Scenarios of   Rajamangala University of Technology Isan   as

A Professional and Technology University

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Abstract
This research was conducted using the Ethnographic Delphi Futures Research Technique and aimed to examine scenarios of Professional and Technology University: Rajamangala University of Technology Isan. The samples were 71 specialists and instructors from five campuses, Nakhon Ratchasima Center, Khon Kaen Campus, Surin Campus, Kalasin campus, Sakon Nakhon Campus. Interviews and content analysis were divided into three rounds. Round one was interview, rounds two and three used a five-point rating scale questionnaire. Eleven entrepreneurs and five experts used in-depth, naturalistic, structural interviews as well as panel discussion.
 The results showed that organization of learning and instruction should be more hands-on training course and English for communication Information technology ethics and personality development. Research was found the sources of funding outside agencies to conduct research. Networking research, especially the Mekong region. Academic service, adding manpower for supporting the instructors in Rajamangala University of Technology Isan. Maintaining art and culture should contribute and provide local information technology in the community. Therefore, those involved can appropriately use the results of this study in Rajamangala University of Technology Isan step towards a Professional and Technology University.
Keyword: scenarios, Rajamangala University of Technology Isan, professional and technology university

1.   Introduction

Thai Education system consists of 12 years free basic education : 6 years of "Pratom" (primary education, P1 to P6) and 6 years of "Mattayom" (secondary education, M1 to M6).   Enrolment in the basic education system begins at the age of 6. The current Thai Education system stems from the reforms set by the 1999 National Education Act which implemented new organizational structures, promoted the decentralization of administration and called for innovative learner-centred teaching practices and the 2002 Bureaucratic Reform Act.   The current structure of the Ministry of Education comprises five Commissions as follows :

1.   The Office of the Permanent Secretary is responsible for compiling information used to
inform the formulation of policy and law. It coordinates the administrative and management systems and services of the Ministry, liaises between the Ministry and other agencies and government offices, and acts as its public face, providing information on projects to institutions and education personnel.   It is also tasked with accelerating professional development and ICT development, International, private and non-formal education is promoted by this office.

2.   The Office of the Education Council (OEC) develops the National Scheme of Education and
policies, plans and standards associated with the integration of religion, art, culture, local wisdom and sports into all levels of education.   It develops strategies to help mobilize resources ; conducts, coordinates and promotes research for the development of education; establishes networks at the institutional as well as policy and planning level ; and provides advice on relevant laws and ministerial regulations stipulated in the National Education Act.

3.   The Office of the Basic Education Commission (OBEC) is responsible for policies, plans and
standards for basic education. It promotes the development of administration systems to support educational delivery ; improve curricula ; promote educational innovation; mobilize resources; and establish and coordinate information networks for teaching and learning. It also supervises the monitoring and evaluation of basic education provision. Currently, there are 32,262 public schools and 185 educational service areas (ESAs) nationwide under its supervision.

4.   The Commission on Higher Education (CHE) is responsible for policies, plans and quality
standards relevant to both public and private higher education, as well as for monitoring and evaluating educational provision at this level. Higher education is predominantly provided at universities and colleges. The two distinct levels of educational attainment are the diploma level and graduate degrees. Over 2.2 million students are currently enrolled in the higher education sector and participation rates of university age students

has increased significantly over the last few years from an average of 26% to the current average of 40%.   In recent years, there has been a significant increase in higher education opportunities with 78 public universities and 89 private higher education institutions. (Bureau of International Cooperation Strategy, 2007)

For this reason the rapid changes of the recent world, the expansion of free trade system and integration of economic to create power of bargaining in Region Level, leading to new economy which was necessary to apply knowledge as a major factor in creating the economic growth and permanent development. Only knowledge-based-society and continuous training could develop people's potentiality to keep pace with those changes. Asia-Pacific-Cooperation which Thailand was one member, specified framework of cooperation linking with study of human resource development and economic cooperation clearly focusing on the Education Reform in instructional effectiveness in school and high quality vocational training in order to create income for people to keep pace with globalization and new socio-economic, the increasing competitiveness affecting people's living status.

To serve the world changing trend and policy of international collaboration and intention of the Constitution of Thailand 1997 and the additional issue.   The Ministry of Education specified moving strategy of the new university to prepare man power in basic and medium level in various fields of technique relevant to the enterprise and labor market focusing on University of Technology for producing manpower as the country need in subject, field, skill, and ability of students with collaboration of organization which needed to use manpower from the section of producing, private, public, and community to create clear collaboration process as well as promotion the University of Technology.   The important measure of strategy of adjusting the administration and management system as developing collaboration system so that the students could have theoretical knowledge and practice.

Rajamangala University of Technology Isan was established by legislation Rajamangala in 2005 which is new university group and was a local educational institute developing from technology and vocational college, Rajamangala of Technology Institute, and   Rajamangala University of Technology Isan providing service for people in the upper part of Northeastern Region especially Khon Kaen Province, Kalasin Province, Surin Province, Sakonnakhon Province and Nakorn Ratchasima Province with an implementation under the changing situation of the globalization world and Thai society in social, economic, politic, environment, and technological aspects. Rajamangala University of Technology Isan had to relate to the world of work and should be increasing of students' ability, creativity, and analytical thinking, based on responsibility of educational management system had to take care of and serve the economic and social need. The important mission of Rajamangala University of Technology Isan were teaching, providing knowledge, and research which were major condition for conducting those missions to be effective for people and society.

According to the trend pushing from outside, it affected Rajamangala University of Technology Isan on implementation of mission based on strategic plan of Rajamangala University of Technology Isan 2005-2009 and practice plan of Rajamangala University of Technology Isan administration 2006-2010. Rajamangala University of Technology Isan held a seminar for reviewing and revising the strategic plan and organized "RMUTI AGENDA" by specify goal of Rajamangala University of Technology Isan as a Professional and Technological University.

2. Research Objectives

The objective of this research was to develop a probable scenario of Rajamangala University of Technology's transformation into Professional and Technology University.

3. Data Collection

The population and sample : for quantitative data collection, the population from whom the researcher was selected using the purposive sampling technique with 71 administrators from Rajamangala University of Technology Isan   (1 president, 3 vice president, 4 dean and 13 executive administrators, 50 instructors.

4. Research Methodology

The instruments used for this research are indepth-interviews, questionnaire and separately to 3 rounds ; the first round involved in-depth, naturalistic, structural interviews as well as panel discussion.   Then collected data led to develop as the 5 level rating-scale questionnaire sending to experts answering in the second round, after that quantitative data analyzed to determine the Median, Mode and Inter-quartiles Range, then, results sent to radical scenarios and consensus in the third round for experts reasonable support and consensus.

Data analysis : The collected date were analyzed by the use of a computer program.   The statistics used were percentage, median of 3.5 or higher, an inter-quartiles range of 1.50 lower and the difference between mode and median of no more than 1.0.   The data collected by using the interview from were analyzed and grouped according to contents.

5.Results

Rajamangala University of Technology Isan has proudly developed manpower with the higher vocational diploma and bachelor's degree in different fields of study for the society and the country. The qualities of the manpower in several study fields are recognized among manufacturers. The students' national and international academic awards have guaranteed its academic excellence. As a university with the campuses located in different places, so has provided diverse programs of study according to local's and students' needs. Many fields of study have been recognized in their high qualities and standards by education institutions and manufacturers. Every campus has been certified with ISO 9001 : 2000, internationally recognized management system by Institute of ISO Standard Accreditation. This assures that the students who study in this university will be provided with high quality of education. While studying in university, students are not only developed in term of academic ability, but also given the chance of social study in order to prepare themselves for working together with others in the society in the future.

Rajamangala University of Technology Isan, holds the principles to do follow the missions, objectives, and goals to be the leader of educational management in vocation and technology for the region and to develop human resources for the international working standard based on sciences and technology for the increase of the capability for economic and social development competition and it aimed for the development academic and research strength by carrying out academic and research cooperation with foreign organizations from Lao People's Democratic Republic, Socialist Republic of Vietnam and Republic of China (Taiwan). This is to fulfill the policy of the government in establishing and extending the association with both domestic and international organizations for becoming ASEAN community in 2015 by holding the principles to cooperate for the integrative benefit and to share expertise together. This would lead to the good cooperation in education management because it is administrated with the international standard. Moreover, it would help to produce the pragmatic graduates with quality for agro-industrial technology and services industry who would bring knowledge to the society as the resolution 'Rajamangala University of Technology Isan Develops Manpower with Technological Expertise'. For administration, it provides service based on the integrative good governance to seek for the effectiveness and success for proceeding the campus' activities to be progressive and accepted in the society.   This accomplishes the missions, goals, policies, and planning of the campus. Hence, we will be working together for sustainable development of Rajamangala University of Technology Isan and will be the professional educational institute for life-long learning in industrial technology and social sciences. To produces the graduates who have quality, morality, social maturity, and the ability to work professionally and conducts research and academic services which are capable for working and competition.   The strategies were to become the hub an education and knowledge of science and technology with strengthened,   produce the quality people has human capital skills to work for the country and serve as the center of life – long learning in applied science and technology to improve the country's competitiveness.

6. Discussion

Rajamangala University of Technology Isan has administrated under the law in B.E. 2548, higher education strategies, regional developing strategies, and used the principle of bureaucratic system to be managed and administrated, as well as adapted for juristic person.   Each campus tries to seek the university identity for strength, and develop curriculum to be consider with labor's marketing and community's needs for student, mainly focuses on providing education through the international standard administration to produce the skillful graduates in agricultural industrial technology and social science technology to develop community and society.

There are the geographical and ethnological indicators based and developed for consistence to the higher education for community development.   These reasons would lead Rajamangala University of Technology Isan, in the Northeastern Thailand trying to rush develop many curriculums, reflecting to need of localities. The purpose of universities, as centers of advanced learning, is to provide students with wide-ranging knowledge and to conduct in-depth teaching, in-depth training in specialized academic disciplines and to develop   and research in specialized academic disciplines, results showed that the experts were consensus with the highest in the expectation of educational result processing, the middle in the factor and condition for educational management, and the lowest in the expectation of educational management.   The experts were agreed consensus in the results and optimistic scenarios.

7.Conclusions and Recommendations

This is to fulfill the policy of the government in establishing and extending the association with both domestic and international organizations for becoming ASEAN community in 2015 by holding the principles to cooperate for the integrative benefit and to share expertise together. This would lead to the good cooperation in education management because it is administrated with the international standard. Moreover, it would help to produce the pragmatic graduates with quality for agro-industrial technology and services industry who would bring

knowledge to the society as the resolution 'RMUTI   Develops Manpower with Technological Expertise'. For administration, provides service based on the integrative good governance to seek for the effectiveness and success for proceeding the campus' activities to be progressive and accepted in the society.   This accomplishes the missions, goals, policies, and planning of the campus. Hence, we will be working together for sustainable development.These trends affected very part of society as well as Rajamangala University of Technology Isan as well.   According to situation of globalization world, many kids of changes were rapid and unstable.   The information and technology progress and computer science caused the recent world adapting to the world age of learning society.   It was necessary to encourage potentiality and capacity in competing and developing human power by management of the Education Reform in order to gain human resource with quality, ability for self developing oneself, society, locality, and country in many aspects to progress to 21 th century firmly and highly dignified.

The current evaluation and future trend of higher education management, Rajamangala University of Technology Isan as local higher education with a major role in producing man power in moderate and high level. Besides, according to responsibility of the specification of University Act by teaching in Diploma, Bachelor's Degree for more than 40 years.   The major field offered was Science and Technology in engineering, agriculture, fishery, administration.   Rajamangala University of Technology Isan developed Master of zoology and computer in 2008. For the instructional management in graduate study of Rajamangala University of Technology Isan, it focused on potentiality development in thinking and ability in academic searching by oneself efficiently as well as ability in studying, searching, conducing research, in order to find solution for different questions by using correct technique based on academic rational, ability in proposed information for others with different levels of competency to understand.

What is needed is a Rajamangala University of Technology Isan strategy which is:

- Invest in raising the quality of the entire educational system, to address the development of teachers, curricula, instructional media and information technology, improve the quality and knowledge of students in accordance with educational plans.
- Adjust teacher training and development to ensure quality and high moral standards among teachers.
- Rigorously piloted and evaluated prior to any national rollout
- Comprehensively planned in the implementation phase, with a limited set off tasks clearly defined for officials at national, provincial, district, circuit, and classroom levels.
- Promote the intensive use of information technology to enhance learning efficiency.
- Develop the quality and standard of Rajamanga University of Technology Isan to guarantee a high level of academic and professional services, to achieve excellence in research and innovation, produce and develop students that corresponds to structural changes within the manufacturing and service sector.
- Coordinate all aspects of educational management through the different stages of the planning cycle.
- Lifelong Learning , strategies include : developing a range of life skills through distance learning, establishing workplace and community learning centres and promoting the past sharing of resources with the formal school sector.

Through a strong emphasis on participation, partnerships and cooperation, education in Rajamangala University of Technology Isan is gradually becoming much more of a shared responsibility.   Today, parents, guardians, education administrators, teachers and community leaders, as well as other relevant government agencies are joining forces.   Together we are developing strategies which can better prepare our young people, create safer and more stimulating learning environments ; and provide opportunities for learning which are both relevant to and benefit all members of society.

8. References

Bureau of International Cooperation Strategy 2007.   The Commission on Higher Education. Internationalization of Thai Higher Education,   (Thai version).   Bangkok : The Commission on Higher Education.

Education, Ministry. 2005.   The announcement of the Ministry of Education titled standard criterion of curriculum in graduate study level 2004.   Published on 21 th   February 2005.

Jossey-Bass.Chermack, T, S. Lynham, and W. Ruona. 2001. A Review of Scenario Planning Literature. Futures Research Quarterly 17(2): 7-32.

Kaivo-oja, J. 2001. Scenario Learning and Potential Sustainable Development Processes in Spatial Contexts: Towards Risk Society or Ecological Modernization Scenarios? Futures Research Quarterly 17(2): 33-56.

Martelli, A. 2001. Scenario Building and Scenario Planning: State of the Art and Prospects of Evolution.Futures Research Quarterly 17(2): 67-74.

McIntyre, C. 1999. Enrollment Simulation and Planning: Strategies and Solutions No. 3. Washington, DC: American Association of Community Colleges.

McIntyre, C. 1998. Enrollment Simulation and Planning: A Report for Lansing Community College. Sacramento, CA: Computer-Aided Planning.

O'Banion, T 1997. A Learning College for the 21st Century. Phoenix, AZ: Oryx Press.Poonpattarapirom, Chumpon (1983).   Ethnographic Delphi Futures Research Technique,   Chulalongkorn press.

RAND Corporation. 1994. The Class of 2014: Preserving Access to California Higher Education. Santa Monica, CA: RAND.

Rieley, J. 1997. Understanding Scenario Planning in Higher Education. Unpublished paper. Milwaukee, WI: Milwaukee Area Technical College, Center for Continuous Quality Improvement.

Rose, R., and C. Kirk. 2001. The Strategy of Planning. Planning for Higher Education   29(4): 50-55. Sinlarat, Paitool. 2000. Staff development.   Bangkok : the Ministry of University Affair.

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