DEVELOPMENT OF A PROGRAM THEORY ON THE SUCCESS IN RESEARCH OF FACULTIES: A MULTIPLE CASE STUDY OF TRF-CHE OUTSTANDING NEW RESEARCHERS IN SOCIAL SCIENCE AND HUMANITIES

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Abstract: The objective of this research is to develop the program theory of successful researchers based on Chen's change model, which includes 3 components to the success: interventions, determinants and outcomes. The research is done by studying 3 selected cases who received awards for The Thailand Research Fund and Office of the Higher Education Commission. The research process includes the following steps: 1) set up preliminary change model using concepts from related theory and research 2) develop interview questions and gather verifications to explain interventions and determinants in the change model and supporting success factors 3) collect data according to the nature of variables. 4) analyze data of each case individually, and 5) synthesize multiple cases to modify change model for success and find conclusion for the program theory of successful researchers. The research results indicate that the program theory of successful researchers, which is developed based on Chen's change model, can be explained with the research outcomes of awarded researchers. The main 3 potentials of their success are self-development, language skills and research skills. The supporting factors for the success are good companions who support knowledge and inspiration, and the organization that allows flexibility and freedom of thoughts and provides full supports for research.

Keywords: Development Program Theory, Multiple Case Study.

Introduction
From the past to present days, the philosophy of higher education places importance to research in order to create new knowledge in different fields of sciences. Such researches have been accepted from insiders and outsiders of the education circle for

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a long time. The main purposes of an international university are: 1) to pioneer, seek for, maintain and pass on knowledge in order to create and sustain progresses and academic excellence; 2) to use knowledge in such a way that benefits the society by regarding that a university is a high-level technology resource that facilitates the prosperity of humankind; 3) nourish and promote arts and culture. Therefore, research is the main obligation that is highly crucial to the university's reputation and recognition. For example, University of Paris, France, Oxford University, England, and Harvard University, USA are focusing on research since its first establishment until the present day, resulting in that these universities maintain in the 1 to 10 rankings in terms of the number of researches published in international academic journals and being recorded in the ISI Wed of Science international database which is a citation database providing bibliography, abstracts, cited references, and citing articles covering sciences, social sciences and arts and humanities. And those who create such quality researches for those universities are "faculties". (Vijitr Srisa-an, 1975: 6-13)

Faculties in higher education institutions play important roles in creating reputation, receiving commendation and recognition to the institutions. Those commended things refer mainly to research and pioneer in new sciences and knowledge. Thus, responsibility and achievements reflected knowledgeability or the state of being a leader in the academic circle of the teaching profession in higher education institutions are researches accepted and published in international academic journals. Every teaching staff in an institution must always do research, accumulate academic matters, and disseminate new academic matters in their fields to the academic world. (Uthai Boonprasert, 2004: 10)

In addition to the fact that doing research benefits a researcher and the affiliated agency directly, it also benefits the country and the world society, as well as to the academic circle in related sciences and fields. (Suchart Prasitrattasinth (2003: 662); Thienchai Keeranant (1996: 6 – 11) and Wannee Gaemged (2008: 20 – 21)) Moreover, if such researches are published in international journals, they will be counted as researches of the university by counting as quality pieces of the university according to the quality assessment criteria of the Office for National Education Standards and Quality Assessment (ONESQA). Since ONESQA has identified indicators for research quality and creative work of a high education institution as follows: a research must be 1) a research or creative work that is published and disseminated; 2) a research or creative work that is capitalized; 3) an academic work that is certified. These quality indicators are key performance indicators (KPI) that imply research quality of a university.

Problems and situations found are that the number of published researches in international academic journals and being recorded in international databases such as ISI Database and SCORPUS Database for Thai higher education institutions is few comparing to the number of researches of foreign higher education institutions. This phenomenon affects those concerned including the government who determines a policy and the practitioner level namely higher education institutions. In particular, in higher education institutions those who are directly affected are "faculties" who produce valuable and quality researches for the country. Therefore, in this research, it is believed that "faculties" who are successful in doing research will have different

characteristics from those faculties in general higher education institutions. In terms of researcher potentiality, this includes self-development, language skill development and research skill development. In terms of organization, this includes management and support which is the key factor in creating quality research. Particularly, the researcher potentiality may not occur or may not be clearly expressed during working in the faculty position, but may be important situations happened in the past under various circumstances that helped to push faculties to become researchers who can create their own quality researches.

Therefore, this research has designed a plan using the multiple case study research methodology in order to search for complicated knowledge and facts from key stakeholders. The population target group in this study is a group of researching faculties who were awarded the TRF – CHE Outstanding New Researcher Award in the social science and humanities field for the year 2005 – 2008. Retrospective study of various situations that happened in the lives of these researching faculties was conducted. There were case studies that could be jointly used to explain or establish linkages sufficiently as evidence to lead to conclude that such past situations had influence on the research success of faculties.

The conceptual framework for developing the program theory used the change model which was one of the components of the program theory of Chen by using the integrative approach (Chen, 1990: 65 – 71).

Research Questions
Main research question: How does your research accomplishment happen? With minor questions as follows:
1. What are factors affecting your research accomplishment?
2. What are causal factors, causal mechanisms, conditions and events or situations that encourage or push you to accomplish your research? And, Are events or situations in each case study similar or different?

Research Objectives
To establish a theory of research accomplishment program for faculties according the Chen's concept.

Literature Review
The change model of the program theory according to the Chen's concept comprises of interventions, determinants and outcomes (Chen, 2005: 31)

The procedure for establishing the theory from case studies is integrated between the construction of the program theory according to the Chen's concept (1990: 65 – 71) by the integrative approach and the construction of the theory from the case study of Eisenhardt (1989). There are 6 stages in this research as follows: 1) to construct a preliminary model according to conceptual frameworks taken from related theories and researches; 2) to build a set of questions for interview and search for supplementary evidence; 3) to collect data; 4) analyze individual case studies; and 5) to synthesize multiple cases in order to construct the accomplishment model that can explain accomplishment according to the program theory of Chen.

The dharmic principle concept: the accomplishment dharmic principle (Four Rddhippada) consisting of 4 means namely aspiration (eagerness to learn), diligence (effort to accomplish), thoughtfulness (active thought) and consideration (investigation and reasoning). These components are employed to analyze the components of faculty's potentiality that affects research accomplishment including self-development, language and research skill development (Brahma Kuna Porn (Prayuth Payutto), 2009: 842 – 850)

Research methodology: Design the multiple case study research methodology with the target population including 3 cases of faculties in social sciences and humanities who were qualified and awarded the TRF – CHE Outstanding New Researcher Award. The study traced back retrospective events with each case study in order to search for facts that could explain or provide linkages such that sufficient evidence was apparent to conclude that such facts affected the research accomplishment of the faculties. The study used the research theory conceptual framework in exploring related events and situations and looked for the relationship of components within the context of such events (Stake, 2006: 46 – 77)

Case Selection: 3 cases that were qualified must have the properties consistent to the issues under question and passed the case selection criteria. The 3 cases included: Case Study 1: Associate Professor Dr. Kriengkrai Techakanont, a permanent lecturer at the Faculty of Economics, Thammasat University; Case Study 2: Associate Professor Dr. Thanik Lertchanrit, a permanent lecturer at the Faculty of Archaeology, Silpakorn University; and Case Study 3: Associate Professor Dr. Sorabusya Rungrojsuwan, School of Liberal Arts, Mae Fah Luang University.
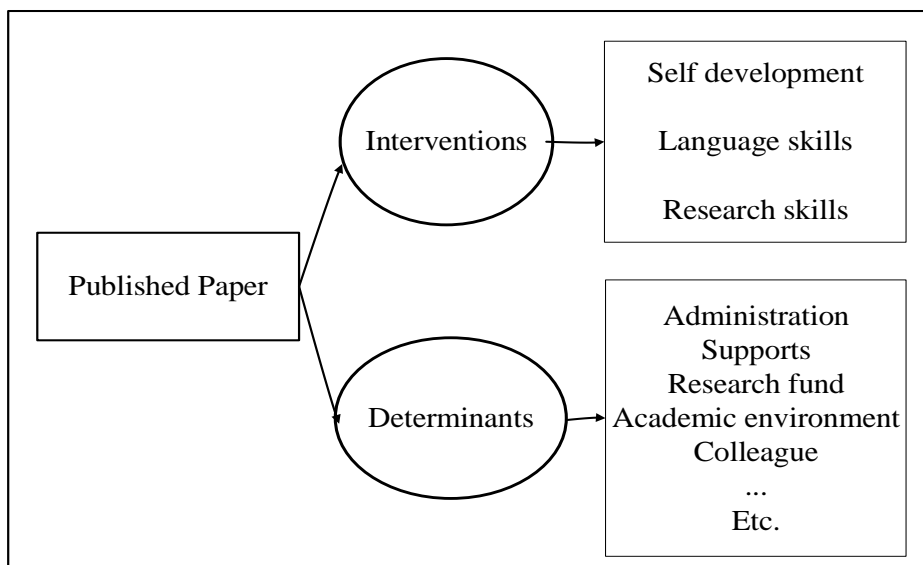
Conceptual Framework

Figure 1: Conceptual Framework of The Study

Research Procedure

Stage	Derived Data

1. Set up preliminary change model using concept from related theory and research	Interventions consist of 2 components:
	Component 1: faculty's potentiality including self-development, language skill and research skill.
	Component 2: Organization including management and support.
	    Determinants include success conditions such as persons, places or contract obligations, etc.
	    Outcomes from doing research are quality researches that are published in international journals.

2. Develop interview questions and gather verifications to explain interventions and determinants in the change model and supporting success factors.	Research tools: 1. Design document lists, copies of work records, photos and other media materials obtained from case studies and investigation. 2. Construct measures of variables identified in the program theory. 3. Use the developed tools in the interview with Case Study 1; bring unclear questions back to adjust accordingly and add questions that may be useful for the research, and then propose to the supervisor before using them in the additional interview with the Case Study in the next round. 4. Make some adjustments to the used tools and print the complete version of the tools.
3. Collect data according to the nature of variables.	1. Collect data from academic works published on the Internet and recorded in research databases, with more emphasis on researches that are awarded the TRF – CHE Outstanding New Researcher Award. The objective is to use such data in linking the interview in various aspects with the details as follows: 2. Collect data from the interview, meet case study researching faculties on the date and at the place as set by appointment using the constructed tools as the interview framework.
4. Analyze data of each case individually.	Analyze data using the content analysis method since data obtained is qualitative data. The analysis builds conclusions from the data obtained from interviews, observations, records, and related documents by analyzing key words in which a set of words are put together based on some relationships of each word used in the classification, and then

Stage	Derived Data
	analyze the components with the following procedures: 1. Personal Document: by thoroughly reading all collected documents related to each case study and copy data from documents that contain the content that appear to be relevant to the research question or related variables. 2. Interview data: by translating statements obtained from the interview in a verbatim manner, reading the interview dialogs together with listening to the interviews repeatedly in order to ensure correctness. Then, reading the interview dialogs occurred from conversations between the researcher and data providers repeatedly in order to make sense of the interview as well as examining the field work records in order to review events and fill in the missing data. 3. Describe the case studies in relation to interesting matters dividing by age range so that it is easy for readers to understand and be able to see the details of lives, perspectives, feelings, attitudes and the surrounding context of the researching faculties as well as lifestyles in the context related to how best to accomplish research.
5. Synthesize multiple cases to modify change model for success and find conclusion for the program theory of successful researchers.	Cross-case analysis is a method to compare the conclusions from the 3 cases in order to find the pattern – matching by using the conclusions of the main word groups obtained from the individual case analysis in support of the consideration under the components of the change model according to the Chen's program theory concept.

Research Results and Discussions

Research results for constructing a research accomplishment program theory in the change model according to the Chen's program theory concept, from case study researching faculties who are awarded the Outstanding New Researcher, can be presented in 3 parts as follows:

    Part 1: A research accomplishment program theory according to the Chen's change model

    Part 2: Interventions towards the research accomplishment

    Part 3: Determinants of faculty's accomplishment

Part 1: A Research Accomplishment Program Theory according to The Chen's Change Model

The research accomplishment program theory for faculties that is developed according to the Chen's change model can be explained the award-wining quality

research outcome resulting from the faculty's potentiality with respect to 3 aspects namely self-development, language skill and research skill; and 2 determinants namely, good friends who share knowledge and is an encouraging exemplar, and an organization with flexible work management, freedom for faculties , and a clear research support policy.
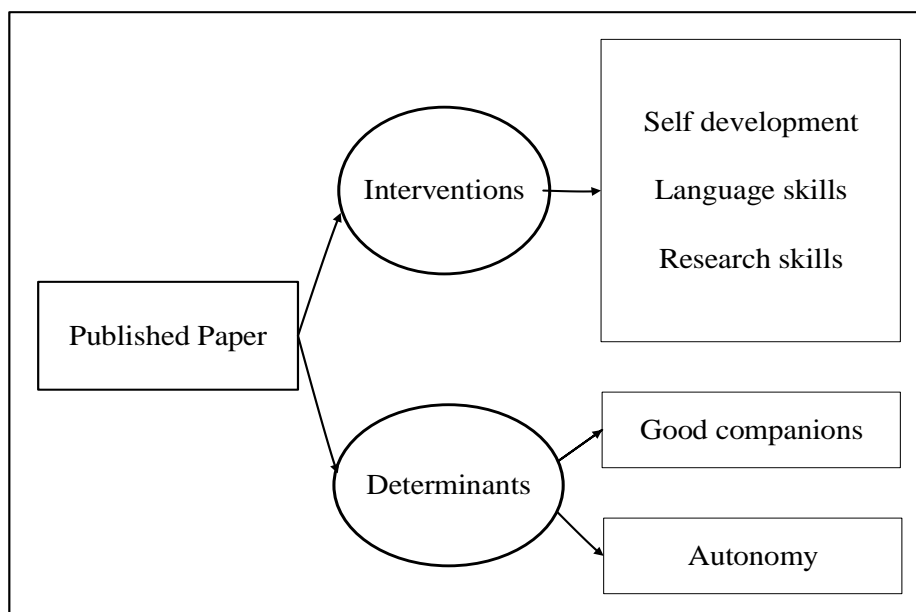

Figure 2: A Program Theory on The *S*uccess in Research of Faculties

Part 2: Interventions towards The Research Accomplishment
With respect to faculty's potentiality that contributes to the faculty's research accomplishment, it is found that events and situations that lead to changes in self-development, language skill and research skill of the 3 case study faculties differ by specificity of each case and can be summarized that for all of the 3 case studies, there is eagerness to learn (aspiration) which is considered from the search for good knowledge sources and exemplars, good people, good and valuable models. Such self-development is called to having good friends. All of the 3 case studies have good efforts to accomplish (diligence) which is considered from determination to develop oneself, be enthusiastic at all times, understand changes in life and environments. All of the 3 case studies are thoughtful and follow up continuously (active thought) which is considered from attitude and value adjustments to ensure good lifestyle, support learning, and foster wisdom. Lastly, all of the 3 case studies are reasonable (consideration) which is considered from the ability to solve problems and self-dependence, apperception, and the ability to systematically solve problems with judgments according to own consideration.

Part 3: Determinants of Faculty's Accomplishment

Determinants of faculty's accomplishment that are resulted from events and situations that have been intervened for change in terms of self-development, language skill development and research skill development, include:

3.1 Good companions: it is found that all of the 3 case study faculties have persons who share knowledge and give moral support such that this determinant becomes the key characteristic and influences the determination of the goal in life.

Case Study 1: it is found that there was a situation that the case study was impressed with the way his instructor was teaching while studying in the second year of his bachelor degree. It was so inspired that made him set his career goal to become a faculty. Also, a situation when he had to find a supervisor for his Master Degree dissertation, he was impressed with the supervisor's kindness for accepting him even though the supervisor insisted that he did not have the expertise in the case study's topic, as well as for writing a reference letter in support of his application for a scholarship to study a PhD in Japan. As for a situation while studying a PhD, the case study was impressed with his supervisor who provided recommendations on research agenda that was useful and appropriate to Thailand that became a track in choosing to develop post-doc research. Besides, there was a situation where a senior faculty in the case study's organization provided data and encouraged him to do research.

Case Study 2: it is found that there was a situation that the case study was impressed with his supervisor in his bachelor degree, who was both his faculty and advisor in academic skills as well as the conduct of life, always helped him with useful information for life advancement such as job application, application for OCSC scholarships, and how to choose a university for a Master – PhD Degree abroad.

Case Study 3: it is found that a situation that the case study was impressed with his supervisor and teaching staff in his PhD in Linguistics since he had an opportunity to study and get involved in his supervisor's research and absorbed the working style as an instructor and researcher of the subject's teaching staff. Thus, they became a role model in working as a university faculty and the case study did not feel that doing research was a burden. This is consistent with the idea of Ezarik (2002) that individuals gave more importance to a particular individual because of the admiration of his accomplishment, belief, ability and actions. Role models could be father, mother, teacher, community leader, famous figures, etc. They were pleased with and one wanted to be like ones. These figures helped to create learning of how to succeed, for example in education, career, and personality to become in the future. The research of Tassanee Terdthanakarn (2003) studied influences of a role model to the imitation behavior and the determination to buy certain goods that were highly and less related to young persons, and it was found that the sample had the imitation behavior directly from the role played by their role models to a large extent.

3.2 Organization: it is found that the universities that the 3 case studies were affiliated with had flexible organizational management and provided freedom to faculties in doing their research. These universities had a clear research supporting policy and appropriate teaching balances while building a research culture. For example, senior researchers welcomed new faculties into a research team, familiarity with creativity behavior of the senior faculties, meetings and exchanges of research

experiences, giving advices, facilitating and providing equipment, data sources and places, as well as the research environment, etc. There activities encouraged new faculties or new researchers to learn and accept research burden that was held to be the main task of a university faculty, which was consistent with the National Education Act B.E. 2542 that stipulated that research was used as a part of the learning process. Higher education institutions should use research to develop high level academics and search for knowledge and social development. The government had announced the education policy that encouraged the creation of new researchers, development of new faculties who had less research experiences by having senior researchers as mentors Office of the Prime Minister (1999).

Recommendations

The research accomplishment program theory for faculties in this study describes the research quality that is a result of changes from two main components namely, Component 1: factors embedded in faculties who create research and Component 2: factors supporting faculties to achieve quality researches. In these two components, there are two parts. The first part concerns with policies and management of the institution that facilitate faculties to do research. The second part involves the friendship relationship of personnel within the organization. Under this program theory, internal characteristics of each factor are presented and they are required to conduct in consistent with the target which can be deducted into recommendations for faculties and institutions as follows:

1. Factors embedded in faculties who create research will generate acceptable accomplishments. Faculties must develop themselves in 3 aspects namely, self-development to ensure basic characteristics consistent with the accomplishment; development of language skills, especially English; and development of research skills.

2. Supporting factors: it is necessary for institutions to review their policies and management to ensure the freedom of faculties to do research, available research grants as well as promoting the culture of organizational coexistence.

Recommendations for future research

In developing the research accomplishment program theory for faculties, this study conducted the case study research by conducting retrospective study in order to search for factors affecting the faculties' research accomplishment which are key components of the program theory. From the derived theory, it is found that the component concerning factors embedded in faculties who create research is the main component in generating changes towards accomplishment. Therefore, the study of the human factor is interesting in terms of the search for knowledge and facts since individuals are complicated and different with respect to lifestyle, experiences, socio-economic status, and so on. From the research findings, there are recommendations for faculties to learn from the findings derived from case studies and adapt these findings to develop themselves to ensure the readiness of skills required to create quality research, and to arrange activities that focus on developing learners to be equipped with research characteristics and experiences. As for recommendations for the organization from the derived theory, the organization can adapt them with a system that supports the development of faculties' quality, for example, policies,

services, or activities that promote faculties' quality, as well as to adopt such recommendations in the new faculty recruitment stage so that faculties with potentials and desirable quality are recruited.

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