

# Experience of Prominent Academic Researchers in Thai Public Universities

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**Abstract.** *Academic researchers are important for Thailand. This research aimed at understanding how academic researchers become prominent academic researchers and what motivates academics to become prominent academic researchers. Transcendental phenomenology is employed to answer the research questions. 12 prominent academic researchers were interviewed and Atlas.ti 7.0 was used to analyze the information. The findings showed that there were 55 themes, 14 categories, and 5 clusters emerging from experiences of prominent academic researchers. The 14 categories were: (1) Goals, (2) Planning, (3) Action, (4) Relationships, (5) Supporting, (6) Thai academic leadership, (7) Ethics, (8) Pressure, (9) Ability to learn, (10) Determination, (11) The love of what they are doing, (12) Background of experience, (13) Communication skills, and (14) Overcoming Limitations. These categories were then classified into 5 clusters as follows: (1) Ability and skills, (2) Habits, (3) Motivation, (4) Network, and (5) Overcoming limitations. Limitations and discussion are addressed in this article.*

**Keywords :** prominent academic researchers, motivation, research performance, phenomenology, Thai public universities

## Introduction

It is accepted that research activities can enhance national competitiveness; however, Thailand has not been satisfactory in terms of global competitiveness. According to the World Economic Forum (2012), the country had a level of global competitiveness which is behind developed countries, such as Switzerland, Germany, United States, United Kingdom, Singapore, Hong Kong, and Japan. When considered in terms of research activities, Thailand did not have a great deal of knowledge which it developed itself and so it paid much attention to research and development activities from other countries. In ASEAN, according to the World Bank (2012), in 2006, Thailand spent approximately 0.2 % of its GDP on research, while Malaysia and Singapore spent approximately 0.6 % and 2.2 %, respectively. The Global Competitiveness Report 2012 -2013 (World Economic Forum, 2012) indicated that the capacity for innovation, quality of scientific institutions and utility of patents per million population of Thailand all lagged behind Malaysia and Singapore (See Table 1). The numbers represented the rankings of the three nations from 144 countries. In the case of capacity for innovation, Thailand was ranked at 79th while Malaysia and Singapore were at 17th and 20th respectively in the world ranking. In terms of quality of scientific institutions, Singapore was ranked at 12nd and Malaysia was at 28th whereas Thailand was at 60th. Regarding the issue of the Patent Cooperation Treaty (PCT) patents applications per one million, Thailand had a poor performance, since it was ranked at 72nd when compared with Singapore (13rd) and Malaysia (34th).

Table 1: Three indicators of innovation (Rankings out of all countries)

Indicators / Countries	Malaysia	Singapore	Thailand
Capacity of Innovation	17 <sup>th</sup>	20 <sup>th</sup>	79 <sup>th</sup>
Quality of scientific institution	28 <sup>th</sup>	12 <sup>th</sup>	60 <sup>th</sup>
PCT patents applications per one million people	34 <sup>th</sup>	13 <sup>th</sup>	72 <sup>nd</sup>

Source: Adapted from World Economic Forum (2012)

In terms of research publications, according to Table 2, when compared with Malaysia and Singapore, abilities to produce research in Thailand were behind these two nations, especially in the number of publications per citizen (per capita).

Table 2: Comparison of the number of publications of three Asian nations on SCOPUS and ISI databases among three nations

Topic	Malaysia	Singapore	Thailand
Number of publications on Scopus	74,968	134,549	74,225
Per capita (Scopus)	0.0026	0.0284	0.0011
Number of publications on ISI	32,735	82,953	42,937
Per capita (ISI)	0.0011	0.0175	0.0006

Sources: Scopus and ISI (online databases) assessed on 13<sup>th</sup> November 2011

The Office of the Higher Education Commission (2009) claimed that 90 percent of research in Thailand came from Thai public universities. Therefore, if Thai public universities do not produce enough research-based knowledge, the country will likely face a knowledge deficiency.

Thailand had few researchers who were highly praised for success in science, and who could be presented as good examples for the society (Mahidol University, 2011). Conducting research is a process which is related to the number and wisdom of its researchers. If Thailand has a poor performance of its researchers, the outcome of research will be poor. Consequently, Thailand cannot solve its own problems (Bunyarattawej, 2006). There were some studies (Damsuwarn, 1999; Leahey, 2006; Lee & Bozeman, 2005), which tried to ascertain the factors affecting a researcher's ability to conduct research. However, these studies took the postpositivist paradigm. They were quantitative studies based on statistical interpretation and did not present an in-depth understanding, as qualitative studies might be able to do. Moreover, these studies did not directly present the understanding of how academic researchers become prominent academic researchers. To develop this understanding, the authors designed this research to be a qualitative study.

## Review of Literature

Kahn and Scott (1997) conducted research based on 256 US doctoral students to present the productivity of scientists. Their findings showed that research productivity of PhD students depends on their career goals, research interests, and years in a PhD program. Interest in research was influenced by Holland's investigative personality, self-efficacy, and research training environment. Self-efficacy was directed by the research training environment, gender, and years in the PhD program. Kahn and Scott's (1997) findings were confirmed by another study (Kim, Pedersen, & Cloud, 2007), which indicated that research interest directly influenced the research productivity of researchers.

Damsuwarn(1999) employed a structural equation model to identify the factors affecting the research intention of faculty members in a Thai university to achieve research excellence. He applied behavioral intention to research intention and used this variable to predict how much researchers in a university intend to conduct research. Behavioral intention was used to predict people's tendency to perform specific behavior (Fishbein & Ajzen, 1975). Damsuwarn (1999) defined research intention as the degree to which an academic researcher intends to perform research missions to achieve academic excellence. In addition to research intention, research volition was a mediating factor between research intention and personal characteristics and between research intention and situational characteristics (Damsuwarn, 1999). The concept of research volition was adopted from Lord and Levy (1994). Originally, volition indicated that people had to have a strong will to control themselves and volition affects behavioral intention (Lord & Levy, 1994). However, Damsuwarn (1999) presented research volition as the combination of research expectation in utility and self-esteem. He indicated that personal characteristics contained three components: the need for achievement, work value, and

self-efficacy belief. He proposed that these constructs affected research volition. Damsuwarn (1999) further indicated that situational characteristics contained four components: rewards' structure, work norms, research climate, and research experiences. These factors were presented as being antecedents of research volition.

Lee and Bozeman (2005) proposed their research findings about productivity of scientists. They said that research productivity was a function of research collaboration, individual, institutional, and environmental factors. Research collaboration between a university and other organizations could improve the research ability of a university (Numprasertchai & Igel, 2003). Individual factors affected the performance of researchers (Lee & Bozeman, 2005). Institutional and environmental factors also affected the performance of researchers (Lee & Bozeman, 2005). Finally, a Thai study found that norms, reward structure, and research climate could affect the performance of academic researchers (Damsuwarn, 1999).

Leahey (2006) presented a model explaining the factors affecting performance of researchers, concluding that research productivity depended on the field of research, career age, gender, specialization (skills and abilities) marriage status, public institute, PhD prestige, employment history, and experience of funding. Specialization was also influenced by gender. Specialization provides a chance of getting papers accepted by peer-reviewed journals (Leahey, 2006). Vroom (1964) suggested that job performance depends on ability and skills. Abilities were significant factors of personal differences affecting job or task performance and work behavior (DuBrin, 2005). In Thailand, ability was the most important factor which led researchers to conduct research (Jankingthong, 2006).

Hirsch (2005) maintained that researchers from different fields produced different rates of publications and citations. In a comparison between linguistics and sociology in the US, Leahy (2006) showed that researchers in sociological disciplines were more productive than those in linguistic disciplines.

Leahey (2006) stated that there was a strong link between gender and specialization and, as predicted, women scored lower than men in terms of specialization and this specialization positively influenced their research productivity. Xie and Shauman (1998, p. 863) concluded that "women are less likely than men to have the personal characteristics, structural passions, and facilitating resources that are conducive to publication". Leahey (2006) claimed that career age had a linear relationship with research productivity in areas of sociology and linguistics in the US. Prestige of the graduate school which scientists or researchers attended had a relationship with research performance. In India, the quality of graduate schools where researchers had trained had a significant relationship with quality of research performance, because research students graduating from well-known schools had a good opportunity to learn from well-known scientists and researchers (Pattnaik & Chauhury, 2001). Receiving research funding had a direct effect on research productivity (Leahey, 2006). Similarly, Lee and Bozeman (2005) confirmed that receiving a number of research grants had a positive effect on scientists' productivity. Being married had a passive significant relationship with research productivity and researchers who had been employed in other research organizations produced a significant amount of research productivity (Leahey, 2006).

Lam (2011) investigated the relationship between the value orientations of scientists with regard to commercial engagement and individual motivations. Traditional beliefs about the isolation of science from commercial activities were probably to be extrinsically motivated. Some scientists used commerce to gain resources "ribbons". Some were intrinsically motivated by the autonomy of "puzzle-solving". Lastly, some were motivated in conducting applied commercial research by financial rewards "goals".

To sum up, the aim of this research was to understand how academic researchers become prominent academic researchers and what motivates academics to become prominent academic researchers. There have been a number of issues which may influence the performance of prominent researchers, such as goals, interest in research, research intention, team work, an organizational network, self-efficacy, intrinsic and extrinsic rewards, ability and skills, gender, career age, PhD prestige, employment history, receiving research funding, a professional network, and an appropriate workload.

## Methodology

In this study, the author used transcendental phenomenology, as advanced by Moustakas (1994) and Creswell (2007); this position goes back to Husserl's philosophy, but concentrates more on bracketing out preconceptions; researchers can depend on intuition, imagination, and structures to receive experience and systematic methods (Creswell, 2007).

## The Sample Size and Sampling Strategy

For phenomenology, the sample size is preferably at least 10 people (Creswell, 2007). The target sample size in this research was 12 people. Co-researchers (i.e., participants) were selected on the basis of criteria, which is called 'criterion sampling' and which provides rich and enough different experiences (van Manen, 1990). It is important that all co-researchers have experience of the phenomenon being studied and those co-researchers meet the criteria (Creswell, 2007). Thus, the authors set the criteria as follows: Prominent academic researchers may be those who have produced at least one significant research publication which is widely cited by other researchers or who have had their research works, such as patents, copyrights, or publications where at least one has been awarded by a prestigious national or international research organization.

## Data Collection

First, the authors established the criteria of prominent academic researchers who had produced a high number of citations and publications of research articles and/or who had produced significant numbers of patents, licenses, and books.

Second, the authors found the information of prominent academic researchers on SCOPUS and on the websites of national research organizations, noting their names and institutions.

Third, the author then found their contact addresses (telephone numbers or email-addresses) from the university in which they worked. Information from the internet was searched from their universities' websites in order to understand their profiles and workplaces before conducting interviews.

Fourth, once the senior author had obtained the co-researchers' names and contact information, she then made contact by e-mail, requesting permission and making an appointment to meet and discuss the matter further.

Fifth, when the author met the co-researchers, the consent form was discussed and given to them. They read and then signed the form. The co-researchers were informed of their right to refuse to continue at any stage and their interviews were recorded by a tape recorder (with the co-researchers' permission). There were no significant problems or field issues during the interviews.

Finally, the files of the recorder were stored in a computer. Then, the author commenced examining the co-researchers' typescripts one-by-one. The author did not wait to finish all co-researchers' transcripts, but commenced the analysis after interviewing each individual co-researcher.

## Data Analysis

Moustakas (1994, pp. 121-122) developed an analysis from what is called the 'Modification of the Stevick- Colaizzi-Keen Method'. However, Creswell (2007, p. 227) simplified and modified the second approach of doing transcendental phenomenology, as follows:

I would have begun with a description from my own fears and experiences (epoche) with it as a means to position myself, recognizing that I could not completely remove myself and my interpretation from the situation. Then, after reading through all of the students' statements (students are co-researchers), I would have located significant statements or quotes about their meaning of fear. These significant statements would then be clustered into broader themes. My final step would have been to write a long paragraph providing a narrative description of what they experienced (textural description) and how they experienced it to (structural descriptions) and combine these two

descriptions into a longer description that describes the “essence” of their experiences. This would be the endpoint for the discussion.

Even though the steps of doing transcendental phenomenology, described by Creswell (2007), were influenced by Moustakas (1994), they are shorter than those of Moustakas (1994) and more appropriate for the use of computer software (Atlas.ti). Therefore, the author chose the steps of Creswell (2007) as the method of analyzing the transcendental phenomenology data.

## Results

The results of this study were based on the interviews of 12 prominent academic researchers, whose profiles are shown in Table 3.

Table 3: The information of prominent academic researchers

Number	Gender	Positions	Research fields
P1	Male	Professor	Engineering
P2	Male	Professor	Life science
P3	Male	Associate Professor	Environment science
P4	Female	Associate Professor	Material science
P5	Female	Professor	Life science
P6	Male	Associate Professor	Business
P7	Female	Associate Professor	Medical science
P8	Female	Associate Professor	Food science
P9	Male	Assistant Professor	Medical and life sciences
P10	Female	Associate Professor	Life science
P11	Male	Professor	Engineering
P12	Female	Associate Professor	Engineering

In this study, the author described the significant statements, themes, categories, and clusters as follows:

Significant statements refer to statements which prominent academic researchers have said about the phenomenon. Significant statements are shown under the double quotes expression. Significant statements provide meanings of experiences of prominent academic researchers (i.e., the moment of experience).

Themes refer to the containers of significant statements. After the author finished the list of significant statements, the author grouped similar significant statements into themes.

Categories refer to the containers of themes. Once the author had the list of themes, the author then gathered similar themes into categories. This process could be found in the structural description.

Clusters refer to the containers of categories. When the author had the list of categories, the author then assembles similar categories into clusters. This process could be found in the structural description.

However, there is not enough space in this article to show all steps of analysis. So the author presents the final version of the analysis which is the composite textual structural description (i.e., the synthesis version of the textual and structural descriptions). The textual description (what co-researchers have experienced) and the structural description (how co-researchers have experienced) are not presented in this article.

### The Composite Textual Structural Description

The composite textual structural description is a synthesis of the textual and structural descriptions

(Moustakas, 1994). The synthesis indicated five major clusters (factors) contributing to academic researchers becoming prominent academic researchers. These factors were 'Abilities and skills', 'Motivation', 'Habits', 'Network', and 'Overcoming limitations'. 'Abilities and skills' represented that prominent academic researchers had abilities and skills to complete their research tasks. This cluster contained 5 categories: 'Background of experience', 'Communication skills', 'Planning', 'Action', and 'Ability to learn'. 'Background of experience' contains 5 themes: 'Having high education background', 'Experience of attending international conferences', 'Experiences from international training', and 'Experiences from study abroad'. 'Communication skills' is a category which contains 2 themes: 'Having good communication skills' and 'English proficiency'. 'Planning' is a category consisting of 2 themes: 'Planning before doing anything' and 'Vision'. 'Action' is a category containing 5 themes: 'Continuous to do research in the same field', 'Privileges of power from holding a senior research position', 'Having academic intuition', 'Working as a team', and 'Doing research economically'. 'Ability to learn' is a category comprised of 4 themes: 'Improving themselves continuously', 'Freedom to learn', 'Learning from different fields', and 'Thinking outside the box'.

'Habits' signified that prominent academic researchers had qualities of behavior which supported them to work successfully with other people and organizations. 'Habits' represented manifest activities and behavior that were the uniqueness of prominent academic researchers and that were performed by them. 'Thai academic leadership', 'Ethics', and 'Determination' were three important habits which were found in prominent academic researchers. 'Thai academic leadership' is a category containing 4 themes: 'Fairness', 'Learning from mistakes', 'Modesty', and 'Self confidence'. 'Ethics' is a category consisting of 2 themes: 'Having ethics while doing research' and 'Loyalty toward funders'. 'Determination' is a category comprised of 3 themes: 'Attempting to do research', 'A sense of responsibility', and 'Diligence'.

'Motivation' demonstrated internal and external forces which drove prominent academic researchers to do research. 'Goals', 'Pressure', and 'The love of what they are doing' were categories driving prominent academic researchers to conduct research. 'Goals' is a category containing 7 themes: 'Able to be used in real life', 'Altruism', 'Curiosity', 'Financial rewards', 'Having someone to be a role model', 'Books, licenses or patents as a symbol of success', and 'Promotion'. 'Pressure' is a category consisting of only one theme: 'Pressure from research environment'. 'The love of what they are doing' is a category which also contains only one theme: 'Love to do research'.

'Network' represented relationships and support that prominent academic researchers had from and co-operation with other people and organizations. 'Relationships' is a category containing 5 themes: 'Relationship with foreign organizations', 'Relationship with foreign researchers', 'Relationship with other Thai researchers', 'Relationship with private organizations', and 'Relationship with public organizations'. 'Supporting' is a category comprised of 7 themes: 'Support from family', 'Support by international organizations', 'Support by own organization', 'Support by private organizations', 'Support by public organizations', 'Support by students' and 'Support by mentor or supervisor'.

Overcoming limitations represented problems or limitations which, if the researchers overcome these, they may become more successful. 'Overcoming limitations' is a cluster which contains only one category named the same as the name of the cluster. However, this category contains 7 themes (limitations or problems). These limitations or problems were from a lack of assistance, from expectations of own organization, from family obligations, financial regulations, from a lack of resources to do research, from research fields, from workload, and of research publications. All 5 clusters, 14 categories, and 55 themes are shown in Figure 1.

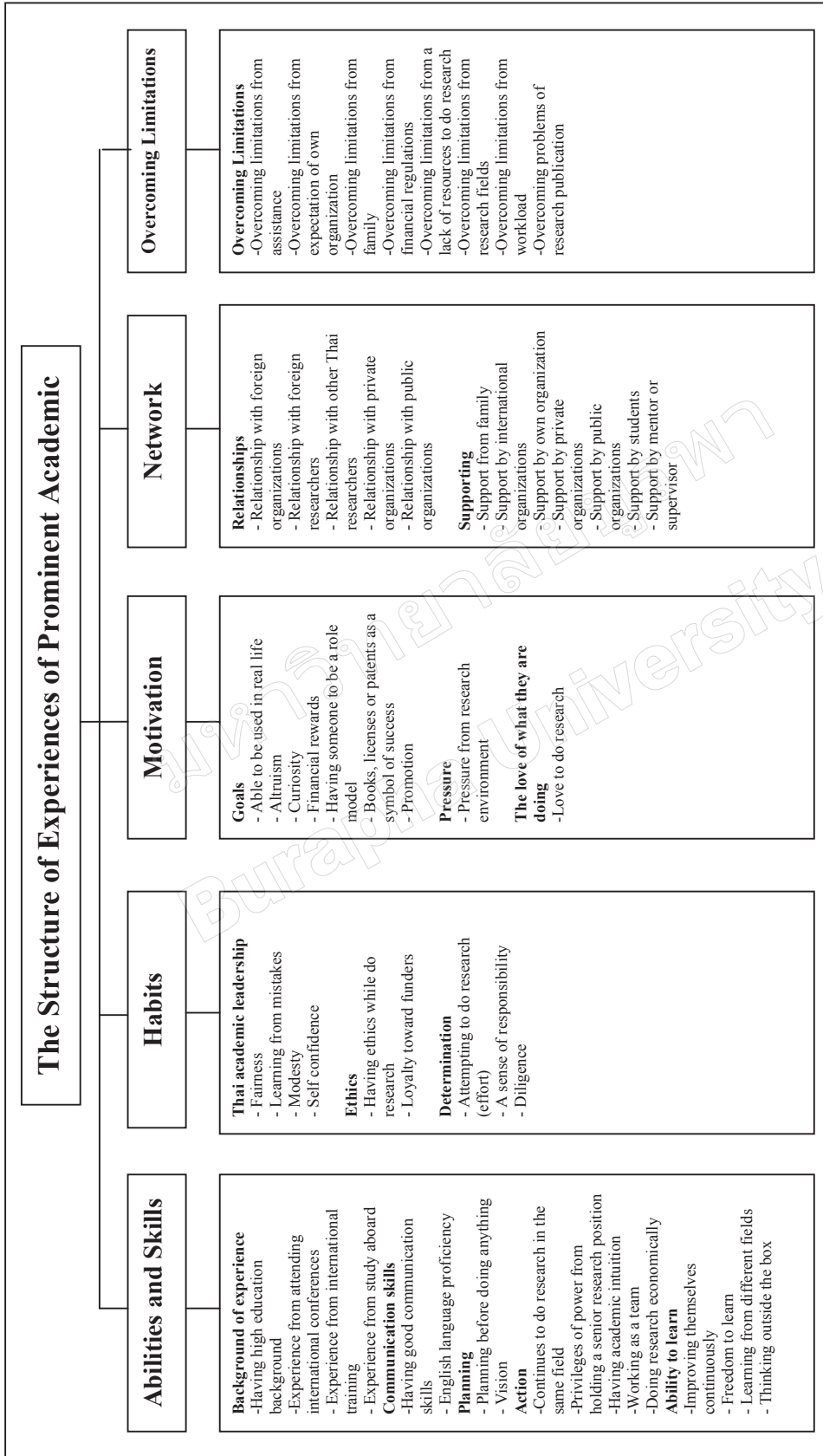


Figure 1: The structure of experiences of prominent academic researchers

The study went on to examine in some details, the Abilities and skills, Habits, Motivation Networks, and Overcoming limitations for prominent academic researchers. All of these factors were likely to be important to prominent academic researchers in Thailand and this was shown to be the case in this study. These factors are now discussed.

## Discussion

As indicated above, this research showed that there were a number of factors contributing to academic researchers to become prominent academic researchers. These were as follows:

### Skills and Abilities

Abilities and skills provided researchers with the chance to gain in-depth knowledge of a body of literature, such as central debates, theories, methods, and important contributions. Abilities and skills could provide a chance of getting papers accepted by peer-reviewed journals (Leahey, 2006). In Thai universities, ability was the most important factor which led researchers to conduct research (Jankingthong, 2006). Background of experiences was important, because prominent academic researchers had a high education background. For example, all prominent academic researchers had a PhD and one of them held a post-doctoral degree. One study claimed that researchers who performed the best were those who earned a PhD degree (Tien, 2008). Moreover, prominent academic researchers needed to have good communication skills and English language proficiency. In addition, they had abilities to implement research projects, the 'Action' category. They had vision to see future trends of research. Lastly, they had abilities to learn. In abilities to learn, prominent academic researchers had freedom to learn, abilities to think outside the box, and intuition. Thinking outside the box was similar to creativity which was responsible for imagination, and creativity was positively influenced by freedom to learn with silent monitoring (Forte, 2009; Gray, 2012). Thinking outside the box could be obtained from learning in different environments. Research in Singapore showed that people who open themselves to new things were positively related to high creative performance (Leung, Maddux, Galinsky, & Chiu, 2008). Academic researchers also had intuition which allowed them to know what was right or wrong. Intuition was the subjective experience which was connected with the use of knowledge and experience accumulated from learning over time (Lieberman, 2000).

### Motivation

This study divided motivation into 3 categories: Love of what they are doing, goals, and pressure from environment. 'The love of doing research' is similar to Interest in Research (Kahn & Scott, 1997) which indicated that some researchers were motivated by their research interests. 'The love of doing research' was also similar to a positive attitude toward conducting research. Attitudes were presented as states of mind or feelings; disposition explained how a person feels positively or negatively about a specific behavior (Fishbein & Ajzen, 1975). Another kind of motivation was 'goals'. As Locke and Latham (2004) stated, goals are responsible for the performance of people. Goals are important motivators which positively affect job satisfaction (Locke & Latham, 2004). Research environments of their institutions might influence research performance. Studies showed that one factor affecting productivity and performance of the organization or university was the organizational factor (Damsuwarn, 1999). In China, organizational culture was an important factor affecting the research output of a university (Linlin & Hui, 2008). Research culture clearly improved innovation, independence, peer collaboration, and long-term investment in productive research (Conn, Porter, McDaniel, Rantz, & Maas, 2005).

### Habits

Habits were qualities that prominent academic researchers kept engaging in. According to Covey (2004), "habit lies at the intersection of knowledge, attitude, and skill" (Covey, 2004, pp. 34-35).



Prominent academic researchers had good habits supporting them in leading and working with other people. Habits were grouped into Thai academic leadership, ethics, and determination. For the first category, 'Thai academic leadership', leadership was different among cultures and contexts (Mujtaba, Afza, & Habib, 2011). In this study, Thai academic leadership was comprised of 'Fairness', 'Learning from mistakes', 'Modesty', and 'Self-confidence'. These qualities were important for prominent academic researchers. Besides academic leadership, prominent academic researchers had high ethics. Ethics brought credibility to them. Ethics increased important values in collaborative research, such as trust, accountability, mutual respect, and fairness to research. Ethics could prevent the research findings from being fabricated, falsified, or misrepresented (Resnik, 2011). Researchers had to depend on their integrity to guarantee that research was conducted in an ethical manner (Daniel-McKeigue, 2007). Ethical standards in some academic areas could be taught through standards in academic journals in which researchers intend to read or publish their research (Mosavel, Ahmed, Daniels, & Simon, 2011). Such evidence represented the importance of ethical standards which was found in the research of prominent academic researchers. In terms of determination, prominent academic researchers had 'Attempted to do research', 'Diligence' and 'A sense of responsibility'. In the third category 'Determination', the determination of prominent academic researchers might be rooted in three fundamental needs: competence, relatedness, and autonomy (Deci & Ryan, 2000). Prominent academic researchers made considerable effort (i.e., attempts to do research), showed great diligence, and had a considerable sense of responsibility to do research. As Covey (2003, p. 33) suggested, "You can get what you want through your own effort and interdependence, where personal efforts are combined with the efforts of others to achieve the greatest success". Diligence was a habit of prominent academic researchers. They said that they had "diligence and commitment". Some of them worked "all 7 days in a week". They also had a sense of responsibility for both their research and teaching activities. A study in Thailand showed that a sense of responsibility was a factor influencing efficiency of conducting research (Boonpen, 2007).

### Network

Prominent academic researchers had a wide network of relationships. The network cluster contains two categories: relationships and support. The relationships category showed that prominent academic researchers had co-operation with people and organizations while the support category refers to agents who/which helped them become successful. A number of people and/or organizations which could support or co-operate with prominent academic researchers were foreign organizations, foreign researchers, other Thai researchers, government agency, other Thai researchers, research students, mentors or advisors and family members. Prominent academic researchers could get co-operation and support from their network. Successful researchers could achieve high performance in a number of ways. One way of doing so was through successful co-operation between and among other researchers and scientists which in turn led to high numbers of publications, academic rank, and research grants (van Rijnsoever, Hessels, & Vandeberg, 2008). Publication was connected to professional networks, professional networks provide researchers with ways of acquiring opportunities and rewards (Ynalvez & Shrum, 2011). Trust and fair benefits among partners could be major contributions to successful collaboration of research units (Numprasertchai & Igel, 2005). Professional networking among individual faculty members from different universities improved the development of the researcher's career (van Rijnsoever, et al., 2008). Interconnections among academic researchers, universities, and business and government bodies enhanced innovation capacities of developing countries (Bangun & Sukarya, 2012). Lee and Bozeman (2005) also confirmed that research collaboration could improve research productivity of organizations. A number of studies showed that research collaboration between a university and other organizations could improve the research ability of a university (Arvanitis, Kubli, & Woerter, 2008; Numprasertchai & Igel, 2003; van Rijnsoever, et al., 2008).

## Overcoming Limitations

This study showed that the overcoming limitations cluster was important for prominent academic researchers, since limitations could prevent prominent academic researchers to become more successful. Prominent academic researchers experienced a lack of resources, assistance, money, and equipment. In Thailand, a serious problem of conducting research was a lack of equipment, research funding, and helpers or research assistants respectively (Intratrat, 2004). Another problem was that financial regulations were too restricted and did not support some researchers. These regulations limited the opportunities to conduct research (Intratrat, 2004). Some prominent academic researchers faced the difficulty that there were inequalities and differences among research areas. In the US, researchers in sociological disciplines were more productive than those in linguistic disciplines (Leahey, 2006). Some had difficulty in publishing their papers, because executives and researchers used an impact factor to decide what journals they would publish in. Several prominent academic researchers experienced a limitation from expectation of their own organization, because the policies of these organizations did not support them. Expectations, together with ways that were communicated to them, could influence the motivation and performance of employees (Hardré & Cox, 2009). However, if such expectations and goals were unlikely to be achieved and be clear; they might induce dissatisfaction (Roberson, 1990). Workload showed negative effects on conducting research. Universities which were interested in research and where academic staff had less responsibility for teaching duties tended to actively participate in research activities (Arvanitis, et al., 2008). Research productivity and teaching activities had negative relationships, rather than supporting each other (Gautier & Wauthy, 2007; Porter & Toutkoushian, 2006). In Thailand, problems relating to teaching load, irrelevant work, and administrative load were serious problems (Intratrat, 2004). Thai lecturers who had management positions had less time for doing research and they faced problems with continuous research or creative work (Rattananoi, 2010).

## Theoretical Implications

Self-Determination Theory (SDT) is a theory which can well explain the findings of this research. Deci and Ryan (2000) suggested that humans should engage with interesting activities, exercise capacities, pursue connectedness in society and integrate intrapsychic and interpersonal experiences into a relative unity. Intrinsic motivation is the main part of self-determination theory activities which are things that people do when they feel free to follow their inner interests (Deci & Ryan, 2000). Intrinsic motivation demands people freely participating in activities that they find interesting and that offer novelty and optimal challenge (Deci & Ryan, 2000). This research showed themes which support intrinsic motivation, such as 'Able to be used in real life', 'Curiosity', 'Having someone to be a role model', 'Altruism', and 'Books, licenses or patents as a symbol of success'. Extrinsic motivation refers to motivation that an activity which is done to achieve some separable results. For example, people who do their job to avoid punishment; they are extrinsically motivated or people who do their job to achieve some benefits; they are also extrinsically motivated (Ryan & Deci, 2000). Factors which were shown in several themes can be judged as extrinsic motivation, driving prominent academic researchers to conduct research. These factors were 'Promotion' and 'Financial rewards'. Amotivation refers to the state where people have a lack of an intention to perform behavior (Ryan & Deci, 2000). The study found a number of limitations from assistance, expectation of own organization, family, financial regulations, a lack of resources to do research, research fields, workload, and research publication. These limitations were all amotivation factors.

## Practical Implications

To build future successful academic researchers, universities or research organizations should not only recruit academic personnel based on past study, but also on curiosity and abilities to think outside the box and to think freely. Research funds, laboratory, tools, time, and other resources are important to developing excellent research outcomes. To establish a network of researchers or a research team,

Thai academic executives have a question about how to encourage academic researchers collaborate with other researchers; as shown in this research, a research network and team were important.

Prominent academic researchers gained their experiences from abroad through studying, collaborating with foreign researchers and organizations, and international conferences. Such activities were research training grounds for prominent academic researchers to gain knowledge and extend their vision for future research. Thai academic executives need to support faculty members in such ways.

Research students were important, because they were the human resources of prominent academic researchers. Thai academic executives should consider how to obtain high quality research students into their universities.

The findings indicated that prominent academic researchers had excessive irrelevant work. This factor raised the issue of how to reduce their workloads. Therefore, irrelevant work which is not related to teaching and research should be reduced.

### Limitations of this study

This research studied the experiences of several prominent academic researchers; however, this research did not focus on a specific discipline. For example, researchers in medical sciences may have different experiences from those in engineering and physical sciences. Moreover, prominent academic researchers in social sciences and humanities were not included in this research. Several co-researchers came from disciplines, such as engineering sciences, life sciences, and medical sciences. Nevertheless, the experiences of these researchers might also indicate, to some extent, similar experiences of other Thai academic researchers, both studied and not studied in this thesis.

### Recommendations for future research

First, financial rewards were a concern for some prominent academic researchers because they used these rewards to feed their families. However, other prominent academic researchers contradicted this view and indicated that these rewards did not affect their desire to conduct research. Future research should study this issue about the role of financial rewards in motivating researchers to do research.

Second, as indicated, this research did not focus on a specific discipline. So, the knowledge gained from this study broadly presents the understanding of prominent Thai academic researchers. Therefore, to be more specific, future research could focus on specific prominent academic researchers in each particular field of knowledge.

Third, a future study could be a mixed method study of prominent academic researchers which could be valuable, because neither the qualitative approach nor the quantitative approach alone can provide an in-depth and broad understanding of all the real-world complicated problems (Classen, et al., 2007).

Finally, it might be useful to do a longitudinal study of a group of prominent academic researchers over a long period. The reason for doing a longitudinal study is the fact that this research did not include the dimension of time, since, if the time passes, prominent academic researchers may change their characteristics, opinions, or behaviors.

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