of TQM for Thai community's knowledge management systems is designed and proved by Delphi Technique.

The model of TQM for Thai community's knowledge management systems is improved and then presented to public.

IV.   Preliminary Results

Documentary investigation confirms possibility and usability of TQM application for Thai community' KMS. Preliminary results show that:

1) Knowledge is very important factor of community's potential growth. Each community has their KMS, which are different by community's way of life and environmental context.

2) Important factors of successfully organization in KM implement are knowledge sharing and innovative by nature of cultural organization.

3) There are a lot of tacit and explicit knowledge in Thai's communities, in difference forms such as tales, folk songs, literatures, way of lives, traditional curatives, home decoration style, and belief in religions ect. Most of them are not investigate in scientific methods. According to lack of dissemination systems mapping and suitable analytical tools, those knowledge are only garbage data and information.

4) TQM is philosophical and processes of organization quality investigation and improvement of inputs, processes and outputs. TQM techniques are assembly line, design of products for manufacture, and the end-to-end optimization of entire process. The improvement processes depended on collecting data and information, and analyzing, sharing codifying knowledge and discoveries. Usefully implementation technique will be suitable designed for organization circumstances, and successfully depended on having the knowledge people about individual parts of process work together in teams and share their knowledge that could be best decision made. So TQM could be integrated with KM and organized KMS communities effective able.

KM is the organizational behavior, knowledge sharing culture, and knowledge solution habit. Integrated Thai communities' KMS with TQM model is needed to improve knowledge sharing, creating, and solving processes in society's value.

V.   Conclusion

This study relation between KM, TQM model and quality definition are analyzed. The results confirm the importance and possibility of quality knowledge improvement in Thai communities by applying TQM to KMS. These results also confirm the relevance behind the management of both the technical and human aspects in knowledge quality processes, and potential of TQM and KM to generate competitive advantages. Thus, communities' knowledge index and standards will be designed and TQM model for Thai communities will be developed.

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