An Investigation of Factors Related to Research Productivity in a Public University in Thailand: A Case Study

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Abstract

Currently, National Governments expect universities to become both more efficient and effective in both teaching and research. However, there appear to be many obstructions to research productivity, that in turn cause low levels of research outcomes. These problems need resolution and elimination in order that universities, through their academic staff can increase their research output. Currently, this is an important issue facing higher education institutions, and the purpose of this research is to focus on the factors that have an influence on the low research productivity of academic lecturers in a public university in Thailand.

The conceptual framework for this research was chosen to integrate empirical research findings on faculty role performance and productivity with two existing motivation theories, namely Expectancy Theory and Efficacy Theory. The research methodology uses a qualitative research approach, based on in-depth interviews with eleven representative respondents from a public university that has been given the reference name of 'The Noble University'.

Based on a review of pertinent literature, it appears that there are five important factors that impact on academic research productivity. These are environmental factors, institutional factors, personal career development factors, social contingency factors, and demographic factors.

According to the findings of this study, these five important factors can be conveniently divided into three main groupings which have been termed the essential factors, desirable factors, and side-affect factors. Each of these factors, it is claimed, need resolution, in a sequential way, by administrators of the university. This study makes a number of recommendations which, it is believed, will improve both the quality and quantity of research productivity at this university, and, in some instances, more widely across the higher education sector.

Declaration

I , Ms. Sarunya Lertputtarak, formally declare that the EdD thesis entitled “An Investigation of Factors Related to Research Productivity in a Public University in Thailand: A Case Study” is no more than 60,000 words in length, exclusive of tables, figures, appendices, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic or diploma. Except where otherwise indicated, this thesis is my own work.

_____ Tuesday, 10 June 2008

Signature Date

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Table of Contents

Table of Contents (Continued)

Table of Contents (Continued)

List of Figures

List of Tables

List of Abbreviations

PhD	Doctor of Philosophy
EdD	Doctor of Education
GDP	Gross Domestic Product

CHAPTER 1

Introduction

1.1 Rationale

Because of world-wide economic and social imperatives, universities in all countries are engaged in a significant reconceptualisation of their public roles (Geiger 1986). The higher education sector in the twenty-first century is very different from that of the late nineteenth and twentieth centuries. Universities now perform important roles as the guardians of public knowledge. They are an important part of the modern capitalist engine and are recognized as generators of public scientific and technological knowledge. There are changes in the internal and external environments of academic institutions that have resulted in significant differences in the ways in which the mission of institutions are now expressed (Geiger 1986). For instance, the Prince of Songkla University has responded to the challenges of the new environment by renewing its commitment to a strategic approach to academic quality (Petcharat 1989). Its intention is to be seen to be a markedly more vital and energetic center of life long learning, research based teaching and community outreach activities. Faculty members have been asked to increase their research productivity by expanding their research activities, particularly with regard to information technology. This will allow some faculties to develop their future academic offerings to include research based graduate studies, self-reliance and internationalization. As another example, Chiang Mai University has reframed its corporate mission:

> To be a premier university seeking excellence in the advancement and dissemination of knowledge of our nation as it faces the challenges of a globalizing world (Chiang Mai University 2006).

To achieve this status, Chiang Mai University has, as one of its major objectives, to initiate and conduct innovative research and development projects.

Universities are supported in these endeavours by their national government, because they are currently looking to institutions of higher learning to contribute in increasing ways to the solution of pressing technological and social problems, and, in some cases, to restructure their traditional course offerings to engage a wider cohort of the population in higher education (Hill, 1993). This has led to some stresses on the higher education system because universities are being asked to extend their research and development activities as well as to institute internal structural changes in a climate of shrinking economic resources.

The National Government currently expects universities to become both more efficient and effective in all they do, especially in the area of research. Government policy has focused on attempts to persuade universities to be more selective in research by identifying areas of research strength. According to the Prime Minister's keynote address on higher education development policy to faculty members, deans of faculties and heads of departments of all higher education institutions throughout Thailand on Friday 10 January 2003, the role of research in higher education was highlighted as important (Bureau of International Cooperation Strategy Commission on Higher Education 2003). In summary, the Prime Minister's statement (Bureau of International Cooperation Strategy Commission on Higher Education 2003) said:

> Universities should develop their research performance as sources of new knowledge and also it is important to provide academic support to prepare the country for the knowledge-based society. Researches must be carried out scientifically to find solutions to problems by using valid and reliable research methodology and tools. Incentives should be provided to offer better progress in academic careers and in terms of financial benefits such as income generation from research intellectual property rights and patents. Furthermore, a new culture and attitude should be encouraged to allow freedom of academic expression in a public and open way.

Generally, the major responsibilities of academic staff in the modern university are teaching (transmission of knowledge), research (advancement of knowledge) and community service (application of knowledge) (Perkins 1973;

Marsh & Hattie 2002). However, it should be acknowledged that within much of the academy a value hierarchy exists in which research and scholarship are at the top of the pyramid, followed by teaching and then community service (Brand 2000). Cargile and Bublitz (1986) found that faculty members perceive research to be the outstanding component; in fact, research is deemed to be twice as important as teaching and five times more important than community service. Many believe that university professors face a distinct trade-off between producing empirical research and providing quality instruction in the classroom. However, it is interesting to note that Boice (1987), found faculty staff with the greatest early success as productive researchers, demonstrated a more even balance among teaching, research and collegial networking.

Rowland (1996) investigated the perceptions of faculty members about the relationship between teaching and research. He found the overall view that teaching and research should co-exist in a synergistic balance within any department. One obvious linkage between teaching and research is that of stimulation and support. For example, in teaching introductory courses to undergraduates, faculty members may engage in such research activities as developing questions or interpreting data (Creswell 1986). It is felt that university lecturers should participate in both research and teaching as an essential part of their work, because the active involvement in the research process directly improves the quality of teaching. Furthermore, the American Assembly of Collegiate Schools of Business (AACSB) stated four justifications for research: (i) it improved the general knowledge of society; (ii) it is a necessary ingredient in effective teaching; (iii) it improves the practice of a particular discipline in the real world of affairs; and (iv) it is necessary to perpetuate one's own discipline or one's own self-image (Jacobs, Reinmuth & Hamada 1987). In a later study, Middlewood (1999) examined the effects of multiple research projects carried out by practitioners in educational institutions in the United Kingdom. His reports showed that 94 percent of the respondents to a questionnaire felt that they had learned new skills that boosted their professional standing. Furthermore, 52.6 percent of the respondents mentioned that the research was linked to the advancement of their professional career and 60 percent of respondents said that research has a powerful

positive influence upon the overall ethos of the work environment and the status of institution. These views suggest that research activity by faculty members is likely to improve institutional effectiveness.

Whilst some still argue that involvement in research diminishes a faculty member's teaching effectiveness, suggesting that teaching and research may be incompatible in the university environment (Levy & Cooke 1990). Levy & Cooke (1990) quote the Vice-Chancellor of Berkely University, John Heilbron, as stating:

> The people who tend to be our distinguished teachers and who are most interested in improving undergraduate education also tend to have distinguished research records. So, although it would be idle to deny that people might slight teaching to comply with their research imperative, I do not believe that the two enterprises – research and teaching - are antithetical (p.38).

1.2 The Role of Research Productivity in Higher Education

It is suggested here that the study of the role of research productivity in higher education can be divided into three areas: institutions, faculty members and students. The role of research in each of these areas will be discussed in turn below.

1.2.1 Institution

Several institutions' policy for promotion, as well as their tenure and reward systems, is based on quantity and quality of research productivity, teaching and service (Read, Rae & Raghunandan 1998: Kotrlik et al. 2002). Typically, high-status institutions place great emphasis on the relationship between research productivity and rewards by offering pay raises, tenure, and promotion (Konrad & Preffer 1990; Lane, Ray & Glennon 1990; Laviton & Ray 1992; Pfeffer & Langton 1993; Im & Hartman 1997). According to Gibbon, Ivancevich and Donnelly (1994), organizations typically provide two types of rewards. These are extrinsic rewards, for example salary increase and promotions, and intrinsic rewards that are associated with the actual process of work. Intrinsic rewards can be associated with

an individual's personal satisfaction arising from completion of complex projects, for instance the achievement of a personal goal such as publishing a research paper, or developing feelings of increased autonomy and personal growth through successful completion of research work (Katz & Coleman 2001).

Gibbs and Locke (1989) insisted that research productivity was the most important criterion for making promotion and tenure decisions after surveying 59 chairs and committees in 93 universities. Read et al. (1998) also supported the observation that faculty members promoted in recent years had more publications than those promoted in earlier years. This increase in emphasis on research and decrease in importance of teaching and service has been recognized by faculty members since the 1980s (Cargile & Bublitz 1986; Schultz, Mead & Hamana 1989). It is therefore clear why staff in traditional universities, where research has always featured more significantly in promotion and development of status, are expected to maintain and possibly increase research output.

Albach and Lewis (1995) surveyed academic staff from 14 countries. Their findings showed that more than three quarters of faculty in all countries agree that successful research is important in faculty evaluation and, further, that the majority agreed that it is difficult for someone to achieve tenure if he or she does not publish. Kfir, Libman and Shamai (1999) considered the role of research activities in academic Colleges of Education in Israel, and found that although not all faculty members can or should engage in research, the college as a whole should be exposed to research and participate in the academic research culture.

Numerous other research efforts support these findings. Perry et al. (2000) stated that Liberal Arts Colleges were pushing faculty members to produce more research to ensure promotion and tenure, and similarly, Henthorne, LaTour and Loraas (1998), reported that many teaching-oriented schools were requiring publications in refereed journals as essential requirements for tenure and promotion.

In addition, research productivity is not only important as a route to academic promotion, it is also important for enhancing an institution's reputation and economic status (Blackburn et al. 1991). Creamer (1998) stated that faculty publishing and productivity could be demonstrated as an index of departmental and

institutional prestige. Similarly, the study of Henthorne et al. (1998) found that institutional rank and performance contributed to the benchmarking of an institution's research productivity. In addition, Olsen (1994) noted that an increase in productivity led to high prestige for the institution, while Boyer (1990) showed in his study that

> Research productivity is viewed as a key element in status attainment of postsecondary institution (p.167). .

Finally, as the results of research by Marchant and Newman (1994) in America showed, those institutions in which research was emphasized tended to have larger student enrolments.

The higher education system is currently a very competitive system. Because there is a scarcity of students, one major problem is to attract adequately prepared students in sufficient numbers to justify the economic operation of an institution. Relevant to the current study is the fact that success in the research arena often yields extra funds that can be used to improve faculties and attract highly qualified faculty. These research-generated resources can therefore not only be crucial in supporting a solid undergraduate population, but contribute to an institution's overall prestige (Levy & Cooke 1990). For example, in the area of information systems there have been regular publications comparing the statistics of faculty research productivity of various information systems programs (Lending & Wetherbe 1992; Swanson & Ramiller 1993). Grover, Segars and Simon (1992) studied the publications by information systems faculty members from more than 190 institutions, and found that the top 50 institutions achieved this high rank because of the weighted page count of articles published by their information systems faculty.

In conclusion, for higher education institutions, lecturers' research productivity that is produced each year and is publishable is not only criteria for academic promotion, but can also enhance a university's reputation and raise a university's rank. Whenever a university has higher prestige and recognition, the number of students can be shown to increase and the institution could receive a higher income for development.

1.2.2 Faculty members

Whilst it is clear that faculties build and disseminate knowledge through the production of research (Dundar & Lewis 1998; Henthorne et al. 1998; Williams 2000a), it is also true that research can provide an important background for faculty members to become successful lecturers. In many cases, high research productivity enhances quality of teaching effectiveness, because research productivity develops knowledge and reinforces many of the same skills that are required for effective teaching. This includes the ability to organize one's thoughts and to communicate well. Faia (1976) found that institutions which strongly emphasis research, teaching awards are almost twice as likely to go to faculty members who publish than those who do not publish. Moreover, research enhances teaching through the introduction of new topics and methodologies. Teaching topics can be clarified, updated and amended by developing the results from one's research. Research productivity adds significantly to both the quality and substance of classroom experience. Active researchers are more effective at instilling a critical approach to understanding complex research findings rather than a passive acceptance of facts. These characteristics can be usefully communicated to their students.

Another important outcome is that research active lecturers are in touch with the latest developments in their field. Research experience enhances knowledge and intellectual vitality (Jenoks & Riesman 1968) because textbooks may not be current or are outdated in many rapidly developing areas. Lecturers who are involved in research are therefore more likely to be at the forefront of their discipline. Furthermore, research productivity also shapes the ability of lecturers to meet the challenges of a dynamic and even complex environment (Babbar, Prasad & Tata 2000) and provide evidence and argument that help teachers identify activities and outcomes for teaching and learning (Fresko 1997; Gray 1998). The study of Katz and Coleman (2001) supported the idea that participation in research improves teacher educators' self-confidence, enhances their professional status and

contributes to their professional growth and self- actualization. Further, it appears that the more that respondents to this study had published, the more likely they were to consider that researchers are more talented teachers. Therefore it can be said that the highly productive faculty members are seen as more powerful educators and often serve as a frame of reference for junior faculty members and others who are developing their own research agenda (Levine 1997).

In conclusion, research is important for academic development. Doing research can enhance faculty members' knowledge, increase teaching effectiveness and the ability to think and communicate. Lecturers who are involved in research usually gain promotion opportunities and higher academic status.

1.2.3 Students

In 1987, Jacobs, Reinmuth and Hamada reported that success in the classrooms of the American Association of Colleges and Schools of Business was dependent upon research productivity. These findings were similar to those of the studies of Logue (1991) who found that teaching effectiveness was associated with research productivity and Blake (1994), who posited that teaching effectiveness and research activities are directly related.

Jacobs, Reinmuth and Hamada (1987) pointed out that students are challenged more effectively by faculty members who are productive researchers. Students also appear to appreciate teachers who introduce into their lectures aspects of the research that the teachers have actually conducted, more than the teachers who are only discussing the work of others that they have not been involved in (Marsh & Hattie 2002). Hicks (1974) also found that students rated professors who have published as significantly better teachers than those who had not published. The author of the standard textbook for a subject area is seen as something of an authority in that field, and it appears that students respond positively to the experience of being taught by teacher whose book they know will be read by students elsewhere. (Rowland 1996).

It has been observed that staff who carry out research and scholarship are more likely to produce desirable student outcomes (Abelson 1967). This may be

due to lecturers sharing research results with students, and that this helps the teachers clarify their subject material. Furthermore, students' suggestions, comments, questions and criticisms can elucidate new research directions. Sharing the results of one's research efforts with an appreciative audience provides reinforcement for having done the research and contributes to the pursuit of further study (Marsh & Hattie 2002).

In conclusion, the lecturers' accomplishment relates to their research productivity. Students appear to appreciate faculty members who are productive researchers more than lecturers who seldom do research. The lecturers who carry out more research also teach students well and assist their students to produce more desirable outcomes.

1.3 Statement of the Problem

Although there is clear evidence that administrators at many institutions together with academic staff realize the importance of research within the university structure, there is still an unacceptably low level of research productivity. Why some faculties produce research year after year while others do not conduct any research is a 'puzzle' (Creswell 1985). The current climate in higher education threatens the university's ability to sustain the conditions that support research achievements. Increased demands on government and private funding, a deteriorating physical infrastructure, increased pressure on undergraduate programs, and the removal of mandatory retirement have raised concerns about the continued capacity of universities to maintain teaching, research productivity and service to the state.

In his important reconsideration of the role of university, Boyer (1990), refers to an earlier statement by Caplow and McGee (1958), that suggested while young faculty members were hired as teachers, they were evaluated primarily as researchers. This observation, simple as it may seem, was the cause of many debates at the time regarding the nature of university staff responsibility. Further, Boyer (1990, p. 12) refers to two Carnegie Foundation surveys, where university staff were posed the question *'In my department it is difficult for a person to*

achieve tenure if he or she does not publish'. For 'all respondents', the percentage reporting that they 'strongly agree' was 21% in 1969, and 42% in 1989. Although these data are now somewhat dated, the increasing trend toward the importance of publishing noted during those twenty years is still highly relevant. Indeed, many universities are now making the requirement for staff to engage in research and publication explicit (Katz & Coleman 2001).

Oshagbemi (1997) provided a list of comments related to job dissatisfaction of university teachers. He pointed out that the dissatisfaction occurred because there was (i) very inadequate time available for research, (ii) increasing pressure to publish, (iii) erosion of time for research and personal development in specialist areas, (iv) increasing difficulty with, and time spent in, obtaining research grants, (v) difficulty in attracting able Doctor of Philosophy (PhD) students, and finally (vi) the lack of research facilities. The need to respond simultaneously to teaching and the pressure of doing research raises significant questions for institutions in the identification of priorities and allocation of research. This pressure has had different impacts on different departments, schools, and subject disciplines. Academic staff must find ways to improve their activities to enhance the quality of the student's learning experience, while simultaneously engaging in activities, which offer appropriate staff development in research and publishing.

1.4 Research Problems and the Research Environment in Public Universities in Thailand

Although academic lecturers in Thai public universities desire to conduct research, there are many obstacles that need resolution and elimination in order that lecturers can increase their research productivity. Thailand provides only 0.16 percent of GDP, or 154 million dollars in research funds. Compatible figures for other nations were: Malaysia, 226 million dollars, Indonesia, 282 million dollars, and Singapore 965 million dollars. Recent figures show that the amount of funds available for research in Thailand were 1200 times less than in the United States (179,216 million dollars) (Sophon 1998).

A study by Suwanwala (1991) that investigated perceptions of research productivity of academic lecturers in Chulalongkorn University, the most famous institution in Thailand, found that many lecturers did not realize the importance of conducting research, and many of them lacked the knowledge, skills, experience and resources to do research. Similarly, a study conducted in Ratchapat Lampang Institution (Wongwichai, 2000), reported issues raised by institution academic members related to research problems that are claimed to cause low quantity and quality of research productivity. The surveys in this study were based on participatory research, with the collection of data from several sectors including government agencies, the private sectors and communities in Lampang province and nearby areas. It was found that, institution problems first arose because there was no research unit to act as the central conduit for information and corroboration, and that there were insufficient research funds and resource availability to support researchers. In addition, promotional efforts, technical management and administration systems were inadequate. Second, personal problems appeared important, often because academic lecturers had insufficient research knowledge and experience, suggesting that they lack confidence to conduct research, while in addition, there was no encouragement or attractive motivation methods within the institution. Third, academic lecturers usually conducted research in the topics that they were personally interested in rather than attempting to conduct research that would be more beneficial to both their local community and to national development. Lastly, there were no properly developed networks among institutions, government and private organizations to utilize the research outcomes.

Juthawattanathorn (1994) investigated the problems associated with national research fund allocation and found that the majority of research funds which were awarded by the government were not sufficient for the research undertaken, and furthermore that the systems for fund allocation were not flexible. Consequently, there were many universities that received insufficient funds for research development, and they were then unable to modify their proposals to suit the available budget. These findings echoed the study by Jitiaurnchai (1993), where the study of research problems in Mahidol University found that

institutional policy and insufficient research funds were significant obstacles. This was in addition to the more general observation that academic staff members at this institution also appeared to lack knowledge and confidence to do research, and there was a also an unhelpful lack of criteria to measure research quality.

Many of these issues were evident to this researcher in her previous position in The Graduate School of Commerce (GSC)'s Quality Assurance Department, Burapha University in year 2002. In 2001, there were 542 teaching staff and 300 general staff, and around 11,983 students (Burapha University 2001). Whilst Burapha is a large institution even by international standards, its record in research outcomes and publications is not high. In 2001, there were only 54 research projects (involving around 10 percent of lecturing staff), and there were only 25 research outcomes that were published (involving around 5 percent of the lecturing staff) (Burapha University 2001).

Clearly, the concerns discussed above are evident at a wide range of institutions, and it is the intention of this project, carried out at "The Noble University", to contribute in a positive way to an increase in meaningful research output in the university system.

1.5 Research Question

As indicated in the preceding discussion, the research question that underpins this work can be stated as "What are the factors that impact on low research productivity of academic lecturers in a public university in Thailand?"

1.6 Contribution to New Knowledge and Statement of Significance

Information regarding factors that influence research productivity of academic staff in universities will be of interest to a large number of institutions that are currently dealing with ways to retain their academic status in the global university community. Although this study concentrates upon one university for reasons of economy and scale, the investigation has been designed in such a way as to be

useful to a wide range of situations, particularly where demographic and cultural factors are similar to the studied institution.

The general aim of the project is to provide information that will assist in the design, development and formulation of institutional research policies in the changing global situation, and in particular to highlight those factors that should be emphasized in order to further encourage academic lecturers to increase their research productivity. It is anticipated that this investigation will provide new perspectives on this issue because the research methods employed will focus on qualitative understandings drawn from key informants in the area.

The research methodology in this study involved qualitative in-depth interviews. This method was selected because of the nature of in-depth interviews and their value in bringing the researcher into the participant's world (Patton 1990). Rubin and Rubin (1995) also stated that qualitative interviewing is not only a set of skills, but also a philosophy an approach to learning.

Such information is vital to this project for improving higher education research productivity. To most effectively achieve this aim, the various obstacles to increasing the productivity for faculty members need to be identified in their own terms. This study has been designed to address these issues, and will solicit information directly from faculty members, by in-depth interview, regarding their perceptions of reasons for non-participation in research productivity, and to invite suggestions about the ways to overcome these obstacles. The results of this study will provide benefits to the studied institution.

1.7 Definition of Terms

Academic lecturer/staff/member: Full-time tenured and tenure-track University lecturers who are mainly responsible for teaching, researching and undertaking academic service (advising students and performing professional duties) as well as researchers who work in specific research centers. They can be Professors, Associate Professors, Assistant Professors and lecturers. However, this does not include University council members who are not full-time lecturers, adjunct professor, visiting professor, temporary faculty members and teaching assistants.

Moreover, this does not include academic service officers such as librarians, financial department staff, and computer center staff.

Expert: A full-time academic lecturer who is mainly engaged in working in a high status position in the University. Experts will therefore include the President, Vice presidents, Assistant President, Deans, Associate Dean, and Assistant Dean.

Research: Any scholarly research produced by academic faculty members that contributes to the knowledge base of a discipline. For example; a research proposal for a grant, a research publication in refereed or non-refereed journal; a research report for an agency or institution; a monograph, academic book or book chapter, submitting an article to newspapers or magazines; producing a creative work or innovative item, a licence or patent; being on book or journal editorial boards; being a post-graduate supervisor; or being on a committee for oral exam or dissertations (Creswell 1986).

Research activity: Any activity that academic lecturers perform when they conduct research such as defining a research problem, carrying out a literature review, collecting data, analyzing data or writing a report.

Research Output: The quantity and quality of finished research works and publications produced by academic lecturers during 2005.

Research productivity: Total research output compared with inputs (money, time, facilities, researchers' and team's efforts) during 2005.

Publication: Any activity that aims to make the products of academic research generally known to the public. It is not only research published in refereed or non-refereed journals, but also on websites, in exhibitions, radio or television broadcasts or governmental report papers.

Public University: Those higher education institutions that the government has organized and controlled. Although each public institution operates under a separate charter with some freedom, the government through the Ministry of Education still holds ultimate authority over public universities.

Environmental factors: Those factors that relate to the work environment and cultural climate in which the academic lecturers have to deal with everyday, such as their colleagues' commitment to research, the relationship between the

academic lecturers and their supervisors, academic honesty, academic integrity, academic freedom and faculty collaboration toward a community of scholars.

Institutional factors: Those factors that directly emerge from the institution's structure, such as the type of institution, institution policy for promotion, research policy, work-load, salary, resources and material supports.

Personal career development factors: Those factors that come from the academic and personal qualifications of academic lecturers themselves such as an individual's ability and interest, attitude toward conducting research, academic origin, advanced degree earned, research experience, skills and training, rank and tenure status.

Social contingency factors: Those factors that have direct effects on academic staff abilities to carry out research because they typically place constraints on the time and energy that individuals have to engage in work activities. Those social constraints include the faculty member's health, extent of obligations to significant others such as spouse, children and parents, financial strains and pregnancy.

Demographic factors: Those factors include age, gender and marital status, and these are included in order to see if there are any factors that have intrinsic problems associated with them that interfere with an academic staff member's ability to carry out research.

1.8 Dissertation Organization

This study is organized in an eight chapter format. Chapter One gives an overview of the research environment, the current role of research in higher education, the research problem, a statement of the purpose of the study, the potential contributions of the study to the wider University community, and definitions.

Chapter Two provides a review of the relevant literature related to academic research productivity, both at the local and international level.

Chapter Three describes and justifies the research framework by demonstrating the related theories to produce a conceptual model and focus research questions.

Chapter Four presents the research methodology used in the study and includes an explanation about the research design, the processes used for sample selection, a description of data collection and recording techniques used, and makes some comment on the methods of analysis and interpretation as well as showing a profile of the case institution's and respondents' backgrounds.

Chapter Five contains details of the data collection results. These results cover a broad view of research activities undertaken by respondents in the different Faculties, a description of individual respondents' perceptions classified by faculty, and lastly a review of respondents' perceptions classified by Science and Social Science fields.

Chapter Six presents the data interpretation and discussion by drawing the related quotations from information provided by the respondents in Chapter 4. The interpretation made here is closely based on the focus questions and is also discussed in light of the results of previous study.

Chapter Seven provides a discussion to explain the important issues found in the study about the classification of factors that influence academic lecturers' research productivity.

Chapter Eight contains the conclusion to the study, and advances some suggested implementations of the results and recommendations for further study. To assist in the application of the findings to a possible wider context, some limitations of the study will be pointed out in this chapter.

1.9 Chapter Summary

The purpose of this study is to provide information that will assist in the design, development and formulation of institutional research policies by highlighting those factors that should be emphasized in order to further encourage academic lecturers to increase their research productivity. The investigation has been designed to be useful to a wide range of situations, particularly where demographic and cultural factors are similar to the studied institution. In summary, the intention of this project is to contribute in a positive and practical

way to the enhancement and increase of meaningful research output in institutions that are, in the current economic climate, falling below acceptable output targets.

Nowadays universities are changing their roles. Universities put more emphasis on producing a higher quantity and quality of research productivity. Academic lecturers are recognizing the importance of conducting research in order to enhance their knowledge and improve the quality of teaching. Their teaching role and research should co-exist in a synergistic balance within any department which is supported the Institution, Government, private organizations and the community.

Nevertheless, there is still an unacceptably low level of research productivity, especially in public universities. The current climate in higher education threatens the university's ability to sustain the condition that supports research achievements. In Thai public universities, there are many obstacles that impact on low research productivity which need to be resolved and eliminated if research productivity is to increase.

The next Chapter presents the literature review that has provided the contextual base upon which this study was designed. It outlines the results of previous work in this area, and uses this work to develop a clear meaning for the term 'research productivity'. By doing this, it foregrounds the currently accepted methods of measuring research productivity. Finally, there is a critical examination of the results of previous research that have investigated factors that have been claimed to impact on research productivity.

CHAPTER 2

Literature Review

This chapter is divided into six parts: Part one examines the determinants of research productivity; Part two discusses the measurement of research productivity; Part three presents previous studies of research productivity, Part four examines the factors that influence research productivity; Part five presents comments about previous research regarding research productivity in Thailand; and, lastly, Part six concludes the chapter with a summary of the review of literature.

2.1 Determinants of Research Productivity

For the purposes of this investigation, it is important that the notion of 'research productivity' be carefully defined, since it is a key element in the development of the research question. To begin, 'Research' means the careful study or investigation, especially in order to discover new facts or information (Oxford University 1995). 'Productivity' means the total production compared with inputs or consumption over the same period of time, which serves as a measure of whether the producer's production process are working efficiently. (Witzel 1999).

However, in combining the two words as 'research productivity', a simple definition becomes more difficult in a research environment because different people have very different perceptions about its meaning. Whilst productivity is very important in industrial circles, public concern over competitiveness and productivity in universities enters virtually every policy discussion, whether the subject is education, the budget deficit or national politics (Krugman 1991).

Debate about the meaning of research productivity is essential in the context of this investigation because research, especially governmental and University-based research, is part of the service economy that provides 70% of all academic jobs in the United States (Offermann & Growing 1990; Quinn, Doorley & Paquette 1990; Roach 1991). Consequently, the development of clear measures for research productivity will be a significant influence in the nature of this sector.

Research productivity has been defined as the relationship between the outputs generated by a system and the inputs provided to create those outputs. It may also include the term 'efficiency' and more importantly 'effectiveness', which measures the total output or results of performance (Turnage 1990). Print and Hattie (1997) define research productivity as '*the totality of research performed by academics in universities and related contents within a given time period*' (p.454), and research efficiency has been defined as the productivity of research per unit of input resource (Kostoff 1995).

Research productivity is an outcome measurement of scholarly effort (Jacobs, Hartgraves & Beard 1986; Kurz et al. 1989), and has two components that are; (i) knowledge creation (research) and (ii) knowledge distribution (productivity) (Gaston 1970). For the most part, the 'product' of academic lecturers' research is scholarly publication (Carnegie Foundation 1991). The importance of this definition of research productivity is that it enables faculty members to share insights, demonstrate academic scholarship, gain recognition for creative thinking, and finally to develop a reputation for expertise in a specialty area (Rhodman 2002).

Taking a slightly wider view, research productivity can include research publication in professional journals and in conference proceedings, writing a book or chapter, gathering and analysing original evidence, working with post-graduate students on dissertations and class projects, obtaining research grants, carrying out editorial duties, obtaining patents and licences, writing monographs, developing experimental designs, producing works of an artistic or creative nature, engaging in public debates and commentaries (Creswell 1986).

However, research is typically a private and self-mastered activity, and it can be difficult for university staff members to balance an effective project agenda

with the demands of teaching, service and life in general. According to Boice (1987), productivity should emerge from hard work, and a fair schedule for research activity should utilize a benchmark that encourages a struggling researcher to relate to their current level of activity. For example, Boice (1987) found that a new faculty member who could find only one hour per weekday to work on their research, generally managed to submit about 1.5 manuscripts per year, which is then consistent with the expectations for a pay rise and higher tenure status. Furthermore, faculty members who adopt a regimen of brief daily periods for research projects typically experience less stress in managing their time and their lives (Boice 1987).

2.2 Measurement of Research Productivity

Several measures of faculty research productivity that have been mentioned in the literature relating to higher education will be discussed here, together with some of the issues that have caused wide concern. The most pervasive issue regarding the measurement of research productivity is the confusion of quantity of publications with quality of publications, either in the publication itself or the publication outlet (Lawrence & Green 1980). Indeed, it has been noted that the debate over the most appropriate measure of productivity revolves around these two fundamental dimensions of quantity and quality (McGuire et al 1988). Furthermore, whilst research productivity can be measured at the individual level, there is also a need to develop hierarchical measures at the sub-department, department and university levels. Discussion of the measurement of quantity and quality follows.

2.2.1 Quantity Measurement

The most frequently used measure of the quantity or amount of research productivity is a numerical publication count or the journal article count over a certain time period. The activities included in measuring productivity range from a narrow perspective of ‘number of research articles published’ to a broad interpretation which consists of presentations, both formal and informal, number of

graduate students that a staff member is advising, publications of any type and proposals submitted for funding. Moreover, it also includes counts of the number of editorial duties, conference deliveries, licenses, patents, monographs, books, experimental designs, works of an artistic or creative nature, public debates and commentaries (Creswell 1986). Rotten (1990) stated that a common approach to measuring research productivity was to count the number of books, articles, technical reports, bulletins, and book reviews published, as well as presentations given and grants received through reviewing curriculum vitae or other print materials.

Fielden and Gibbons (1991), pointed out that within the business faculty, many lecturers emphasize articles published in refereed journals and trivialize all other measures of productivity. Clement and Stevens (1989) found that management administrators put greater weight on scholarly research and less on trade and newspapers articles than their non-management business peers. Radhakrishma and Jackson (1993) reported that publishing in refereed journals was ranked as the most important factor in research productivity, and Radhakrishma, Yoder and Scanlon (1994, p.17) noted that '*publication (in refereed articles in journals and paper presentations at a conferences) are considered to be a very important component of faculty productivity'* . This statement was supported by Kotrlik et al. (2002) in reference to Personal Communication from William J Cooper, former Dean of the Louisiana State University Graduate School. Kotrlik et al. (2002) quoted William Cooper as stating that 'the only magic number is zero; if you haven't published in refereed journals, then publications in research conference proceedings, books and other publications are meaningless' (p.3).

To further illustrate the complexity of this task of determining research productivity, faculty publication counts can either be 'straight counts' or 'weighted counts' (Collins 1993). It has been suggested that perhaps the easiest way to gather counts is to ask respondents to self-report the number of publications produced for a particular period of time. However, counting all publications equally may be simplistic because it ignores the quality of the publication. One method of adding quality into self-reported counts is to define eligible publications carefully. Faculty members can be asked to list non-refereed publications separately from refereed

journals. Single authored papers can be distinguished from multiple-authored ones. The types of publications, for example journal articles, books, monographs, or book reviews, can also be easily distinguished (Brocato 2001).

Furthermore, Creswell (1986), seriously pointed out that counts of publication need some form of weighting system, particularly, for instance, the comparisons between journal articles and books. Books demonstrate a problem because there are several types of books that cannot be used to measure research performance, such as original scholarly books, theoretical or research monographs, edited books and textbooks. A chapter in a book for readings may also be classified as a book form. Further problems also could arise when equal weight is given to many of the peer-reviewed publications in newer journals whose review standard may be less rigorous than the longer established journals.

Several weighting systems have developed to make comparisons among types of research productivity. Braxton and Toombs (1982) used an objective method of weight assignment by using a panel of scholars of the academic profession or of graduate education to make the assessment when weighting productivity. The judges were asked to rate the publications on scale of zero to ten. The median ratings obtained were then used to construct a scale of the weights.

The results of this weighting procedure show that original scholarly books and monographs receive higher weights than do journal articles. Textbooks are also weighted higher than edited books, whereas edited books are weighted equally with articles published in high-quality journals but higher than articles published in journals of lower perceived quality (Creswell 1986). According to Braxton and Toombs (1982), critical book reviews published in academic or professional journals had a mean rating of 8.8; a published edited book, 4.2; assignment of current scholarly books as required course reading, 5.5; a paper presented at a conference, 8.9; articles on current disciplinary topics published in local newspapers, 4.5; and textbooks published, 9.3.

The special characteristics of the various journals also affects the weighting system. An article published in a refereed journal is assessed and certified as a contribution to knowledge because refereed journals are putatively ‘prestige’ journals, supervising the review of manuscript by experts in the field. Thus, articles

published in refereed journals may be assessed higher than articles in non-refereed journals (Miller & Serzan 1984).

However, there are also unpublished research outcomes that are recognized as a form of productivity. For example, papers presented at professional meetings and the final reports of funded research are significant types of unpublished research. Weights for these items may also be needed because a grant from the National Science Foundation is perceived as having more value than one received from an institutional research fund. Furthermore, the prestige of professional associations also varies with their geographical location. For instance, a paper presented at the national association conference may have more prestige than the one presented at a regional meeting (Creswell 1986). Lastly, service as a reviewer of grants proposals is another pertinent measure (Pellino, Blackburn & Boberg 1984).

The simple counting of published and unpublished research outcomes does not allow any comment upon the quality of work. For examination of quality, peer review rating and citation analysis are emerging as relatively new tools to assess the value of the contributions of research to the discipline.

2.2.2 Quality Measurement

Peer review refers to a process whereby one or more qualified persons professionally peer review a person's work, generally for publication in a scholarly journal or book (Upali, Hebert & Nigel 2001). External reviewers for academic journals typically do not know the names of the authors of manuscripts that they are asked to review. However, the case of assessing grant proposals may be different, because the peer review process in grant proposals has considerable interest in what are the particular characteristics of the researcher (e.g. age, gender, rank, potential conflicts of interest) (Chubin 1994).

Kirkpatrick and Locke (1992) found a statistically significant positive correlation between individual peer rating and measures based on article counts and citation counts. However, peer ratings are not without their limitations, for example, it can be influenced by the personality of the scholar being judged and/or

by the prestige of the institution of affiliation (Folger, Astin & Bayer 1970). Similarly, Nelson, Buss and Katzko (1983) argued that peer review has several other limitations; (i) the quality of the personal work is not being measured in peer reviews, (ii) journals different in scope of articles published because some journals may concentrate on contribution to knowledge while others may focus on more creative contributions, and (iii) peer rating is affected by rapid changes of editorial staff and publishing policies.

Citation measurements have been used to measure faculty research productivity (Braskamp & Ory 1994: Creamer 1998). Indeed, Centra (1981), claimed that citation data better reflects the impact of faculty work. One way of gathering citation data is by obtaining curriculum vitae from faculty and verifying listed citations via citation abstracts and databases (Brocato 2001).

Published works are cited as building blocks for ideas, concepts, findings, methods or information on instrumentation. Some are cited for negative purposes or for perfunctory reasons (Creswell 1986). Nevertheless, in a cited article, not everything is read and found useful. A publication is property, and citing practice is a social device for coping with problems of property rights and priority claims (Kaplan 1965).

However, citation counts have some important limitations (Creswell 1986; Brocato 2001). First, there are substantial differences in citation rates among various disciplines because of the rates of publication and the acceptance rates of journals. Second, significant research may not be recognized for a considerable period of time, but a scholar who has published a number of pieces in a fixed period of time might expect to generate at least a few citations. Citation rates decay substantially (Line 1984), thus staff who work for a longer period of time generally have more publications and more opportunity to be cited. Consequently, citation counting must be a restricted compilation to a fixed span of time in both citation sources and the citation documents. Third, a scholar who is a junior author of a piece, and therefore not first named, would be missed in simple counts. Fourth, some surnames are subject to common misspelling by citing authors, and these errors are preserved in the citation indexes. Fifth, citations may be for criticisms and rejections of research rather than its merit and utility. Sixth, several critics of

citation tools have noted that self-citations and citation of friends' work may distort realistic measurement. Finally, citation counts do not distinguish between positive and negative comments about the work. Furthermore, citation indices are subject to a long lag-time because of the long peer review and publication process.

It has been noted that the quality measure of research productivity is not as frequently used as simple counts since the cost of gathering information on citation is quite considerable (Wanner, Lewis & Gregorio 1981). In addition, the correlation range between citation counts and publication counts are only 0.6 to 0.72 (Cole & Cole 1967).

2.3 The Previous Studies of Research Productivity

Hunter and Kuh (1987) studied the productivity of prolific contributors to higher education. The study was conducted in three phases; (1) identification of prolific contributors by frequency count of articles published during 1979-1983 in seven selected professional journals. There were 85 prolific contributors who gained suitable qualifications. (2) Questionnaire survey to 85 prolific contributors to ask for information about personality traits, educational experiences and other factors considered important by respondents to their development. (3) Semi-structured telephone interviews with eighteen respondents (selected using purposeful sampling to form a subset of persons) from whom to gain insights into the interests, experiences, and motivations of highly productive knowledge producers. The study used theories of Adult and Career Development, Personality and Socialization perspectives. This study found that creative individuals were suggested to be 'confident, sensitive, open-mined, curious, flexible in their thinking, intellectually playful' (p.444) . They are willing to work long hours over long period of time and have a well-developed sense of humour. The reasons for engaging research and publication activities are an interest in contributing to knowledge, facilitating promotion in academic rank, enhancing personal prestige, and fulfilling a sense of scholarly obligation. Factors related to exceptional output are experience in publishing with faculty members in a graduate school, collaboration with students on writing projects, employer expectations to engage in

publishing, inquiry activity motivated by personal satisfaction, presence of a mentor or sponsor, being good-natured, creative or having diverse interests, vocational satisfactions, spousal support of scholarly activities, mentors in a graduate school and situated early in their career and are participants within professional groups.

Butler and Cantrell (1989) carried out an exploratory study to compare the valence of six extrinsic rewards (money, reduced teaching load, tenure, mobility, recognition and promotion) and related these to business faculty members' research productivity. The theory that Butler and Cantrell (1989) used was Vroom's expectancy theory (Vroom 1964). They found that money and reduced teaching load were the most desirable rewards for tenured faculty and that mobility, recognition and promotion are the desired outcomes. Under expectancy and need theory for the lower-level needs, the need strength is a negative sloping function of need fulfilment. The less fulfilled lower-level needs are, the more they will be desired (the higher their valences will be). Money is the greater for assistant professors than for associate professors, while mobility is greater for associate professors than the assistant professors.

Baldwin (1990) conducted a qualitative and exploratory study to identify individual and institutional environmental factors that might distinguish between 'vita' professors and the 'representative' cohort of their colleagues. This study used career development theory. The theory suggested that in many fields workers eventually reach a plateau following an initial period of career growth when they become less goal-directed, and then after achieving the highest academic status, many professors experience a career reassessment phase. Results suggest that the professors invest larger portions of their time in research, administrative and institutional service activities than do the representative cohort professors who lead more diversified and balanced work lives. Vita professors are to be more involved in professional activities such as presentations at meetings, consulting, publishing, collaborating, and applying for funding. By contrast, there were more hindrances reported by vita professors than cohort professors, which included insufficient working conditions (such as poor facilities and library collections).

Blackburn et al, (1991) studied the framework of cognitive motivation theory to evaluate the role of selected personal and environmental motivational variables for faculty members' allocation of work effort given to research, scholarship and service. Blackburn and staff (1991) used need theory, life-stage theory, socialization theory and cognitive motivation theory. Need theory focuses on demographic variables of gender and age as 'ascribed characteristics that can be thought of as surrogates within need motivation theory' (p.387). Life-stage theory describes males to have an increased need for affiliation as their age increases and therefore, their interest in teaching grows as they proceed through the later stages of their lives. These authors posit that at successive points in time people have different needs and these needs motivate behaviour. Socialization theory states that field of specialization, education experience and characteristics of the graduate institution and characteristics of the employing institution play a significant part in a staff member's work output. Blackburn et al. (1991) discussed how certain occurrences, for example earning a Ph.D., would increase one's ability to conduct research or working at a research institution would instil greater values of research and teaching in that individual. Cognitive motivation theory supported the idea that 'the manner in which people differentially assess their personal abilities and interest interacts with their perceptions of the organization's priorities (what it supports) and caused them to engage extensively in some activities and less frequently in other activities' (p.388). In summary, Blackburn et al. (1991), found several variables to be strong predictors of publishing, including self-competence, financial support through obtaining grants, career age, self-efficacy, self-valuations and perceptions of environment. Moreover, they suggested institutions can create opportunities for faculty members to increase their competencies, and also that staff members' growth and performance can be enhanced by appropriate administrative leadership.

Vasil (1992), studied self-efficacy expectations and causal attributions for achievement among male and female university faculty. He used self-efficacy theory. Respondents were from 284 of 428 college faculties. His study found a significant relationship between research self-efficacy and productivity and between self-efficacy and causal attributions. Males reported significantly stronger

self-efficacy beliefs, greater time spent in research, and greater productivity than did females.

Tein and Blackburn (1996) investigated the faculty rank system, research motivation and faculty members' research productivity. The study used behavioural reinforcement theory, cognitive evaluation theory and expectancy theory. The respondents were based on the criteria of employment status (tenure or nontenure but in a tenure track), assistant, associated, and full professors from the unweighted 1989 Carnegie National survey data. There were 2,586 full-time faculty members. The study found that the faculty rank can be viewed as a reward system *'…as a reward, promotion has the greatest motivating effect when it is contingent upon performance'* (p.5). The introduction and removal of promotion influences a publication rate and shapes the productivity curve. Findings from expectancy theory suggested that '… individual needs, values and perceptions about the environment determine one's behaviour' (p.6). Tien and Blackburn (1996) stated that a faculty member's motivation to conduct research will be greatest when they have the belief that research performance will; lead to an outcome, that this outcome is perceived to have value, and that the belief exists that with effort, one will be able to perform at the desired level. Behavioural reinforcement theory suggested that promotion instituted as a fixed interval schedule would influence the productivity curve. The authors noted that expected publication rates are low in the early period of the rank interval, but increase as promotion comes closer, then declines after promotion is obtained. The results found that full professors published significantly more research than assistant and associated professors. However, associate professors did not produce more than assistant professors. The faculty members who remained in a rank position longer than six years had fewer publications than their colleague at the same rank.

Hughes (1996), studied factors related to faculty publishing productivity. This study was designed in part to test the structure of factors upon which the theoretical model underlying the Faculty at Work study by Blackburn and Lawrence (1995) was based. The main theoretical foundations were need theory, life-stage theory, socialization theory and reinforcement theory and the samples were drawn from the Carnegie Foundation for the Advancement of Teaching in

1987. The various pieces of the model were linked together within a cognition motivation framework. The study found that there were numerous factors related to research productivity: (i) socio-demographic variables such as gender, race and chronological age; (ii) professional career variables, including the graduate school in which one received a Ph.D, one's discipline, prior publication record, career age, current rank, tenure status, types of employing institution and one's administrative position; (iii) environmental variables, which are the institution itself, its financial base, location, the nature of the student body and governance structure, reward systems, performance evaluations and incentives that faculty receive for certain behaviour; and (iv) social contingencies, which include the events that happen within the personal environment of the individual faculty member, such as birth of a child or illness of a spouse, domestic strife or death of a family member. The latter points have been proposed by Blackburn and Lawrence (1995), but no empirical evidence of the role that these variables play has been gathered. Educational researchers have also tended to overlook variables in the work environment related to the campus information environment. The size of the library (number of books and journal collection) has been noted to be a factor in a few studies, but there has been no systematic investigation in the literature of higher education. Self-knowledge represents self-evaluations in the terms of beliefs about personal and professional self-image, self-efficacy and competence. Cognitive motivation research suggests that 'an individual's understanding of themselves predicts how they perceive their environments' (Blackburn & Lawrence 1995, p.28).

Williams (2000a) studied the research productivity of a nursing faculty. He proposed to examine differences in research productivity of generic baccalaureate nursing faculty at the public research and regional universities in Kentucky. He used expectancy theory. The respondents in his study were the faculty members who held the rank of assistant professor or above, had at least a Master's degree, and hold a tenure track position. His study found that significant differences were noted in publication counts, components of motivation and time spent in research in the faculty within the two types of institutions. Both similarities and differences were observed in the workplace culture at the regional and research universities.

The greatest percentage of faculty at both types of universities cited resources as a condition that enhanced the research process, and they cited workloads as a condition that deterred the research process.

Williams (2003), studied the research productivity, satisfaction and perceptions regarding the emphasis placed on research/teaching at the Human Resource Education and Development Faculty (HRED). The target population was all HRED full-time and part-time instructional and research faculty in colleges and universities across the United States who possess academic and-or research responsibilities. The theory in this study was based on cognitive motivation theory, expectancy theory and efficacy theory. The sample consisted of 291 HRED faculty members. The finding suggested that research support was present in the form of teaching assistants, funding, and resources specifically provided for research. Moreover, HRED faculty preferred to spend less time in teaching than they were spending and preferred to spend more time in research. Faculty were somewhat satisfied with instructional duties and with other factors related to their job. Faculty somewhat disagreed with items stating research was the primary promotional criteria at their institution and that research was rewarded more than teaching at their institution.

Chen, Gupta and Hoshower (2006) studied the factors that motivate business faculty to conduct research. In their study, the researchers used expectancy theory to examine key factors that motivate business faculty to conduct research. They survey results from 320 faculty members at 10 business schools, showed that faculty members who assign a higher importance rating to both the extrinsic and the intrinsic rewards of research exhibit higher research productivity. Study finding suggest that untenured faculty members were motivated by extrinsic rewards, while tenured faculty members were motivated by intrinsic rewards. Research activities were negatively correlated with years in academic employment. There was also no relationship between research productivity and academic discipline and there are no relationship between research productivity and gender.

In summary, the review of previous research on productivity, I found that the motivation theory was an important theory. The researchers mentioned about various motivation theories such as expectancy theory, need theory, socialization

theory, reinforcement theory and efficacy theory. There are several factors which affect research productivity and lecturers' behaviour or willingness to perform research work. For instance, personality (Hunter & Kuh 1987), rewards (Butler & Cantrell 1989), personal factors (Baldwin 1990), institutional environment (Blackburn et al. 1991), self-efficacy (Vasil 1992) and rank system (Tein & Blackburn 1996). In the next section the factors influence academic research productivity will discuss in more details.

2.4 Factors Influencing Academic Research Productivity

There are numerous factors that have been found to be associated with research productivity. According to Blackburn and Lawrence (1995), related factors appear to be socio-demographic and career factors as well as self-knowledge, social knowledge, behaviours and environmental constructs. When Fox (1996) studied members of the science faculty, there appeared to be three categories of correlates of research productivity: individual characteristics (such as psychological characteristic, work habits and demographics), work environmental factors and reinforcing feedback (colleagues and mentorship). Williams (2003), investigated the factors related to research productivity of human resource education and workforce development in the postsecondary faculty, and as a result classified related factors into three categories: environmental factors, institutional factors and individual interest and ability factors.

For the purposes of the present study, the determining factors for research productivity have been classified into four main parts which are demographic factors, environmental factors, institutional factors and personal career development factors as presented by Blackburn and Lawrence (1995).

2.4.1 Demographic Factors

Demographic factors relate to the personal characteristics of academic members, and for this study they will be taken as age, gender and marital status, and each will be justified, in turn, for inclusion in this work.

Age has been studied in numerous studies with conflicting results. Many studies about productivity have indicated that the relationship between career publication and age is not linear, although the overall rate of publication generally declines with age (Finkelstein, Seal & Schuster 1998; Teodorescu 2000). Levin and Stephan (1991), reported in a longitudinal study that the 'life cycle' effect varies significantly by field. Life cycle is related to publishing productivity and obviously scientists become less productive as they age. Generally, a person's age at first publication affects consequent research productivity. If academic lecturers submit research for their first publication at a young age, then it is more likely that they will produce more at future points in time. Bland and Berquist (1997) noticed that the average productivity of faculty seems to decrease with age, however, many senior faculty members remain quite active in research and their outcomes can be comparable to those of younger faculty members.

High producers produced large amount of research consistently over the course of their career, whereas initially low producers remain consistently below average (Blackburn & Lawrence 1995). These authors have grouped faculty productivity and age into four theoretical categories: (i) Biological perspective: intellectual powers peak at an early age and deteriorate thereafter because of the declining mental capacity when the intellect becomes less flexible; (ii) Psychological perspective: critical events in life (e.g. marriage, children) and career (e.g. tenure, retirement) influence one's motivation level. Productivity tends to rise during the early years and then once the goals are met, the output drops; (iii) Sociological perspective: the high-output department raise the level of lower producers, and different age cohorts can produce at different rates; and (iv) Social-psychological (life-course) perspective: combine personal motivators (interest and competency) with personal perception toward work environment. This theory postulates that received rewards will lead to increased research output. This

observation that ‘the more resources are received the more productivity increases’ (p.38) as noted by Merton (1968) is called ‘the Matthew effect’. However, several researchers found that there are no firm relationships between age and research productivity. Bland and Berquist (1997) found that shift workloads and emphasis influence the number of items produced rather than the age of the worker. Williams (2000b), studied academic lecturers in the Human Resource Development Faculty in the United States and found no significant relationship with age, as did Ramsden (1994) in Australia.

Blackburn et al. (1991), stated that the relationship between gender and researcher productivity has been addressed in many studies. Again, these findings are sometimes contradictory and sometimes show correlation. Many researchers insisted that males have had higher levels of research productivity than women (Bailey 1992; Vasil 1992; Billard 1993; Gottlieb 1994; Blackburn & Lawrence 1995; Finkelstein et al. 1998; Creamer 1998; Kotrlik et al. 2002). Indeed, women appear to have lower achievements on nearly every indicator. Women produce fewer publications, they generally hold lower degrees, they are employed in inferior graduate schools and other places of work, and have lower rank and fewer tenured places (Blackburn & Lawrence 1995; Sax et al.1996; Vasil 1996). Rebne (1990), confirmed results that suggested that women tend to produce less research than men across disciplines. The study found that aggregated production of journal articles yielded a per capita female/male ratio that ranges from 0.26 in management sciences to 0.74 in biological science.

Naturally, women faculty members often have family demands that compete with time to conduct research (Creamer 1998). Women are often not involved in the collegial networks which extend their opportunity as men are (Epstein 1988). Further, Gaertner and Ruhe (1983) reported that many women face greater work-related stress than men because they feel compelled to exceed the work performance of men. Many academic women find themselves in a male dominated work environment, and are often dependent on male colleagues to support their mentoring and training which is necessary to be a successful researcher. A survey by Norgaard (1989) of academic women in an Accounting Faculty found that over 50 percent of the respondents believed that an ‘old-boy’

network existed in academic settings and 49 percent experienced gender-based discrimination that finally reduced their research productivity. Moreover, women generally receive less recognition or credit than do men for their contribution to a co-authored piece, particularly with a senior male (Sonert & Holton 1995; Ward & Grant 1996).

However, some researchers found that there was not a gender difference in productivity (Kotrlik et al. 2002; Teodorescu 2000; Williams 2000b). Rubin and Powell (1987) as well as Omundson and Mann (1994) found no difference in publication outputs for male and females in a Social Work Faculty. Similarly, McNamee, Willis and Rotchford (1990) found no gender differences in a Sociology Faculty. Garkland (1990) found likewise for a library and information science faculty, and Rieger (1990) for an Education Faculty. Allen (1990), in a study of Australian Universities, also found no difference between men's and women's outcomes. Some researchers have recommended that academic men and women should be motivated by different methods, depending on their role performance (Austin 1984; Horning 1984; Long 1987).

Examining marital status, married women were more productive than single women (Astin & Davis 1985). However, Creamer (1998), discovered that there was either no significant effect or a positive effect on publishing productivity for married women. Furthermore, some studies of women with children have evidenced a significant negative effect on publishing productivity (Kyvik 1990), while others have documented either a significant positive effect (McKenzie 1986) or no significant effect (Long 1990; Toren 1991).

2.4.2 Environmental Factors

Academic environments and cultures or climates generally provide both socializing and reinforcing organizational messages about norms, values and expectations concerning research (Kuh & Whitt 1998). The culture of the academic profession includes a series of primary academic values such as intellectual inquiry and understanding, social commitment, academic honesty, academic integrity,

academic freedom and faculty collaboration toward a community of scholars (Austin 1992).

Collegial commitment is one of the outstanding influences on research productivity. Collegial commitment is a factor that demonstrates the perceived strength of faculty commitment in the institution as a whole and within the member's department (Blackburn & Lawrence 1995). Jauch et al. (1978) found no relationship between a faculty member's institutional loyalty and her or his productivity. Nonetheless, researchers with the strongest professional commitment still had higher research productivity.

The climate in the working area is a very important drive to positive productivity. The positive atmosphere that faculty members get from immediate colleagues on their campus, scholars and lecturers can sustain and develop new ideas. Faculty members can obtain reinforcement from their colleagues to continue their work. Good colleagues are sources of ideas, criticism and also provide pressure to do good work in the form of strong motivation to succeed (Blackburn & Lawrence 1995).

Many studies have found a positive correlation between reinforced climate and research productivity (Braxton 1983; Louis et al. 1988). One extremely important insight found in the studies on research performance is that scholarly inquiry is a social process. The amount of colleague interaction stimulates individual involvement by offering opportunities for researchers to test ideas, share discoveries and reap the rewards of social interaction (Creswell, 1986). Prpie (1996), examined a significant intensive scientific collaboration among 385 eminent researchers. Jones and Preusz (1993), showed a significant relationship between research productivity and the extent of interaction with colleagues for discussions along with involvement in joint research products. The personal relationships with colleagues are the basis for informal exchange of ideas that finally become collaborative research projects.

Bland and Ruffin (1992), described twelve important organizational variables or cultural characteristics that positively influence faculty research productivity. Those variables consist of clear organizational goals, a research emphasis, distinctive research culture, a climate balancing between respect and

intellectual jostling, assertive participative governance and a flat (decentralized) organizational structure.

The Medical College of Wisconsin (2003) has investigated those attributes of staff which are recognized as being 'collegial habits' within a highly effective faculty. These effective habits consist of: (i) associating and collaborating with distinguished colleagues in any discipline; (ii) having a collegiate network which includes senior colleagues, peers, administrators and staff; (iii) collaborating with colleagues on writing, teaching, research and/or administrative tasks; (iv) regularly obtaining guidance and/or feedback from senior colleagues; (v) establishing regular contact with professional colleagues outside the institution; and (vi) borrowing resources from colleagues that are pertinent to a new assignment.

In addition, Dundar and Lewis (1998), reported that high ratios of graduate students to faculty had a high correlation with productivity, and the percentage of graduate students that were hired as research assistants correlated highly with research production. Hancock et al. (1992), as well as Zamarripa (1995), suggested that the number of graduate students supervised is correlated with research productivity.

Beside the environmental factors mentioned above, the leadership of an institution or department leaders are important factors affecting research productivity. Leadership is a relationship between leaders and their constituents and a subtle process of mutual influence that fuses thought, feeling, and action to produce collective effort in the service of the purposes and values of both the leader and the led (Bolman & Deal 1991). Kerr (1977), reviewed the literature on leadership and found that leadership plays an important role in research universities because the leadership highlight staff morale and self-esteem. For Gardner (1995), who studied leadership from the perspective of the cognitive psychologist, leaders are 'persons who, by word and/or personal example, markedly influence the behaviours, thoughts and /or feelings of a significant number of their fellow human beings' (p.6). Leadership in academic organizations can be understood as taking different forms depending on how leaders view their institutions. A university can be viewed as a bureaucracy, a collegium, a political system or an organized anarchy (Chaichanapanich 1998).

Generally, leadership has a weak relationship with academic productivity, even when the Chair of the faculty lends moral support or provides monetary backing for the research, because faculty members continue to be more concerned about their teaching, their research or their scholarship. Indeed, it has been observed that faculty staff members valued more highly the assessment of their colleagues and their students than the support of their leadership (Blackburn & Lawrence 1995). On the other hand, Glueck and Jauch (1975) discovered that the behaviour of the administration had a significant influence on the satisfaction of the academic members. Researchers were most satisfied with administrators who they perceived to be satisfied with them and their work, who attempted to reward them and who supported them to do more research.

2.4.3 Institutional Factors

According to the Carnegie Classification (Middaugh 2001), there are six types of educational institutions: (i) Research universities that offer a full range of Baccalaureate programs to graduate education through the Doctorate, and give high priority to research; (ii) Doctoral Universities that offer a full range of baccalaureate programs and are committed to graduate education through the doctorate; (iii) Comprehensive colleges and universities that offer a full range of baccalaureate programs and are committed to graduate education through the Master's degree program; (iv) Two-Year Colleges that offer the associated certificate or degree programs and with few exceptions, offer no baccalaureate degrees; and (v) Specialized institutions that offer degrees ranging from the Bachelor's degree to the Doctorate in a specialized field such as medical schools, law schools and art colleges. Of relevance to this investigation is that the type of educational institution can influence the level of staff research productivity (Gottlieb 1994; Ramsden 1994; Noser, Manakyan & Tanner 1996). The study of Radhakrishma, Yoder and Scanlon (1994) reported that faculty members in major research institutions published more than faculty members at four-year colleges. El-Khawas (1991) reported there are lower productivity rates for senior members at two-year colleges than at four-year colleges and comprehensive universities.

Pettigrew and Nicholls (1994) found that publication productivity is likely to be higher in doctorate-granting universities.

Prior research has shown that faculty staff behavior is less likely to be controlled by formal bureaucratic rules in research universities than in comprehensive universities (Clark 1987). Meltzer and Slater (1962), stated that the lower the level of supervision, the greater the job satisfaction. In research universities, faculty members are treated like professionals, in that they can set their own agendas (Finkelstein 1984), and they can bargain agreements and contribute to standardization of faculty work. This is in contrast to comprehensive universities, where faculty members are treated like employees and consequently, the comprehensive university's faculty members may find fewer opportunities than research university faculty staff to integrate research into their work practices (Colbeck 1998). Kerlin and Dunlap (1993), stated that the prolonged austerity and retrenchment in higher-education system has contributed to very low morale of faculty members. Bland and Ruffin (1992) said university should establish policies and practices that favour the appointment of highly able and motivated people.

For each faculty or discipline, there are also differing amounts of research productivity. Kyvik (1990), believed that the discrepancies between each faculty arise from differences in their historical development especially in terms of the speed of knowledge production and technological advancement. Beyer and Steven (1974) compared faculty in chemistry, physics, political sciences and sociology and found significantly different rates of publication among them. Science and social science are different. Science is the knowledge of principles and causes that ascertained the truth of facts (Webster's Revised and Unabridged Dictionary 1913), while social science refers to disciplines whose primary purpose is to help understand behavioural and social phenomena (Ellis 1994). Wanner, Lewis and Gregorio (1981) mentioned that natural science faculty members publish nearly half as many articles as social scientists and two and one-half times more than in the humanities.

Regarding research training, the faculties in 'hard' science areas such as physics have more opportunities to work with students than faculty in 'soft' science areas such as English (Colbeck 1998). It has been observed that physicists

integrated research and teaching as they worked alongside undergraduate and graduate research apprentices, and that the physics faculty perceived the process of exploring physical reality as something that could be enhanced by sharing and subdividing experimental tasks. By sharp comparison, English students' research efforts seldom contributed directly to faculty research.

Institutions set the stage for the research performance of their faculty members. The selection of new faculty members is the most critical process for developing and strengthening a culture of research. Institutions with high Doctoral prestige produce the graduates that are the best sources for other institutions to recruit productive faculty members (Creswell 1986). Ideally, the chair and members of faculty recruiting committees should themselves have high research performance. This is of particular relevance because universities also value research from the standpoint of prominence of their faculty members in obtaining competitive research grant funding, which increases the reputation of the institution.

Several studies demonstrated that there is a relationship between research productivity and salary. Higher salaries may result in attracting productive faculty, while at the same time minimizing the possibility of losing active faculty to other institutions (Jacobson 1992; Pfeffer & Langton 1993; Tornquist & Kallsen 1992). Kelly and Warmbrod (1986), stated that 'perceived institutional and departmental supports for research are seen as the most important enablers for research productivity' (p.31). Jones, Lindzey and Coggeshall (1982) said the amount of direct expenditures on material support can be used as an indicator of research performance. This is consistent with Etzhowitz (1992) who found that the ability to secure research funding has become a criterion for success. Funding grants normally include salary money for the professor and funds that are available to hire other professionals to help teach and conduct effective research. In 1998, Dundar and Lewis developed and tested a more comprehensive model of faculty research productivity and found that a library expenditures measure represented one of the important institutional attributes. Where there was increased demand in expenditures for library facilities, it appeared that the research productivity of faculty staff also increased (Payne & Spieth 1935).

Generally, the amount of time a faculty member chooses to spend in research activity affects their research productivity (Cohen & Gutek 1991; Vasil 1992). Financial support for Faculty members encourages them to self-motivate and reallocate their time to do research (Slaughter & Rhoades 1990). A study of academic work by the Ontario Council on University Affairs found that staff in the highest position output group reported working an average of 51 hours per week which included 24 hours on research and 20 hours on teaching. Staff with the lowest publications outputs reported an average of 43 total hours per week, made up of 12 hours on research and 24 hours on teaching. The high research producers found additional time for both research (8 hours) and teaching (4 hours) (Skonik 2000). A report conducted by Oklahoma State Regents for Higher Education (1993), stated faculty members felt they spent too much time in administrative roles and not enough time in personal development activities.

Some researchers found that time spent on research affects research productivity. Liddle, Westergren and Duke (1997) studied time management in relation to time spent on research activities and investigated correlations with publication productivity. Their findings were similar to those of Bailey (1992), who showed an increase in research productivity was supported by amount of time spent on research activities. Williams (2003) found that the balance of time spent in teaching, research, service and administration can explain a significant proportion of the variance found in research productivity, while total work hours did not explain a significant proportion of variance. On the other hand, Kotrlik et al. (2002), found that time allocated to research did not relate specifically to research productivity.

2.4.4 Personal Career Development Factors

Personal career development factors are those factors that come from the academic and personal qualifications of academic lecturers themselves. These factors include such items as an individual's ability and interest, attitude toward conducting research, academic origin, the type of advance degree earned, research experience, skills and training, rank and tenure status.

In a similar way, a staff member's attitudes and commitment to scholarly work relates closely to their research productivity. Researchers are productive because they value their research role and share, in common with colleagues, a deeply embedded normative structure that guides the way to create and communicate new knowledge.

Beehr, Walsh and Taber (1976) indicated that role stresses can interfere with the way in which a person interprets the notion that working hard and effectively will bring about the satisfaction of higher order needs. These authors also suggested that role stresses may adversely affect workers who strongly value the task attributes of enriched work. In a similar Pfeffer and Langton (1993) reported job satisfaction was positively related to productivity, and noted that staff opinions of their personal circumstances may influence productivity, whether it is an opinion of job satisfaction, research/ training environment, funding adequacy or the freedom to collaborate.

It has been suggested that interest in research can be the best predictor of research productivity (Gottlieb 1994; Ramsden 1994; Noser et al. 1996). However Blackburn et al. (1991), found this variable did not satisfactorily predict productivity.

The term academic origin is defined as the college, university or other academic institution from which an academic member graduated or received his/her highest degree (Rhodman 2002). The top academic institutions generally produce a high level of research productivity because high-status universities enjoy advantage in terms of financial resources and research support that encourage publication (Reskin 1977; Beyer, Chanove & Fox 1995: Gomez-Mejia & Balkin 1992; Konrad & Pfeffer 1990; D'Aveni 1996). D'Aveni (1996) pointed out that a process of 'homosocial' reproduction is common within business schools, so that graduates of high-status universities are hired by other high-status institutions.

Generally, the academic faculty members in the health professions such as nursing and dentistry who earn a PhD degree have been associated with higher levels of faculty research productivity (Collins 1993; Flanigan et al. 1988; Harrington & Levine 1986). Consequently, it appears that earning a PhD

apparently teaches health profession faculty members those academic norms and values needed for high research productivity.

Cumulative advantage refers to a staff member's prior academic and professional training. The faculty members in higher education areas require research recognition and a history of resource accumulation in their previous experience to form a base for raising opportunities to gain additional resources in the future (Brocato 2001). The attribute of accumulative advantage makes it easier to achieve success in publishing because of prior research project experience, research membership, development of research skills, collaboration on research project and research sponsorship (Creswell 1985; Collins 1993; Fox 1996).

According to Finkelstein (1984), academic rank is a significant predictor of publication success because the academic lecturers in higher ranks generally have more control over their workload assignment, allowing faculty of higher rank to produce more research than those of a lower rank. Fulton and Trow (1974) observed that 29% of the full professors, 20 percent of the associate professors, 13 percent of the assistant professors and 2 percent of the instructors has published five or more articles in a two-year period. This work accords with the findings of Bailey (1992) who pointed out that rank is a significant predictor of research productivity. Dundar and Lewis (1998) found that departments with higher ranked faculty resulted in higher research productivity (Vasil 1992).

2.5 Academic Research Productivity in Higher Education in Thailand

The national research system in Thailand consists of 'inputs' that are research funds, researchers and research units; a 'process' which is the management system; and 'outputs' that are the research outcomes. According to the statistics related to the national research funds and research expenses in Thailand in 1997, Thailand had a national research fund of approximately 4,811 million baht, that was 0.10 percent of the GDP, and research expenses of 3,788 million baht which was 0.40 percent of overall national expenses. It has been reported that Thai National

research expenses were utilized by governmental units rather than private organizations (National Research Council of Thailand 2002).

In examining the quality and quantity of researchers in 1997, it can be said that there were 4,409 persons classed as researchers which represented 0.72 persons per 10,000 national citizens and there was only 0.23 full-time researchers per 1,000 national citizens. The government has consequently tried to increase the number of researchers to 3.5 people per 10,000 national citizens between 2002 and 2006 (National Research Council of Thailand 2002).

Researchers are the most important source of research productivity, and if any nation can build a cohort of highly qualified researchers, then it can enhance quality research outputs, skills and knowledge. In regard to this claim, Pongwuttisak (1991) studied the citation count of academic lecturers in Ramkarmhaeng University and found that 33.5 percent of citations arose from public universities' research outputs. Clearly, the majority of researchers are in the universities and other higher education institutions. As a result, the Thai government has targeted universities in its national research plan in order to encourage and stimulate more research productivity.

The higher education sector is fundamental to National development. It is an intellectual centre that emphasizes searching for new knowledge alongside the development of human resource potential for professional improvement. Keawmani (1991) analyzed the research outcomes of academic lecturers in Ramkamhaeng University and concluded that the university officers carried out their research in order to improve their knowledge and solve problems by using descriptive research and questionnaires. Furthermore, it is noted that educational institutions generally influence the academic directions of society (Sirichana 1997). For example, according to Sinsiri (1991) higher educational institutions are independent educational units that have the freedom to create their own regulations to guide the analysis and exploration of new knowledge . The regulations also provide guidance on publication by placing emphasis on the reality and validity of professional competence. Panit (1997) pointed out that if universities wanted to develop their institutional quality, they had to emphasize improvement of the organizational units to be the source of new knowledge and, in so doing, become

creative and effective researchers by having good networking with doctoral students and grouping of new research teams.

Tavorn (1983), studied academic lecturers in the Teachers College in the Central area in Thailand and found that the lecturers had moderate research skills, moderate research funds, time and research resource availability. Sangjan (1985) studied the factors that influenced research productivity of the Teachers College in the Central area and discovered that the majority of respondents carried out research, in particular those lecturers who were 36-40 years old, who held a Master degree and had approximately 11-15 years work experience. These findings were supported by the study of Rathanit (1993), who conducted a study at Surin Teaching College and found similar results to Sangjan in 1985. Moreover Rathanit (1993) also mentioned that lecturers, who did research when they studied at their graduate level, generally had positive attitude towards research. Petcharat (1989) studied the academic lecturers in the universities in the south of Thailand and found that the academic lecturers had moderate research skills, fund, time and research availability, which is similar to the situation found by Tavorn (1983). Patisampita (1989) and Taesiji (1989) studied the factors which influenced lecturers' research productivity at Sinakarin Tharavirot Prasanmit University, and found that the lecturers who produced a large number of research outcomes had higher rank than those who produced less outcomes.

Consequently, the Thai government has currently launched a national research policy in order to guide institutional research units in how to produce effective research outcomes. These guidelines are provided for use by all parties involved in research, including government, institutions, private organizations and the community. The intention is that there should be enough research funds and the systems should be flexible enough to support research, as well as providing criteria to measure the research effectiveness.

2.6 Chapter Summary

This literature review has presented a number of views on the meaning of research productivity, which is the relationship between the outputs generated by a system and the inputs provided to create those outputs. As discussed, whilst research productivity can be measured by both quantity and quality, the most frequently used method is to count research productivity based on a weighting system.

The literature review indicates that there have been numerous studies investigating academic research productivity, and these have used a range of different theories. From reports of previous studies, it appears that several factors were found to be associated with research productivity. These factors can be classified into four main groupings which are demographic factors, environment factors, institutional factors and personal career development factors.

The next Chapter will demonstrate the main theoretical contributions that underpin a useful conceptual framework which can be used to understand what motivates lecturers to do research. This motivation theory will be introduced and the conceptual model will be presented.

CHAPTER 3

Conceptual Model

Brought together in this Chapter are considerations drawn from previous studies discussed in the literature, the theories that previous research drew on when studying research productivity and the important factors found by the studies to affect research productivity. These considerations will enable attention to be given to the generation of focus questions which will help to provide a clearer and more systematic investigation of the main research question, "What are the factors that impact on low research productivity of academic lecturers in a public University in Thailand?"

3.1 Supporting Theory

In examining the previous studies reviewed in section 2.3, it becomes apparent that 'motivation theory' is the predominant theory that researchers utilized when studying research productivity. This part describes the supporting theory for this study which was identified through a review of motivation theory and other related theories. The details of each theory will be discussed, compared and contrasted with a view to developing a conceptual framework suitable for this project.

3.1.1 Motivation theories

According to Greenberg (1999), motivation has been defined in science as the process of arousing and maintaining goal directed behaviour. Motivation is key in the establishment and further development of quality in higher education (Rowley 1996)

Motivation theory can be classified in two main ways; content theories and process theories (Greenberg 1999).

Content theories mainly emphasise the basic human needs and drives that cause humans to perform or cease behaviours. Within the work environment, content theories focus on the needs, motives, or desires that cause employees to produce desired outcomes, as well as their relationships to the incentives or rewards that affect on personal performance (Greenberg 1999). Some of the well-know content theories of motivation are: Maslow's hierarchy of needs theory, McGregor's theory X and theory Y, Hertzberg's two factors motivation theory, and McCleland's achievement theory, Alderfer's ERG, and equity theory (Greenberg 1999).

Process theories are concerned with how behaviour originates and operate in the work environment in order to achieve desired outcomes (Auth 1999). Some well-known process theories include: Adams's equity theory, Vroom's expectancy theory, reinforcement theory, and goal setting theory (Greenberg 1999).

Maslow's hierarchy of needs theory

Maslow's hierarchy of needs is based on the idea that motivation comes from human needs. Maslow (1954), stated that to understand motivation at work, one must understand that human motivation arises from needs that can be placed on a hierarchy of importance. Once one set of needs can be satisfied, people begin to be motivated by higher stages of needs. Maslow's theory contains five priority of needs. These needs are: basic physiological needs, safety from external danger, love or affection and social activity, esteem and self-respect, and lastly self-realization and accomplishment.

Of the five levels of needs, the basic physiological needs (need for food, shelter, and water) should be satisfied before the next higher need becomes a motivator. The second step is safety needs such as the protection from disease, natural disasters and the dangers of war. The first two needs are called low-order needs (Maslow 1954).

When people satisfy the lower-order needs, they continue seek love and affiliation and esteem needs. Love and affiliation needs include feelings of belonging, acceptedness, affection, and friendship (Maslow 1954). The esteem needs include ego needs, such as pride, self-respect and feelings of achievement and confidence (Maslow 1954). The highest level of need is self-actualization. People desire to become more and more what one is (Maslow 1954).

Interestingly, Maslow's hierarchy of needs was criticized by many psychologists. In 1957, Maslow appears to have been introduced to the business discipline through a textbook in North America by Davis (1957). Davis (1957) referred Maslow's work in a chapter on the 'Mainsprings of motivation', under the heading 'Priority of needs' thereby indicating it's applicability for understanding the business or work environment . Maslow's theory has been widely accepted and recognized by learners for more than 50 years (John & Saks 2005). Maslow's hierarchy has been adapted and incorporated into a wide range of theoretical or practical applications to various topics.

However, some researchers argued that although the Maslowian paradox is widely accepted, there is little research evidence to support it (Wahba & Bridwell 1973). More than that, Cardinell (1981) and Weller (1982), stated that Maslow's theory did not include 'knowledge and understanding'. Weller added that knowledge and understanding should appear between the need for esteem and the need for self-actualization. Campbell and Pritchard (1976) also argued that peoples' needs are more complex and difficult for a person to control than is represented in Maslow's original hierarchy. Much more than that, self-actualization has proven to be the most difficult to define and to understand in terms of realizing the potential in one's personality.

McGregor's theory X and theory Y

In 1982, McGregor studied two different sets of managers' attitudes, which he termed Theory X and Theory Y. The management style associated with Theory X is characterised as one of coercion and control of employees. The assumptions behind Theory X state that the average human dislikes and tries to avoid working

whenever possible, therefore the approach of managers must be to coerce and control with punishment. The theory assumes that these kinds of workers prefer to be directed and that the primary motivators are fear and money. A Theory X approach means managers allow workers little responsibility, authority, or flexibility. It views workers as needing to be trained and carefully watched to see how they perform (Bobic & Davis 2003).

In contrast to Theory X, Theory Y suggests that managers need to develop the potential in employees and help them release their potential toward common goals. Workers are likely to perform their tasks and therefore, it is seen by managers as unnecessary to control and punish. Generally, people commit to their goals as they perceive rewards as their achievements (McGregor 1985). Theory Y emphasizes a relaxed managerial atmosphere in which workers are free to imagine, be creative and ingenious in setting goals. From the perspective of Theory Y, managers are only consultants in the decision-making process (Merriden 1998).

The Theory X and Theory Y are contrasting theories. In general, management within an organisation cannot specifically select to take on a Theory X or Theory Y approach, rather, it depends on the situation. An effective leader needs to recognize that different motivators are appropriate for different staff and that different staff also have different inherent levels of motivation when setting their own targets (Rowley 1996). Good management should recognize that people are different, teaching staff in higher education are inherently well motivated and work in an environment where the development of professional skills and subject knowledge is the accepted norm as is minimizing staff dissatisfaction (Rowley 1996).

Hertzberg's two factors motivation theory

Herzberg and his team published 'The Motivation to Work' in 1959. This publication explored the impact of fourteen factors on job satisfaction and dissatisfaction in terms of their frequency and duration of impact. The authors used an interview technique which was a new method of data collection at that time for

critical incident analysis. Over 200 accountants and engineers were involved in recalling job-related incidents.

Herzberg's motivation-hygiene theory identified two sets of factors dealing with job satisfaction and dissatisfaction (Herzberg, Mausner & Snyderman 1959). They related dissatisfaction in the work environment to hygiene factors and satisfaction or psychological growth to motivation factors. Herzberg identified hygine factors into working condition, salary, status, security, and interpersonal relations (such as relations with policies and administration or style of supervision). Motivation factors are based on what employees actually do and plan to get through achievement recognition, responsibility, advancement and growth.

Herzberg's theory was a departure from Maslow's hierarchy of needs (1954). Maslow focused on the extent of the deficient need, satisfaction or unmet satisfaction. Alternatively, Herzberg's theory viewed work outcomes (such as recognition and achievement) as being important for individuals when they attempt to achieve job satisfaction.

Herzberg's theory is valid for management as it focuses attention on the influence of motivators on workers' attitude. Herzberg's theory is suitable when looking at reducing dissatisfaction to encourage employees to achieve in their positions. In 2005, Nigel and Geoffrey examined the issue of whether Herzberg' s theory still resonates nearly 50 years after it was first posited. The study's objective was to assess whether or not Herzberg's contentious seminal studies on motivation at work still held today. In their research, 3,200 large organizations from the UK Association of Suggestion Schemes were selected. The sample was stratified to ensure that each of seven employment sectors were represented thereby including Government, utilities, services, retail and manufacturing, financial services and the police. The results found that money and recognition do not appear to be primary sources of motivation in stimulating employees to contribute ideas. In line with Herzberg's predictions, factors associated with intrinsic satisfaction play a more important part. In Thailand, Rathavoot and Ogunlana (2003) also tested Herzberg's two factors theory in the Thai construction industry. Their study involved interviewing Thai construction engineers and foremen to compare the results to those captured by Herzberg. They found that

responsibility, advancement, possibility of growth, and supervision contribute to job satisfaction, while working conditions, job security, safety on site, and relationships with other organizations contribute to job dissatisfaction. Recognition, the work itself, company policy and administration, interpersonal relations, personal life, and status contribute to both satisfaction and dissatisfaction. Achievement contributes to satisfaction for engineers but contributes to both satisfaction and dissatisfaction for foremen. Rathavoot and Ogunlana (2003) concluded that in Herzberg's theory, some factors should receive attention if construction employees are to be motivate effectively.

Herzberg's two factor theory of human motivation is related to McCleland's achievement-motivation theory (McCleland 1980). McCleland's achievement theory will be discussed in the next section. .

McCleland's achievement theory

McCleland (1961) has been a key researcher in the field of achievement motivation. He developed methods for counting the frequency of thoughts, actions, and feelings of individuals related to attaining excellence. His theory has been viewed as a measure of the strength of achievement motivation. (Alschuler, Tabor, & McIntyre 1970).

At Wesleyan University, McCleland and his team developed a technique called 'Thought sampling', McCleland noticed that the thoughts of successful people seemed saturated with ideas about competition, liking to win and hating to lose.

McCleland's theory indicates that workers with high achievement motivation are more interested in motivators (achievements, achievement recognition, responsibility, advancement, and growth) and desire feedback on how well they are doing their job.

People's self-determination, that is, their drive to achieve and maintain a state of control and stability produces security and predictability. In 1980, McCleland conducted a study about the need for achievement as a distinct human motive. The intensity of this achievement motive (in the achievement-motivated

individual) is directly proportional to the desired outcome and the perceived need to control the factors influencing the outcomes. Achievement-motivated individuals value achievement over reward for success, that is, they are intrinsically motivated. McCleland also stated that such individuals require concrete or job relevant feedback that allows them to improve productive performance.

Alderfer's E.R.G. theory

Beside the five levels of needs suggested by Maslow, Alderfer's E.R.G. theory addressed three basic sets of needs: Existence (E), Relatednees (R), and Growth (G). Elderfer (1969) described existence needs as follow:

> Existence needs include all the various forms of material and physiological desires. Hunger and thirst represent deficiencies in existence needs. Pay, fringe benefits, and physical working conditions are other types of existence needs. One of the basic characteristics of existence needs is that they can be divided among people in such a way that one person's gain is another's loss when resources are limited. (p.145)

It can be summarized that existence needs are a physiological desire for material and physical well being. These needs are satisfied with food, water, air, shelter, working conditions, pay, and fringe benefits. People have to share material resources.

Related needs were described as:

> Relatedness needs include all the needs which involve relationships with significant other people. Family members are usually significant others, as are superiors, coworkers, subordinates, friends, and enemies. One of the basic characteristics of relatedness needs is that their satisfaction depends on a process of sharing or mutuality. People are assumed to satisfy relatedness needs by mutually sharing their thoughts and feelings. This process markedly distinguishes relatedness needs from existence needs because the process of satisfaction for existence needs prohibits mutuality. The exchange of acceptance, confirmation, understanding, and influence are elements of the relatedness process. (P.146)

In conclusion, relatedness needs include the desire to establish and maintain interpersonal relationships. These needs are satisfied through relationships with family, friends, supervisors, subordinates, and co-workers.

Growth needs are related to:

> … all the needs which involve a person making creative or productive effects on himself and the environment. Satisfaction of growth needs comes from a person engaging problems which call upon him to utilize his capacities fully and may include requiring him to develop additional capacities. Thus satisfaction of growth needs depends on a person finding the opportunities to be what he is most fully and to become what he can. (p.147)

For growth needs, it is the desire to be creative, to make useful and productive contributions and to have opportunities for personal development that are the key factors.

Alderfer (1969), pointed that existence, relatedness, and growth vary on a continuum of concreteness. The existence needs are the most concrete, related needs fall in the moderate range, and growth needs are least concrete.

E.R.G. theory is similar to Maslow's theory as the process of need fulfilment consisted of moving along the continuum in relation to satisfaction progression. But the difference lies in the content and process terms (Landy & Trumbo 1980). Maslow's theory has five needs, while Alderfer's theory has three needs. Maslow's theory is one of fulfilment-progression, while Alderfer's theory contains both fulfilment-progression and frustration-regression.

E.R.G. is suitable to study job satisfaction. In 2002, Kuennen studied job satisfaction among nurse educators of private colleges and universities in a Midwestern state using E.R.G. theory as the fundamental theory. She investigated job satisfaction with three facets (the work itself, collegiality, and workload). Kuennen's justification for using E.R.G. theory was that this theory consisted of three core human needs. She found that 85 educators were satisfied with their job in general, and satisfied with collegiality and the work itself in particular.

Adams's equity theory

Adams (1963; 1965) is recognized as the person who developed equity theory. His theory derived from Festinger's (1957) work which investigated cognitive dissonance and built on Patchen's (1961) early equity theory. All these early works assume; that people perceive 'fair' or 'unfair' return for their contributions to relationship, that they employ social comparison processes, and that they try to reduce the inequities cognitively or behaviourally when they are perceived (Carrell & Dittrich 1978)

Equity theory focuses on people's perception. Motivation stems from attempts to reduce unfairness or inequity in personal relationships (Wilkens & Timm 1978). Equity theory hinges on inputs in exchange relationship with outputs. Inputs represent the investment in the exchange relationship for which the contributor expects some reciprocal return. While outputs are resources, returns, rewards, or compensation that the actor derives from the relationship.

In conditions where the individual perceives that his outcomes are equal to the other person's, this state should lead to satisfaction for the participants in the relationship (Greenberg 1990). On the other hand, inequity treatments are expected to produce tension and dissonance (Adams 1963). Inequity consists of four principles (Cosier & Dalton 1983); (1) perceived inequity creates tension within a person. (2) the amount of resultant tension is proportional to the size of the perceived inequity. (3) the tension stemming from perception of inequity motivates the persons to reduce it. (4) the degree of motivation to reduce the perceived inequity is proportional to its size.

Equity theory is unlike any other theory as it focuses only on fair and unfair treatment. However, equity theory can be applied to studies across a range of topics. Equity theory has been applied to investigate the power structure in marital relationship (Webster & Rice 1996), satisfaction with bargaining (Darke & Dahl 2003), the relationship between friends (Roberto & Jean 1986), and perceptions of fairness of reward allocation in teams (Wilke, Rutter, & Kinppenberg 2000).

Reinforcement theory

Reinforcement theory was developed by Skinner (1953). In reinforcement theory, behavior can be explained by environmental consequences (Luthans & Kreitner 1975). The theory relies on the concept of the 'law of effect', which demonstrates that positive or pleasant behaviors are more likely to be repeated (Thorndike 1911).

There are four types of reinforcement: positive reinforcement, negative reinforcement, extinction and punishment. Positive and negative reinforcement purpose to increase behavior, while extinction and punishment aim to decrease behavior.

Due to reinforcement theory, people learn several things during the process of reinforcement. Rules of consequence are used in a three step sequence 'When-do-get' (West Virginia University 1996) Step 1 is 'When in some situation', step 2 is 'Do some behavior, and step 3 is 'get some consequence'.

Although the reinforcement theory is a powerful influence tool, the theory contains some limitations (West Virginia University 1996); (1) it is difficult to identify rewards and punishment. Finding good rewards and punishments requires a great deal of experience and insight. (2) It requires control all sources of reinforcement, (3) internal changes can be difficult to create. It works best with the heuristic thinker, not requiring systematic thinking. It needs to maintain steady reinforcement cues to maintain the desire actions. (4) punishing is difficult to do well.

Goal setting theory

In the mid-1960s, Locke began to examine and continued researching goal setting for thirty years in order to understand the impact of goals on individual performance (Wikimedia Foundation Inc 2007).

Goal setting theory predicts a linear relationship between motivation and performance. Goals have a direct effect on motivation by directing attention, mobilizing effort, increasing persistence, and motivating the search for appropriate performance (Locke et al. 1981). Goals can affect performance in three ways; (1)

goals have direct efforts to goal relevant activities, (2) Goals lead to more effort, (3) goals influence persistence (Wikimedia Foundation Inc 2007).

Mento, Steel, and Karren (1987), conducted a meta-analysis examining the relationship between several goal setting variables and task performance, using both laboratory and field studies. The sample size in this study was 7,404 persons. Mento's study found that difficult goals result in higher performance than easy goals. The result of the study stated that goal setting is a viable motivational technique, as is demonstrating goal difficulty and goal specificity.

However, goal-setting theory has some limitations. In an organization, a goal of a manager may not align with the goals of the organization as a whole. The goals for each person may be in direct conflict with the employing organization. If the individual goals and organization goals do not match, performance may suffer (Wikimedia Foundation Inc 2007).

3.1.2 Motivation theories supporting this study

Vroom's expectancy theory

Vroom's expectancy theory is a process theories. Vroom's (1964) model of work motivation applied an expectancy perspective to the workplace. Expectancy Theory, as related to cognitive motivation, helps a researcher understand how individuals make decisions regarding various behavioral alternatives. Vroom (1964), pointed out that people are motivated to work when they expect that job performance will lead to desired outcomes and when they value work activities.

Vroom (1964) noted that industrial psychologist' failure to develop generalizations regarding the relationship between ability tests and performance criteria. Then, Vroom (1964) developed his motivational force model, along with a model of performance which became known as the expectancy models of performance. Supported by Weiner (1985), he observed that *'every major cognitive motivational theorist includes the expectancy of goal attainment among the determinants of action'* (p.555).

Expectancy theory consists of Effort-Performance expectancy, Performance-Outcome expectancy and Valence. Effort-performance expectancy (EP) relates to how people evaluate their ability and how they consider the adequacy of contextual factors such as resource availability (Bateman & Zeithaml 1993). Expectancy is the belief that one's effort (E) will result in attainment of desired performance (P) goals. This belief is based on an individual's past experience, self-confidence and the perceived difficulty of the performance standard or goal (Bartol et al. 1998). For expectancy to be high, individuals must believe that they have some degree of control over the expected outcome. On the other hand, when individuals perceive that the outcome is beyond their ability, their motivation is low. Alternatively, if goals are set too high, it might be difficult for them to achieve success, and this again leads to low expectancy perception.

Performance-outcome expectancy (PO) is the possibility of an achieved performance leading to certain outcomes. The possible outcomes include potential rewards such as bonus and promotion (extrinsic reward) or a feeling of achievement (intrinsic reward), but also include negative outcomes, such as the loss of leisure time (Bartol et al. 1998). Intrinsic process motivation emerges from individuals primarily motivated by intrinsic processes when engaged in activities that they consider fun or enjoyable. These individuals are often diverted from tasks that are relevant to goal attainment in order to pursue tasks that are intrinsically more satisfying.

Valence is the individual's assessment of the anticipated value of various outcomes or rewards (Bartol et al. 1998). For instance, people might view the prospect of a special pay rise positively or he/she may attach a high value to the intrinsic rewards resulting in development of an innovative new project.

These three elements can be combined (Staw 1984) in the following way:

EP * PO * Valence = Motivation

For example, if an academic lecturer is working on a project situation, the individuals involved may be motivated to pursue the project as:

High EP * High PO * High Valence = High Motivation

On the other hand, the individuals in the project situation might show the following:

High EP * Zero PO * High Valence = Zero Motivation

What is inferred here is that, in the case of a special project situation, if the individuals do not rate all elements highly, we will observe a low motivation to succeed. To redress this situation it may be necessary to negotiate with the individuals to attempt to enhance their external or intrinsic motivation. This might be achieved by highlighting the prospects of good outcomes, or to shift individual's assignments so they have a task with greater motivational potential. Vroom (1694), pointed out that individuals will be motivated if they meet three criteria. First, they must value the behaviour outcome valence. Second, they must believe that the desire behaviour is instrumental in achieving the valent outcome. Finally, they must expect that they are capable of performing the behaviour that is instrumental to achieve the outcome.

According to Lawler and Porter (1967), efforts put into driving performance relate to the 'catch all' of abilities such as intelligence, skills, aptitudes and personality traits, and also to the perception of role, which were the activities and behaviours that the persons felt they should be engaged in to enact the performance successfully.

Kanfer and Ackerman (1989) described the way in which Vroom (1964) predicts that ability and motivation combine to determine performance. He found that when motivation is low, both low-and high ability individuals demonstrate similar low levels of performance. Nevertheless, when motivation is high, performance variability due to individual difference in ability will be more evident.

On the other hand, Heneman and Schwab (1972) evaluated nine studies testing expectancy theory's prediction of employee performance. They found that valence, instrumentality, and expectancy were related to performance, while ability was not.

In this thesis, expectancy theory is the selected theory to determine research productivity. In justifying why expectancy theory was chosen, we can look to the

range of researchers who also use expectancy theory in their studies of academic lecturers' research productivity. The range of research is shown in Table 3-1.

Name of researchers	Title of study	Theories used
Butler and Cantrell (1989	Extrinsic reward valence and productivity of business faculty: A within and between subjects decision modelling experiment	Expectancy theory
Tein and Blackburn (1996)	Faculty rank systems, research motivation and faculty research productivity measure refinement and theory testing.	Reinforcement theory, Cognitive evaluation expectancy theory
Blackburn and Lawrance (1995)	Faculty at Work: Motivation, Expectation, Satisfaction.	Reinforcement theory, Personality and career development theories, Dispositional theories Expectancy theories, Attribution Theories, Efficacy theories. Information-processing theories
Williams (2000a)	Research productivity of nursing faculty.	Expectancy theory.
Williams (2003)	A mediated hierarchical regression analysis of factors related to research productivity of human resource education and	Expectancy theory, Efficacy theory.

	workforce development postsecondary faculty.	
Chen, Gupta, and Hoshower (2006)	Factors that motivate business faculty to conduct research: An expectancy theory analysis. Journal of Education for Business.	Expectancy theory

Expectancy theory is suitable to conduct research into research productivity in academic institutions. Robins (1983) stated: "*Though expectancy theory has its critics, it has generally developed results that indicate it is currently the clearest and most accurate explanation of individual motivation.*" Supported by Korman (1974), expectancy theory can be useful in accounting for performance and achievement. Eerde and Thierry (1996) published a meta analysis of research using Vroom's expectancy model and work-related issues. The authors suggested that researchers should consider methods of analysis used in previous research that focused on expectancy theory when studying similar topics.

Expectancy theory appears suitable for this study as it views motivation and performance as critical aspects to concepts such as research productivity. Nadler and Lawler (1977) summarized the four assumptions of expectancy theory:

1. Behaviour is determined by forces that exist within the individual and their work environment.
2. Individuals make decision about work behaviour based on examining whether they are part of the group (membership) plus their effort to perform the task for 'how hard to work, how much to produce, and at what quality' (p.27).
3. People have different needs, desires and goals.
4. People make decisions among a variety of choices based on their expectations that a particular behaviour will lead to desired outcomes.

Efficacy Theory

Besides expectancy theory, efficacy theory is important to this thesis. Although efficacy theory is not included in process or content motivation theories, efficacy theory was mentioned in the research by Blackburn and Lawrence (1995), and William (2003)that studied research productivity.

In regards to expectancy and value, efficacy theory is closely related to expectancy theory (Bandura & Locke 2003; Vancouver, Thompson & Williams 2001). Gist and Mittchell (1992), suggested that the significance of self-efficacy for motivation and performance in work settings has been well demonstrated and also used in the technical repertoire of human resource management professionals.

In his social cognitive theory, Bandura (1977, 1982, 1986, 1995, 1997) introduced the construct of self-efficacy. He describes self-efficacy as '*confidence in one's capabilities to organize and execute the courses of action required to produce given attainments*' (Bandura 1997, p.3). As a consequence, he suggests that efficacy theory plays an important role in a person's self-regulation processes (Bandura 1991). In this theory, a person's behaviour is motivated and regulated by self-evaluation reactions to their own actions, and therefore, self-directedness partially determines the course of one's behaviour. People will participate in and try to deal with situations that they have ability to handle, but avoid situations that they perceive as being beyond their capabilities. This is usually done by comparing those features that come easily to them with those that appear to be more difficult, and also by determining the kinds of resources that they will need to complete the task. Self-efficacy theory helps us to demonstrate how much effort people will expend and how long they will persist in the face of difficulties (Bandura 1977), and helps us to predict how a person's level of effort and persistence on a task will vary in relation to their level of goal commitment. This suggests that the higher a person's perceived self-efficacy, the greater is the potential for performance-related accomplishments (Bandura, Reese & Adams 1982). Self-efficacy is different from self-esteem and self-concept, which tend to be more global assessments of the self across several situations. Self-efficacy is task-specific and

varies in relation to experience, learning, and performance feedback (Bandura 1982)

Gist and Mitchell (1992) made the following pertinent statement (cited in Blackburn and Lawrence (1995):

> The assessment of task requirements and attribution analysis of experience provide some sense of what it will take to do well on the task in terms of ability and motivational components and in terms of the relative contributions of these to performance. However, these two antecedent processes appear to yield necessary but insufficient data in the formation of self-efficacy. There remains an examination of self and setting by which the individual assesses the availability of specific resources and constraints for performing the task at various levels. This assessment requires consideration of personal factors (e.g. skill level, anxiety, desire, available effort) as well as situational factors (e.g. competing demands, distractions) that impinge on future performance. (p.190)

Bandura (1977) indicated that efficacy is derived from four major sources: performance accomplishment, vicarious experiences, verbal persuasion and physiological arousal. Furthermore, expectations of personal efficacy appear to determine coping behaviour, that is, initiation, effort expended and sustained effort. In this regard, Bandura (1977) postulated that:

> Cognitive processes mediate change but that cognitive events are induced and altered most readily by experience of mastery arising from effective performance...psychological changes can be produced through other means than performance accomplishments' (p.191).

He also stated that behaviour patterns are formed through observation of others and that these observations later serve as a guide for action.

These research findings indicate that people who view themselves as highly efficacious act, think and generally feel differently than people who perceive themselves as inefficacious (Bandura 1986), suggesting that personal accomplishments require both skills and belief in what they can do or the ability to use their skills and knowledge. As a result, enhanced self-efficacy motivated and raised internal interest to perform and increases a person's sense of self-worth

(Bandura 1986). Rating of self-efficacy has repeatedly been shown to be predictive of a range of future behaviours (Zimmerman 1995; Ewart 1995; Holden 1991; Holden et al. 1990). Self-efficacy has also received attention as a component of empowerment (Evans 1992; Parsons, East & Boesen 1994; Richan 1994), and in this regard Phillips and Russell (1994) found a statistically significant correlation between research self-efficacy and research productivity (r=0.45) and between self-efficacy and the research training environment (r=0.39). Interestingly, a re-analysis of these results by Brown, Lent, Ryan and McPartland (1996), which supported the findings that the research training environment, had a stronger relationship to research self-efficacy for women than men, showed the opposite tendency for the relation between research self-efficacy and research productivity.

A study by Taylor, Locke and Gist (1984) demonstrated that self-efficacy is directly linked to performance of academic research productivity. This accorded with the work of Landino and Owen (1998), who found that faculty's research productivity was positively correlated with self-efficacy (r=0.17), and Vasil (1992), who found that when self-efficacy perception increased, academic research productivity also increased. Another related study by Blackburn et al. (1991), who conducted a study of 3,930 faculty members from all institution types across the United States, found that self-efficacy accounted for a significant proportion of explained variance in research productivity (r=0.44).

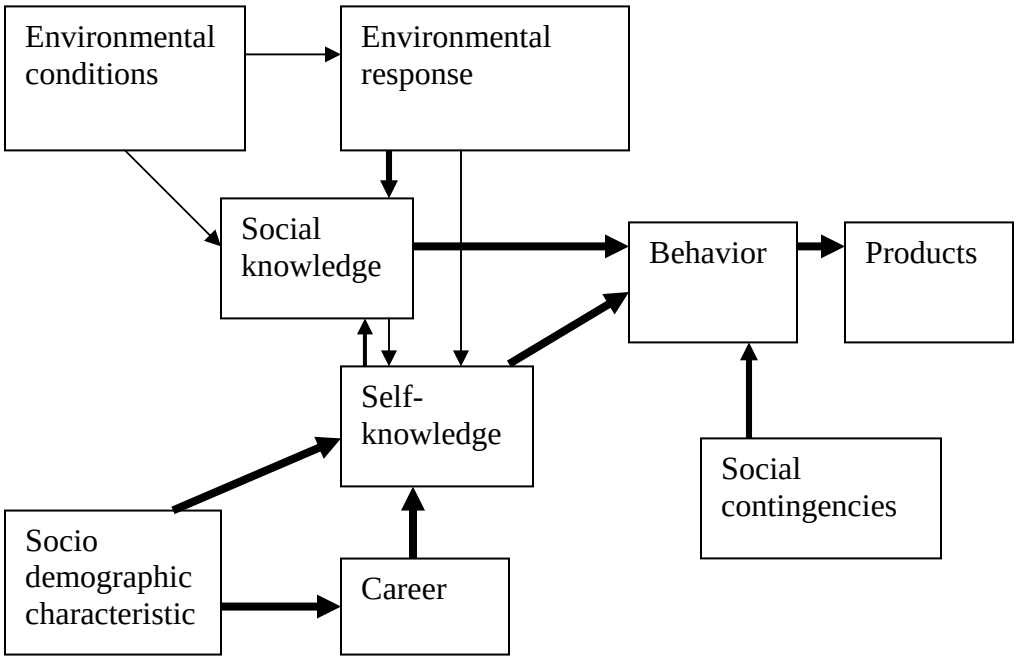
3.2 Conceptual Model

The conceptual model of this study derives from integrating the previous research about academic research productivity with the motivation theories based on the model of Blackburn and Lawrence (1995).

Blackburn and Lawrence (1995) studied motivation, expectation, and satisfaction of faculty at work by using the motivation theories mentioned in Table 3.1. They developed and tested a theoretical framework of faculty motivation for engagement in different teaching, research, and service activities, in order to identify suggestions for universities to become more productive organizations.

Blackburn and Lawrence (1995) used the institutional classification system of the Carnegie Foundation for the Advancement of Teaching (1987).

Figure 3.1 Theoretical framework of Blackburn and Lawrence (1995)



Note: the thick arrows signify strong or direct effects of the variables. The thin arrows acknowledge that there are weaker effects between several or the principal constructs.

The study included 3,389 institutions from which four individual constructs as antecedents of faculty behaviour were identified; socio-demographic characteristics, career, self-knowledge, and social-knowledge. Socio-demographic characteristics consisted of age, race, and gender. Career variables were considered to be discipline, graduate school attended, highest degree earned, place of work, rank, and tenure status, career age, publication record, satisfaction with career. Self-knowledge variables included interest in and preference for a role, commitment, efficacy (competency and influence), and psychological attributes (personality, satisfaction, and morale).

Social knowledge consisted of faculty members' perceptions of various aspects of their work environment and incorporated social supports and material supports. Social supports were colleagues and administrators' commitment, committee decisions, faculty meeting, intellectual climate, leadership, and institutional rules and norms, professional association practices, whereas, material

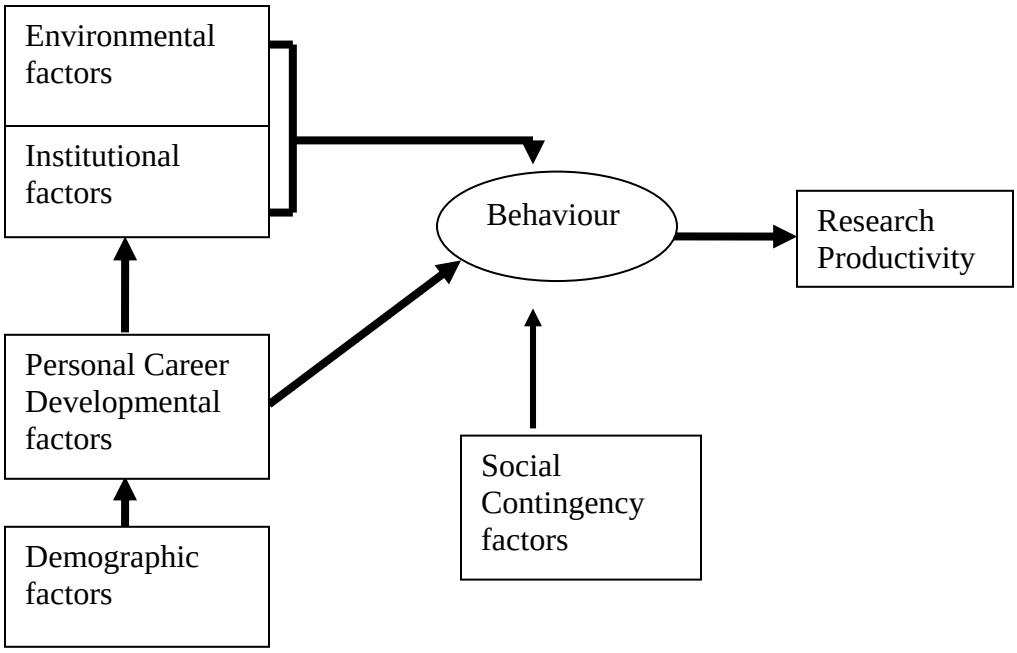
supports included salary and equipment. Environmental conditions were thought to be factors outside the workplace that affect research outcomes. For example, foundation or federal funding in new areas spawning research or conversely the stopping of external dollars which subsequently reduces output. Environmental responses resulted in a promotion, tenure, a merit raise, increased clerical support, more money for attending national conferences, and a graduate research assistant. Social contingencies consisted of family responsibilities, and extended illness. Behaviour included the involvement in research/dissertation/grant and workload. Products were publication outputs.

Blackburn and Lawrence (1995) conducted their research by survey method. The sample selection had two stages. First, they stratified institutions by Carnegie category (N = 4,240). Second, they selected institutions at random until the final sample corresponded to the national distribution of faculty across Carnegie classification categories. The authors sampled were 601 respondents from research universities, 366 respondents from Doctoral universities and 1,004 from comprehensive colleges and universities.

Blackburn and Lawrence (1995) found out the results by estimating the direct and indirect effects by means of a stepwise multiple regression analysis and path analysis. The data found that that being female may have directly influenced discipline affiliation. Chronological age has significant direct effects on the three self-knowledge variables. Older faculty members had lower research competence and ambition and also reported strong teaching values. Self-knowledge as a variable had the strongest influence on social knowledge. The environment response variable did not have strong direct effects on social knowledge and the social knowledge variables were not strong predictors of behaviour. Nevertheless, the data indicated that career and self-knowledge variables had significant betas for one or more of the behaviours that do directly affect productivity.

From Figure 3.1, the separate factors that contribute to research productivity were developed for my study as shown in Figure 3.2. and were used to create focus research questions.

Figure 3.2: Conceptual Model of this study



The influence factors were rearranged into 5 factors, grouping Blackburn and Lawrence (1995)'s social knowledge and environmental condition/response into environment factors and institutional factors.

Environmental factors are those factors that relate to the work environment and cultural climate within which the academic lecturers have to deal with everyday, such as their colleagues' commitment to research, the relationship between the academic lecturers and their supervisors, academic honesty, academic integrity, academic freedom and faculty collaboration toward a community of scholars.

Institutional factors are those factors that directly emerge from the institution's structure, such as the type of institution, institution policy for promotion, research policy, workload, salary and resources, and material supports.

The Personal career development factors were derived from grouping self-knowledge and career in Blackburn and Lawrence (1995)'s model. Personal career development factors are those factors that come from the academic and personal qualifications of academic lecturers themselves, such as an individual's

ability and interest, attitude toward conducting research, academic origin, advanced degree earned, research experience, skills and training, and rank and tenure status.

Demographic factors were derived from socio-demographic factors of Blackburn and Lawrence (1995). Demographic factors include age, gender and marital status, and these were included in order to see if they carry any associated intrinsic problems that interfere with an academic staff member's ability to carry out research.

Social contingency factors are those that have direct effects on academic staff abilities to carry out research because they typically place constraints on the time and energy that individuals have to engage in work activities. Those social constraints include the faculty member's health, extent to obligations to others such as spouse, children and parents, financial strains and pregnancy.

In this study, the expectancy theory supports and presents the relationship among academic members and the work environmental factors, together with the institutional factors. Academic members normally have to interact with the surrounding environment, which includes their colleagues and their supervisors, and at the same time they have to work under the institutional regulations and all the other organizational support systems. Problems related to these issues can be conveniently studied by linking those factors to 'social knowledge' which Blackburn and Lawrence (1995) have reported on. Blackburn and Lawrence (1995), found that 'social knowledge includes faculty members' understanding of how others expect them to behave and their beliefs about others in the environment, individuals with whom they interact and on whom they may depend' (p.17). Moreover, social knowledge is a factor that can also extend beyond the work environment on campus to the lecturer's home. This is important to know because wider social support has also been shown to reduce dysfunctional stress.

Whereas efficacy theory represents and supports the relationship about the academic members' personal characteristics (demographic factors) and individual abilities (personal career development factors), these can be explained by developing lecturers' self-knowledge on how they view themselves and whether they understand themselves or not. Self-knowledge encompasses an individual's

personal attitudes and values with respect to the importance of certain aspects related to faculty performance. The faculty do what they believe they are good at and devote energy to what interests them, and engage in activities in which they can influence outcomes.

3.3 Focus Questions

In order to pursue the research question:

What are the factors that impact on low research productivity of academic lecturers in a public University in Thailand?

A number of focus questions have been devised in order to elicit, as clearly as possible, the personal responses of a range of interviewees who have perspectives of value to the study. For convenience in data collection and analysis, these focus questions have been grouped under six specific headings as follows:

Focus Question One: In your opinion, how do environmental factors impact on the level of research productivity among academic lecturers in your University?

Focus Question Two: In your opinion, how do institutional factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Three: In your opinion how do personal career development factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Four: In your opinion, how do social contingency factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Five: In your opinion, how do demographic factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Six: From your institutional perspective, are there any steps that the University could take to enhance or improve the research engagement of academic lecturers?

3.4 Chapter Summary

The conceptual framework for this study integrates research on faculty role performance and productivity with motivation theories. The selected motivation theories in this research consist of expectancy theory by Vroom (1964) and efficacy theory by Bandura (1977).

The factors classified by this study were derived from Blackburn and Lawrence (1995). There are five factors: environmental factors, institution factors, personal career development factors, demographic factors, and social contingencies. Those five factors contribute to build five related focus research questions about how those five factors impact on academic lecturers' research productivity and the ways to enhance or improve the research engagement.

Expectancy theory relates to motivation and contributes to an understanding of how individuals make decisions regarding various behavioural alternatives. This theory provides an understanding of the relationship between academic members and the work environmental factors, in conjunction with institutional factors. Whereas, efficacy theory relates to the confidence that a person has in their own capabilities to organize and execute the course of action required to produce given attainments. Efficacy theory represents the relationship between the academic members' personal demographic characteristics and their personal abilities for career development. These abilities are related to self-knowledge or the degree to which lecturers understand themselves.

The next chapter will demonstrate research methodology, how the research was conducted and the profile of a case University and its respondents.

CHAPTER 4

Methodology

The purpose of this chapter is to explicate the research methodology that will be used in this study. The chapter includes a description and rationale of the qualitative case study, details of the data collection and the interview schedule, some comments on ethical considerations involved in the data collection and gives information related to the recording of data, analysis of data and the maintenance of rigour. In addition, this chapter also gives; a description of the background of the case institution, details of the faculties involved in the study, and provides a brief profile of the respondents.

4.1 Rationale of Qualitative Study

This study utilizes a qualitative methodology. Previous research generally uses questionnaire surveys, however, collecting data by questionnaires has limitations. For instance, Hughes (1996) studied the factors related to faculty publishing productivity using a postal survey. But she faced quite a low return rate (N= 845 from 3,383 respondents). She also stated that the use of questionnaires has been criticized especially when the questionnaires includes potentially sensitive questions, such as questions about attitude towards colleagues and Department Chairs.

Blackburn and Lawrence (1995), utilized both questionnaires (as explained in Chapter 3) and interviews for a longitudinal study. The interview assisted them to obtain information about respondents' careers and how the university worked. They used a panel of 33 faculty members in public research universities. Blackburn and Lawrence (1995, p.319) gave reasons for why they used both quantitative and qualitative approaches.

> There are two important consequences of our design and methodological choices. First, one both gains and loses when one chooses the method of data collection- interviews versus questionnaires, in most instances. We choose the latter. We needed data from many people in order to test our framework. Questionnaires, however, cannot penetrate to the level that skillful interviews can attain. Intensive interviewing can bring forth deep feelings and subtle motivations. Such subtleties are unlikely to surface through checked-off responses to statements on a sheet of paper or with open-ended written responses….We also know that our knowledge was limited by the questionnaire's inability to probe the complexities of motivations, the competing nature, their intensity, how they change over time, and the like. These sacrifices are a consequence of our choice of the questionnaire survey as our principal data collection device.

Observation has not been included in this study. One of the main reasons for this is that I am not the part of the respondents' faculty or research team and therefore it is quite difficult to complete observations. Flick (1998) mentioned the problems associated with observations. The author suggested that it is difficult to define the role of observer that a researcher can take and which allows him/her to stay in the field or at its edge. Moreover, the most difficult is to participate in a setting without becoming a member (Flick 1998).

From the reasons above , I have decided to select the qualitative method of in-depth interviews which are suitable for studying idea like motivation and response behavior in deep detail. The qualitative interview brings researchers into the participant's world (Patton 1990) and also provides a set of skills, and an approach to learning about the lives of participants (Rubin & Rubin 1995). The details about qualitative, in-depth interviews will be demonstrated in the next section.

4.2 Description of the Qualitative Study

Qualitative research has become an increasingly popular form of research. The application of qualitative research has become more widespread, certainly during the past two decades, due to an increased emphasis on determining the lived realities and everyday experiences of people (Cocklin 1996). Many research

publications are increasingly focusing on qualitative research, recognizing it as a valid and reliable form of inquiry to obtain relevant information of a social or institutional nature (Taylor 1993; Gilner 1994).

Qualitative research refers to several distinct types of research strategies that use naturalistic, ethnographic, or anthropological approaches, including participant observation research or field research (Merriam 1998). Patton (1990, p.41) describes qualitative research as '*naturalistic inquiry that involves studying real world situations as they unfold naturally, non-manipulative, unobtrusive and non-controlling, openness to whatever emerges...*' The characteristics of qualitative research include: (a) a holistic perceptive of the phenomenon under study; (b) using a purposeful sampling technique instead of random sampling; (c) having the researcher as the primary instrument of data collection; (d) making inductive analysis of thick and descriptive data towards an understanding of unanticipated outcomes; and (e) reporting data in narrative text form (Merriam 1998).

The underlying purpose of qualitative research is to understand the real world from the perspective of the research informants. Qualitative research strategies enable the researcher to gather and explore knowledge about the empirical setting in the quest for answers (Filstead 1970). Investigation using qualitative methods permits the researchers to share in the understanding and perceptions of the research question by the case or research subjects in the course of their daily lives. Moreover, these qualitative research methods support the discovery of the uniqueness of persons, objects and events. It guides researchers to learn how people learn about and make sense of themselves and others (Berg 1989).

The techniques of data gathering for qualitative research are observation, in-depth interviews, document and artifact collection or a combination of these techniques (Yin 1984; Black 1991). A qualitative case study may be descriptive, particularistic, heuristic or inductive. '*Descriptive'* refers to the output of a case study being a thick description of the topic investigated (Geertz 1973); '*heuristic*' implies that the case study will clarify the topic being studied; '*particularistic*' demonstrates that the case study is limited in scope to a particular phenomenon,

'*inductive*' implies that insights, concepts or hypotheses will unfold from the data (Merriam 1998).

4.3 Rationale for Qualitative Case Study Methodology

This research has approached the research question by using a qualitative research method because of the perceived importance of the particular views of the informants to the research study. The study is done in a public university that is located in the eastern part of Thailand and for reasons of anonymity it is referred to as '*The Noble University*'. The results of the study include a record of the collected data and based upon this information that has been provided by each individual academic member, there has been a thematic analysis relevant to the research question.

In this study, the researcher was interested in investigating the factors that appear to impact on low research productivity of academic lecturers in 'The Noble University'. According to Creswell (1998), the rationale to use qualitative research must be consistent with the nature of the research question. Typically in a qualitative study, the research question often starts with a 'how' or a 'what' so that initial forays into the topic tend to describe what is going on in relation to the study. Finally, in this type of study, the researcher plays a role as an active learner, who tells the story from the participants' view rather than as an expert who passes judgment on the participants, which is again consistent with the situation that the researcher is in with regard to senior participants from the university.

The term 'Case study' refers to research that investigates only a few cases, often just one, in considerable depth (Gomm, Hammersley & Foster 2000). Because of the type of information required in this study, a case study approach has been considered ideal in conducting this research. It is an in-depth look at a program, an event, a person, a process, an institution or social group (Merriam 1998), which is clearly the situation here. A case study is a bounded system that can be selected because it demonstrates a concern or issue (Smith 1978) and is the most appropriate research method especially when the purpose of the study is to examine, investigate and understand a situation and its meaning for its participants.

It focuses on discovery rather than finding outcomes of specific variables or confirmation (Merriam 1998). Furthermore, a case study usually involves 'thick description', a term that is often used in relation to a description that is rich in context, and is intended to illustrate something (Sechrest et al. 1996). In this instance, it is to demonstrate the factors that impact the quantity of research productivity of academic lecturers at 'The Noble University'.

4.4 Data Collection by In-depth Interview

As this study mainly focuses on qualitative research, data collection using in-depth interviews is entirely appropriate. According to Taylor and Bogdan (1984), the in-depth interview is defined as:

> *Repeated face-to-face encounters between the researcher and informants directed toward understanding informants' perspectives on their lives, experiences or situations as expressed in their own words'* (p.77).

The in-depth interview aims to gain access to, and an understanding of, activities and events which cannot derive from observation directly by the researcher (Minichiello et al. 1995). As such, in-depth interviewing is suitable when the researcher wants to gain a view of what social reality is from the informant's perspective. Because it is believed here that social reality exists as meaningful interaction between individuals that can be studied through understanding others' point of view, interpretations and meanings, in-depth interviewing is an appropriate technique to gain access to the individual's words and interpretations (Minichiello et al. 1995).

Moreover, in-depth interviews are also suitable when the type of research depends on understanding a broad range of people or settings in a short time, especially when the research questions are not appropriately studied by other qualitative methods because of time constraints or if the researcher has reasonably clear and well-defined research interests (Minichiello et al. 1995).

Lofland and Lofland (1995), suggested that during the interview, interviewers should adopt the role of the 'socially acceptable incompetent' by offering themselves as someone who does not understand the situation. The interviewer is the quintessential student role that needs to be taught.

After the interview, data should be reviewed every night by making sense out of what interviewer has heard, getting a clearer feel for the situation, and finding out what the interviewer should pay more attention to in further interviews (Babbie 2001)

Kvale (1996) summarized that process of in-depth interview into seven stages.

(1) Thematizing: clearify the purpose of study for interview and concepts that the researcher plans to explore.
(2) Designing: determining the process for completing the interviews as taking the ethical dimension into consideration.
(3) Interviewing: doing data collection by actual interviews.
(4) Transcribing: creating a written text of the interviews.
(5) Analyzing: determining the meaning of information gathered in relation to the purpose of the study.
(6) Verifying: checking the reliability and validity of the material.
(7) Reporting: telling others what interviewer has found.

This study uses open-ended questions within a semi-structure interview guide. The interview guide has been developed around a list of research focus questions (mentioned in Chapter Three) that can be asked without fixed wording or fix ordering of questions. The set of interview questions is presented in Appendix 4.

Criteria for sample selection and interview process

The University being studied has a Research Centre, seven faculties, one institution, and a graduate school. The participants are selected from those departments. This study used purposeful sampling technique. Participants needed

to be verbally articulate, in order to provide a richness of desired information (Cooper & Schindler 2006).

The criteria for selecting participants:

1. They must be in a position that is responsible for research affairs in studied units. They can be Vice President, Assistant President, Assistant Dean or Deputy Dean of research affairs. But for the studied units that have no specific position, Dean or Director of that department are invited.
2. One participant is invited from each studied unit. Resulting in 11 participants for this study: Two participants are from the University Research Centre, seven from each faculty, one from the graduate school, and one from an Institute with in the case University. The details are demonstrated in Table 4.1. Sampling in qualitative research tends to be small as in-depth interview are time-intensive and it is very difficult for a single researcher to be involved in more than 100 long and complex social interactions (Babbie 2001).
3. The participants must be willing to engage in a lengthy taped interview for a period of approximately 1.5 hours and maybe available for one or two short follow-up telephone conversations.
4. The participants must be able to be interviewed within a reasonable geographic proximity to the researcher.

Table 4.1 Classification of respondents

Case	Faculty
1	Research Development Centre
2	Research Development Centre
3	Graduate School
4	Faculty of Education
5	Faculty of Nursing
6	Faculty of Fine and Applied Arts
7	Faculty of Public Health
8	Faculty of Science
9	Faculty of Humanities and Social Sciences
10	Faculty of Engineering
11	Institute of Marine Sciences

Note: I cannot elaborate on participants' positions as it may identify who they are.

4.5 Interview Schedule

The interview schedule is detailed in Table 2. The individual steps involved in setting up the interview consisted of:

1. Visiting each respondent at his/her office to inform them about the objectives of this study, the rationale for the interview, and to make an appointment.
2. Submitting formal documents relating to the study, which included a letter of invitation to the respondents to participate in the study (Appendix 1), the intended interview questions (Appendix 4), a letter of permission for the project to be carried out in the university signed by the President (Appendix 2).
3. Questioning permission from respondents to make a tape recording of the interview.
4. Submitting the transcribed interview data back to the respondents to check the contents for accuracy of interpretation and reportage.

5. After the interview data was translated from Thai to English, arranging with the Co-supervisor to check the quality and accuracy of the translation.

Table 4.2 Interview schedule

Case	Faculty	Date	Appointment	Time
1	Research Development Centre	25/5/2005	10.00am	1 hour
2	Research Development Centre	10/6/2005	10.00am	1 hour
3	Graduate School	9/5/2005	9.00am	1 hour
4	Faculty of Education	12/5/2005	5.00pm	1.5 hours
5	Faculty of Nursing	6/6/2005	10.00am	1 hour
6	Faculty of Fine and Applied Arts	4/8/2005	10.00am	1 hour
7	Faculty of Public Health	16/5/2005	2.00pm	1 hour
8	Faculty of Science	16/5/2005	10.00am	1.5 hours
9	Faculty of Humanities and Social Sciences	2/6/2005	11.00am	1.5 hours
10	Faculty of Engineering	17/5/2005	10.00am	1 hour
11	Institute of Marine Sciences	13/5/2005	10.00am	2 hours

4.6 Ethical Considerations

As this study involves the opinions and perspectives of human subjects, certain ethical issues were addressed. This work recognized that the ethical risks associated with this research could be minimized by the careful setting of interview questions, particularly in respect of avoiding or not directly addressing any areas of weakness in the candidate's work, or opening any lines of inquiry related to psychological issues that the respondent might have. The environment during interview was relaxed and friendly and without attempt to force the respondents to answer those questions that they were unwilling to answer. Respondents were also informed that they had the right to withdraw from participation in the study at any time, and that they could withdraw any unprocessed materials which the research

had uncovered. It was made clear that no reference would be made to any respondent who had withdrawn from the study for any reason.

As indicated earlier, within this study the name of the case institution is not mentioned but is referred to as 'The Noble University', and to further ensure anonymity of their name and position, respondents have been referred to as 'Case One' to 'Case Eleven'.

Before any interview was conducted, the researcher sent a letter to the President of The Noble University to ask for his permission to conduct a study in the institution. Subsequently, the respondents were informed in person about the purpose and importance of this study. As required by ethical procedures in this context, all the interview data was kept in a safe box at the researcher's office and will be kept secure for five years, after which time it will be destroyed. It is understood that the researcher will be responsible for the security of confidential data.

4.7 Recording of Data

During the interviews, field notes and audio tapes were made with the individual permission of the respondents. Transcriptions of the interview were only carried out by the researcher, a supervisor and a co-supervisor in order to meet ethical standards that required us to ensure the privacy of the responses. Fresh tapes were used for each interview and old tapes were never carried along to subsequent interviews.

4.8 Analysis of Data

Data presentation and analysis involved in this study was primarily descriptive. Each individual case study was prepared and examined, and this was followed by a cross-case comparative analysis. In a qualitative study, analysing data can be understood as an on-going recursive and inductive process. According to Merriam (1998), qualitative research has three levels of analysis: (i) the research analysis, where the raw data is collected and sorted to provide a clear description of the

material, and to provide a first level of understanding of the research question; (ii) following this data collection, an intensive level of analysis is carried out to interpret the material in terms of the theoretical structure chosen for the study; and (iii) the research uses intensive analysis of the data to build new theory or new knowledge.

A description of the transformational analysis and synthesis of the data is carried out in Chapters Five to Seven. Initially, Chapter Five describes the data findings. Analysis is carried out to present the important factors that respondents claim, cause low productivity in the case institution. The data findings have been divided into two main parts, which are:

1. Data finding of individual respondents classified by faculty
2. Data finding of faculty responses classified into Science and Social Sciences

Then, Chapter Six presents the data interpretation focuses upon the interview's responses based on the focus questions.

Finally, in Chapter Seven a discussion is presented which outlines what has been found in previous studies through the literature review, and attempts to synthesise a new model in the light of the new knowledge that has been derived from this study.

4.9 Maintaining Rigour

Creswell (1998) identified eight primary strategies for ensuring trustworthiness in a research study. The procedures include (1) triangulation using different data source, (2) member-checking, (3) writing rich, thick descriptions, (4) clarifying researcher bias, (5) presenting negative or discrepant information, (6) spending prolonged time in the field, (7) peer debriefing, and (8) including external auditors (Creswell 2003). Creswell (1998) suggested that researchers should employ at least two of these procedures.

The rigour of the study is maintained by: (i) checking validity and reliability of the collected raw data through 'member validation'; (ii) by engaging expert advisors and participants to judge the adequacy of findings that were

extracted from the data; and (iii) by checking interpretations made during translation by a engaging a translation expert (who is a co-supervisor) and review translation back to Thai by an English teacher. (iv) providing thick description about studied units and participants' profile (in the next section).

4.10 Researcher Reflections

In qualitative research, it is important for the researchers to reveal his or her personal interest in the phenomenon being studied and how that could affect the interpretation of research findings. Creswell (2003, p.184), recommended that the "*inquired explicitly identify their bias, values, and personal interested about their research topic and process.'*

In this section, I briefly describe my background and interest in academic lecturers' research productivity to disclose potential biases.

I am a university lecturer and also a researcher in my working unit. I have worked as lecturer for more than two years. I teach marketing management subjects. Although I have yet to gain a lot of experience in doing research, research is my interest.

I also work as an assistant in education quality assurance in my department. During the time that I have worked in this position, I have noticed that my university has low research outcomes. My university announced a goal to become a research university, but research productivity is low. Within my department, there are numerous lecturers who have gained Doctoral degrees from aboard, however research is not an ongoing interest for them as they prefer teaching and administration activities.

Every year, my University and work unit undergoes internal and external education quality assurance inspections and I have found that research is an area requiring improvement in my University.

When I decided to conduct my thesis about research productivity, I found that it was not only in Thailand that universities had low research productivity, but also universities in developed countries like the USA. There are numerous

dissertations and articles in databases which describe research into factors that impact on research productivity.

My expectation is that the findings from this study will demonstrate the factors that universities should focus on in order to raise their research outcomes.

4.11 The Background of 'The Noble University'

4.11.1 General Background

The 'Noble University' is a public university located in the Eastern region of Thailand. Like a number of other new universities, it was first established as a teaching college, but later changed its status from a teaching college to be a branch campus of an existing university. It then offered several other degrees besides teacher education. In 1990, due to the need for more college-trained personnel to implementation the Government's Eastern Seaboard Development Project aimed at industrializing the area, this institution was upgraded to full university status.

The Noble University then rapidly expanded. Enrolment in 2001 was approximately 12,000 students, with over 500 teaching staff and 300 general staff. There are eight main faculties: Faculty of Humanities and Social Sciences, Education, Nursing, Public Health, Science, Engineering, Fine and Applied Arts. Moreover, this institution also has Institute of Marine Sciences, a Graduate School, a Gems College, a Graduate School of Commerce, a Graduate School of Public Administration, and a Sport Science College.

This university offers more than fifty undergraduate study programs, twenty-four programs at the Master's degree level, one EdD program, three PhD programs, and many short-course training programs per year. Additional PhD programs in several disciplines are being established and will be offered in the near future.

Research is stated to be one of the primary responsibilities of this university and the institution acknowledges its importance as a centre for generating and disseminating knowledge, and information necessary for the development of the country. The university services to support personnel in the conducting of research

are funded through budget allocations from the Government, the University's own income, and assistance from various organizations. The University has established a centre for research promotion in the Educational Services Division.

According to the Self-Assessment Report in 2001:

1. The proportion of lecturers to number of full-time students was 1:28
2. 26 percent of lecturers hold a doctoral degree.
3. The institution had 54 research projects conducted by 8.63 percent of lecturers
4. Only 25 projects of the possible 54 project were published (46.3 percent).
5. The institution gained external research funding of 1,091,370 baht.
6. This institution internal research funds that were derived from each Faculty's income donation equal to 2,390,345 baht.

By 2003, the number of research projects increased to 93 projects (The Noble University's 2003 Annual Report), with a total research funding of 28,822,445 baht. The 93 projects consisted of 31 projects which received a total of 16,668,000 baht in funding from the Government, 35 projects which received 2,212,185 baht in funding from each faculty's income , 20 projects which received 5,896,510 baht in funding from private organizations, and 7 projects that attracted 4,045,650 baht for lecturers to undertake in conjunction with other organizations..

By 2004, the number of research projects had increased to 137 projects (The Noble University's 2004 Annual Report), with a total research fund of 56,992,729 baht. Of the 137 projects, 28 projects received 29,486,900 baht in funding from the Government, 61 projects that received 5,382,963 baht in funding from each Faculty's income, 35 projects that received 7, 193,920 baht in funding from private organizations, and 13 projects that attracted 14,928,946 baht for lecturers to undertake projects in conjunction with other organizations.

Of the total academic staff (The Noble University's 2004 Annual Report) 23.16 percent of the staff had a doctoral degree, 69.94 percent had a Masters degree and 6.91 percent had a Bachelor degree. Of the Institution's staff 1.66 percent were Professors, 23.21 percent were Associate Professors and 75.14 percent were Assistant Professors.

4.11.2 University Research Policy

The Noble University recognized that research was an important university task when it began to teach post-graduate courses in the late 1970s. Consequently, research became one of the university's missions and one of its main activities. Consequently this new direction, required lecturers to engage in research in order to further develop their teaching ability. It also required lecturers to acquire new knowledge from doing research. Moreover, the knowledge derived from research becomes valuable for communities and private enterprises.

The university research policy was therefore based on the national policy which focused on creating effective research for the eastern region community in order to enhance the quality of life and help to solve environment problems. In essence, the University research policy focuses on:

1. The development of research productivity for all faculties, especially Science and Technology, by:

   Providing adequate research funds for researchers especially in science and technology.

   Providing research training courses to raise research productivity and for publishing results worldwide.

   Developing overall research management systems, to direct the research process to flow in the same policies, and to provide establishing effective research assessment systems.

2. Supporting and encouraging private organizations to participate in the university's research by establishing systems which increase the opportunities for the university and private organizations to work collaboratively.
3. Supporting private organization to share resources by establishing a variety of research departments to share resources, and developing information knowledge-based systems for teams of researchers.

4. Increasing the level of research in the marine sciences and learning how to utilize natural resources with increased effectiveness in order to develop communities, protect the natural environment and improve the technological information systems.
5. Providing an effective publication system to promote the research productivity of graduate students.
6. Encouraging collaboration between the graduate school and the research development centre by providing an information system for the graduate students to access and utilize research facilities and data.

4.12 Faculty Background and Respondents' Profile

Within this section, the university faculty's background and research activities are described, and the eleven respondents are introduced.

4.12.1 Research Development Centre

The Research Development Centre was established in 2004. Before its establishment, all research duties were under the management of the Vice-President of Academic Affairs. The main purpose of this department was to encourage both tenured and untenured lecturers to conduct research and to produce additional publications as suggested by the university's research policy. The Research Development Centre has set both short and long-term policies to support and to implement research activities as well as to increase quantity and quality of qualitative and quantitative research. The responsibilities of the Research Development Centre are to:

1. Set up databases and a homepage on the internet that make it easy to access and find information.
2. Establish network linkages among this university and outside organizations both in Thailand and in foreign countries in order to exchange research projects and students' theses.

3. Develop new researchers expertise by providing additional research funding.
4. Provide a motivating research environment.
5. Advertise and publish research productivity through research conferences, an English research journal, and a homepage in both Thai and English.
6. Develop and make available critical research documents in order to assist further publication of research work.

The study invited two of the administrators from the Research Development Centre to be involved in the interviews to provide a broad view of the factors that impact on institutional research productivity. Their profiles are described below.

Case One: From the Research Development Centre

The participant described in Case one (referred to as Case one from here on in) received Bachelor, Master, and Doctoral degrees in Science (Veterinary Science), majoring in Virology from a well-known university in the USA. Case one previously worked as a science lecturer in a famous public university before retirement in 2000. After retirement, Case one was invited by the President of The Nobel University to work in the current position. The responsibilities of this position include (i) establishing working plans based on government and university policies; (ii) assisting lecturers and increasing research productivity; (iii) eliminating any obstructive regulations that were not supportive or cause inconvenience when carrying out research.

Case one is still interested in doing research and was well recognized in the specialized field before retirement. Case one is a very famous lecturer in the field of microbiology and virology. In the early phase of this person's career, a number of publications in both Thai and International journals were completed and projects were undertaken in conjunction with both Thai and foreign researchers. He had published 48 research projects in Thai and International journals, wrote five books, four sets of teaching materials, three book chapters, 11 articles in magazines, 11

conference papers, and was the temporary advisor in World Health Organization (WHO) research projects.

This work resulted in promotion to professorial status and although this person is over sixty years old, is still interested in doing research and is keen to encourage The Noble University to become a Research University.

Case Two: From the Research and Development Centre

The participant referred to in Case two (to be referred as Case two from here on in) worked for the Research Development Centre for three years before this department was formally established. Case two acts as a facilitator, having as a main duty, the encouragement of lecturers to conduct more research and to publish. Case two respondent informs the university's staff about research funding and motivates them to write research proposals. Moreover, if the policy has any rule which obstructs research productivity, for instance, a complicated financial regulation, the facilitator revises and changes it.

Case two is a lecturer in Faculty of Nursing in Department of Maternal-Child Health Nursing. Case two is interested in doing research about family nursing as she received a Doctoral degree in this area. Previously, Case two completed between one and two research projects a year and published because this prior position recognized the importance of research. She completed15 research projects in which five were published in International journals and the rest published in Thai Journals. Case two has also written eight books.

Although Case two has a high workload, doing research and searching for grants, she has publications resulting from at least one project a year. Case two usually creates research topics in order to have research papers appropriate for publication. Academic books have resulted from this strategic approach. Case two notices that students appear to appreciate teachers who introduce research that they have actually conducted into their lectures more than the teachers who are only discussing the work of others.

4.12.2 Graduate School

The University Graduate School was established in 1977. The Graduate School is not an academic unit, but rather a supporting unit that acts as an administrative centre of all graduate study programs. The Graduate School is a mediator which works in conjunction with the administrative unit, faculties and departments to ensure that quality, together with morality and academic leadership, meet national and international standards. The main mission of the Graduate School is to develop policies, co-ordinate graduate studies, and encourage and monitor students in order to establish a reputation for the university and the country as a whole. Furthermore the school wishes to produce individuals who are knowledgeable, competent, creative and moral with the ability to act as leaders both in the local community and internationally.

Within the post-graduate courses, the research emerges as Masters theses and Doctoral theses. The Graduate School has no research funding to support academic lecturers, but this unit has research grants, thesis and publication funds for students in post-graduate programs. The reason why the Graduate School has no research fund is because each faculty has prepared fund for lecturers and also the Research Centre has been provided with both internal and external funds.

Case Three: From the Graduate School

Case three has worked for the Graduate School since 2001 and also has an administrative position in the Sport Science Association of Thailand. Case three received Bachelor, Master and Doctoral degrees majoring in Physical Education from an overseas institution, and has completed seven research projects since graduation. All of these works have been published. He wrote six books and contributed a chapter to a book. Case three is working in administrative position as well as teaching students in the general area of sport. Case three has a research interest in human physiology, and has to manage time carefully to complete all duties including the conduct of research.

4.12.3 Faculty of Education

The Faculty of Education was established in 1955. The study programs offered by the Faculty of Education are designed to produce complete graduates endowed with both knowledge and virtue. The Faculty of Education endeavours to maintain the educational standards of the teaching profession and to promote its development. It is committed to searching for new knowledge and disseminating research findings to promote academic progress and academic service to the community and country.

The Faculty of Education is composed of nine departments plus one demonstration school which are: Teaching, Educational Administration, Educational Technology, Elementary Education, Guidance Psychology, Non-formal Education, Counselling Psychology, Educational Measurement Technology, Educational Research Technology, Exercise and Sport Science and a Demonstration School. This faculty has 29 study programs, consisting of one certificate, 15 bachelor degree programs, 10 master degree programs, and three doctoral degree programs (Faculty of Education's Self-Assessment Report, 2003). Of the staff, 48.44 percent have a Masters degree and 51.56 percent have a doctoral degree (Faculty of Education's Self-Assessment Report, 2003). There are 64 lecturers in which 12.50 percent are Associate Professors and 35.94 percent are Assistant Professors. Of the nearly 2,685 students, there are 52.37 percent full-time and 47.63 percent part-time students (Faculty of Education's Self-Assessment Report, 2003). The Faculty of Education does not have a Professor as there is no one qualified to take on a Professorial role . To be a Professor, lecturers have to have several international publication and perform numerous research works.

In 2002, Faculty of Education granted three research projects at a total of 121,000 baht, and lecturers also gained external research funding for another four projects. But in 2002, there was no research publication. The Faculty of Education established a clear research policy and provides sufficient research funding and support facilities. It has a Computer Centre with 160 computers available for all staff and students. A Learning Resources Centre also exists within the Faculty.

The Faculty of Education's research policy emphasises implementing new knowledge for producing qualified graduates and enhancing teaching skills. The research policy focuses on:

1. Encouraging lecturers to form integrated research teams.
2. Providing sufficient research funding and facilities
3. Encouraging staff to publish by providing conference, contests, research and academic journals.

Case Four: From Faculty of Education

Case four has worked in an administrative position in the Faculty of Education, with responsibilities to manage faculty performance. Case four started engaging in research activities after completion of a Master's degree.

Initially, the Case four formed a research group to work in a public university in the north of Thailand around 1975-1976. At that time, this University played an important role in the upper northern community, and as a result, various organizations expected this team to help them. Case four carried out a number of research projects with these colleagues, then went to further his career overseas for six years. Upon returning, the National Electronics Computer Centre was offered a research grant in computer and electronics. Case four was teaching Computerized Instruction (CI) at that time, and one student submitted a proposal for the grant under the topic, "CI for Kindergarten Readiness." The team received 170,000 baht in 1989, which was a quite considerable amount at that time. The team performed well compared to other groups in this work, and many newspapers published the team's work, and as a result the Case four became very famous at that time.

Case four took research courses at a Master's degree level, and learnt Statistics for his Doctoral degree. This background gave a good grounding in ideas about qualitative and quantitative research, allowing an appreciation of the strengths and weaknesses of each type of research. Returning from overseas, Case four came to teach at the Noble University, and has been teaching research courses and supervising theses for more than 10 years, during which time much research experience was acquired. Case four has undertaken a total of 12 research projects

from which 2 publications were accepted byInternational journals and six publications appeared in Thai journals. Case four has also written 13 books and is considered an expert in instructional design, training, CAI development, and cognitive processing.

4.12.4 Faculty of Nursing

The Faculty of Nursing was established in 1982 and began teaching nursing students at the undergraduate level in 1983. Since then, the Faculty of Nursing has graduated more than 2,000 nurses to serve Thai society in both the government and private sectors.

The Faculty of Nursing has performed four main important tasks which are teaching, researching, academic service, and preserving Thai Culture. The strategic plan for the Faculty of Nursing relates to:

1. Developing a teaching system that places emphasis on the learner and encourages nearby communities to participate in teaching programs.
2. Producing qualified students based on national and international standards.
3. Encouraging lecturers to study for higher degrees.
4. Utilizing organizational resources with effectiveness.

The Faculty of Nursing is composed of six departments teaching three undergraduate courses and seven post-graduate programs. There are 89 lecturers (Faculty of Nursing Self-Assessment Report, 2003). Of the lecturing staff, there are 24.72 percent who have a Doctoral degree, 68.54 percent who have a Masters degree and 6.75 percent lecturers who have Bachelors degree. There are approximately 600 full-time students.

Research is recognised as one of the important tasks for the Faculty of Nursing. This faculty established a Research Centre and a Research Clinic to support and assist lecturers who have research areas of interest.

The research policy of the faculty is to:

1. Support and implement research activities to develop faculty administration, service and education.
2. Support research projects that aim to improve a sustainable quality of life.
3. Increase quality and quantity of researchers and their productivity.
4. Publish research productivity.
5. Utilize research productivity for professional development.
6. Set up modern research databases.
7. Build network links to national and international nursing organizations.
8. Establish the Eastern Nursing Research Centre.

In 2003, the Faculty received 3,848,100 baht in research funding from the Government and 1,276,900 baht from the Faculty income. No funding was received private agencies. A total of 16 research projects were undertaken, none of which resulted in publications.

The Faculty of Nursing's research focuses on implementing studies of nursing technological development and health promotion based on need and local knowledge.

Case Five: From Faculty of Nursing

Case five is interested in conducting research on AIDS, issues relating to the elderly, and strategies for health promotion. Case five received Bachelor, Master and Doctoral degrees in nursing, majoring in studies to do with the elderly. The main duties of this position are to:

1. Circulate various amounts of research funding efficiently through the faculty.
2. Provide research facilities such as equipment and research assistants. This faculty has a Research Centre.
3. Provide research seminars, for instance, asking lecturers who come back from abroad to present aspects of their thesis to their colleagues,

giving accounts of the progress of their work, and to discuss the significance of their projects.

Case five mentioned that improving research skills was facilitated by attending training courses and by doing research in the topics that were of innate interest. The training courses that were participated in during 1990 related to the training of how to do institutional research and integrated research, as well as how to be an administrative researcher. Case five first did a research project in 1990 and has continued for 15 years. This excludes the three years that were devoted to the work for a Doctoral degree. During this time, 12 research topics have been completed, papers from six topics were published in Thai journals and four were published in International journals. Case five has also written seven books about elderly women' life.

4.12.5 Faculty of Fine and Applied Arts

The Faculty of Fine and Applied Arts was first established as a Department of Human Learning and Social Science in the Faculty of Education in 1955, and in 1995 was promoted to a separate Faculty of Fine and Applied Arts. This faculty aims to produce graduates who are well equipped in the areas of creative thinking and academic excellence and who are also able to keep themselves abreast of social and technological advancement. The students of this faculty are usually trained to value and appreciate Thai art and culture with a sense of ethics and social awareness.

This faculty is composed of five departments which are ceramics, painting, music, graphic arts, and visual and communication arts, and offers a four year program comprising five majors. According to the Faculty's Self-Assessment Report (2003), there are twenty-two lecturers. To date no lecturers have a Doctoral degree, however, 90.91 percent of lecturers have a Masters degree and 9.09 percent of lecturers have a Bachelors degree. The Faculty staff consists of 9.09 percent Associate Professors (9.09 per cent) and Assistant Professors (13.64 percent). The degree is offered to 150 students a years (approximately 25 students per department).

The research policy of the faculty is to:

1. Encourage lecturers to do research by applying for government and faculty research funds.
2. Allocate sufficient funds for research and academic works.
3. Support research publication

In 2003, lecturers in Faculty of Fine and Applied Arts undertook two research projects that received Government funding. The first one received 74,900 baht and the second received 57,000 baht. Three academic works received faculty funding (19,000 baht for each) and publication generally occurred by way of art exhibitions.

Case Six: From Faculty of Fine and Applied Art

Case six has worked a manager of research affairs for two years, but has worked in this university for nine years since the completion of a Masters degree. The respondent received both a Bachelors and a Masters degree in painting from a public university in the north and a public university in Bangkok respectively.

Case six obtained research skills through learning from the other people's research and then applying related knowledge into specific projects. Research was first carried out in 2002, and Case six is now writing a book. The type of work that Case six is interested in doing is creative research in painting. Case six prefers a form of research that is easy to read and to understand by refraining from using superior academic language, and notices that to make complicated research more accessible, the writer should add pictures alongside explanations.

The research topics that Case six is interested in are those associated with handmade products and paintings. Current research projects concern local requirements and how local artists use local raw materials. Research productivity is seen as a route toward promotion.

Case six used to receive a UNESCO Bursary for Artist Award. Many of her artworks are published in both Thai and International exhibitions such as the First International Women's Art Exhibition, The Five Samples Printed Exhibition, and the International Print Biennial. From 1992 to 2007, she joined 15 exhibitions.

4.12.6 Faculty of Public Health

The Faculty of Health Sciences was established in 1993 to produce public health graduates in three programs: Industrial Hygiene and Safety, Environmental Health, and Health Education and Heath Behaviour. In 1997, a continuing program in public health was initiated for human resource development for public health personnel.

According to Faculty of Public Health's Self-Assessment Report 2003, there are approximately 100 students per year and 60 lecturers. In terms of qualifications held by lecturing staff, 37.94 percent have a Doctoral degree and 62.07 percent have a Masters degree. Of the lecturing staff 0.69 percent are Professors, 3.45 percent are Associate Professors and 27.59 percent are Assistant Professors. There were 19 research projects, in which 13 projects received Government funding and six projects received funding from the Faculty. Three projects were published in National and International journals.

Case Seven: From Faculty of Public Health

Case seven has worked in this position for some time, the responsibilities of which are to implement a research plan and to set up research strategies based on the university's and faculty's strategic policies. The faculty has a high level of institutional support because of staff being in an early stage of development. The faculty has a mentoring system that encourages the staff to learn together. In addition, they have a consulting team who are academic experts in this specific field. They are fortunate that these experts spend their valuable time with them.

Case seven started doing research at a nursing college, but at that time there was not much research funding. Research was first carried out seriously whilst studying for the Masters and Doctoral degrees. Since then, Case seven has completed many research projects as team leader or an assistant. Moreover, Case seven is the research consultant for the Ministry of Education's projects.

Case seven is interested in conducting research about human behaviour, health promotion and health assurance internal benchmarking. This is linked to the Doctoral thesis that investigated the topic of health assurance internal benchmarking. In addition, Case seven has also obtained research funding from the Thai Research Fund Regional Office for the same topic. Case seven undertook ten research projects from which the findings of five projects were published in Thai journals and 5 projects were published in International journals. Case seven's has also written four books.

4.12.7 Faculty of Science

The Faculty of Science was established in 1955 as a department in the College of Education with the main objective of producing science lecturers. Since then, Department of Science has developed and expanded dramatically. In 1974, Department of Science was promoted to be a separate Faculty of Science, which now contains twelve departments. These are Aquatic Science, Biology, Biotechnology, Biochemistry, Chemistry, Computer Science, Food Science, Material Science, Mathematics, Medical Science, Microbiology, and Physics.

According to the Faculty of Science's Self-Assessment Report 2003, the faculty offers one certificate program, 17 Bachelor degree programs, 14 Master degree programs and four Doctoral degree programs. Of the total 178 academic staff, 30.34 percent have Doctoral degrees, 69.11 percent have a Masters degree and 0.57 percent have a Bachelors degree. There is no Professor but this faculty has 19.67 percent Associate Professors and 19.67 percent Assistant Professors.

The Research policy of the Faculty of Science emphasises the implementation of research activities to support national development by focussing on basic science and applied science, and providing sufficient research funds, encouraging lecturers to present their research productivity in national and international conferences as well as publication.

Case Eight: From Faculty of Science

Case eight's responsibilities are to encourage lecturers to undertake research by motivating them to submit research proposals, especially focussing on those new lecturers who have just gained Masters or Doctoral degrees. Case eight tries to give the staff research experience in order to increase their opportunity for getting large funding from outside institutions.

Case eight has worked in this position for two and a half years and is a specialist in marine sciences. This entails the study of crustaceans as well as assisting fishermen with increasing their productivity.

Case eight respondent began doing research by applying for research funding, working as a researcher at the Thailand Department of fishery for eight years and working in this University for nine years. During the first two years, time was needed to prepare for teaching and no time was available to do research. Later, it was possible to start doing research, but at that time, only 10,000-20,000 baht was available in funding. This was a very small amount, but after gaining more research experience, 50,000- 80,000 baht and 200,000 baht were obtained from the Thai Research Regional Office and the National Science and Technology Development Agency respectively. These funds were shared with lecturers in Kasetsart University and Mahidol University. Case eight has improved step by step and has also published research to show other researchers what can be done through collaborative research.

Case eight completed one research project last year but it is yet to be published. Because 50 percent of Case eight's time is spent working in an administrative capacity where there are many kinds of work, this is sometimes worrying and impedes concentration on research work. Case eight said that it would be nice to spend time doing research and publishing rather than working in an administrative position. Since Case eight has worked at the Noble University, he has completed ten research projects and published work from four of those projects in International journals, the remaining work has been published in Thai journals.

4.12.8 Faculty of Humanities and Social Sciences

The Faculty of Humanities and Social Sciences was first established in 1955 as the Faculty of Humanistic Studies and Social Sciences of the College of Education, and was promoted to be an independent Faculty in 1991. This Faculty aims to be a prominent and superior academic institution by building up internationally standardized and reliable service and management systems to serve the needs and satisfy all clients and communities in the Eastern region. All staff of this Faculty must cooperate well if they are to achieve outstanding and excellent academic programs, develop administration and management systems, and to be more modern, reliable and international.

The Faculty of Humanities and Social Sciences has 12 departments, which are Business Administration, Eastern Languages, Economics, Geography, History, Library Science, Political Science, Psychology, Sociology, Thai Language, Western Languages, and Law.

According to their Self-Assessment Report (2003), of the 83 lecturers in this faculty, 19.28 percent have Doctoral degrees, 72.29 percent have a Masters degree and 8.44 percent persons have a Bachelors degree. Furthermore, in terms of the Faculty's roles, 1.21 percent are Professors, 10.85 percent are Associate Professors, and 1.21 percent are Assistant Professors. The proportion of lecturers to student is 1:28.

Case Nine: From Faculty of Humanities and Social Sciences

Case nine has responsibilities for setting the Faculty's vision in place and implementing associated action plans. This requires preparation of the researchers' profile in order to show other people details of the faculty lecturers' expertise. In the past, when research topics were received from fund-owners, it was necessary to send information to each department and ask them to find qualified people. However, now the researchers' profiles are available, the topic can be directed

immediately to the qualified researchers. It is also the practice to let lecturers form their teams. For instance, for a research question about tourism, the team may invite lecturers from the geography and history departments to join the project. This faculty prefers to carry out research in teams rather than individual projects, which they call integrated research. Moreover, the faculty does not require specific forms of research, so researchers can select either quantitative or qualitative research approaches. In this area, assessments mainly focus on the outcomes of the research.

Case nine received a Bachelors degree in applied statistics and four Masters degree in marketing from universities in USA and Thailand (topic areas included industrial and organization psychology, mass communication and communication research). Case nine is interested in doing research about consumer behaviour. Case nine's interest in research has been ongoing and it was suggested that research has been undertaken in one form or another ever since a teacher at secondary school gave a homework assignment involving research. This school task was a starting point for learning how to use creative thinking and when the homework was submitted Case nine received high marks and encouraging recommendations from the teacher.

Research began in a proper way during study for the Bachelor's degree. An applied research project was completed as part of a research team as an interviewer. As a result of this experience, the power of the interview method became apparent and led to an understanding that people were different. In this work, there were both participating and non-participating respondents, as well as people who had vast knowledge and those who had less knowledge. This experience showed that not only being an information seeker, but also that being the information giver was a difficult task because the information giver had to make careful judgments before giving the information.

Serious research projects were carried out as part of the study for the Bachelor's degree in the third year. The team received 5,000 baht as a research funding. Case nine was very happy to carry out research, but when studying for his Master's degree by coursework, there was no chance to research. However,

studying the research methodology subject yielded an ‘A’ because of this innate interest.

Case nine respondent has completed five , research projects, has published two research articles in Thai journals and has written nine chapters in books.

4.12.9 Faculty of Engineering

The Faculty of Engineering was established in 1994. At present, students in the Faculty of Engineering are required to compete four years of coursework. The program is divided into five majors with 155 subjects. There are five departments which are Department of Chemical Engineering, Industrial Engineering, Civil Engineering, Electrical Engineering and Mechanical Engineering. The Faculty of Engineering has only Bachelor degree programs.

According to the Faculty’s Self Assessment Report (2003), the Faculty has 58 lecturers of which 13.80 percent of lecturers have a Doctoral degree, 79.31 percent have a Masters degree, and 6.90 percent have a Bachelors degree. As this faculty was only established in 1994, no Professors or Associate Professors have been appointed. Only three persons are qualified as Assistant Professors.

The strength of this Faculty is that it able to support research activities in this location because this Faculty is near the Eastern Seaboard Area. However, the weak points are the high teaching workload and insufficient motivation to do research and produce quality research publications.

Case Ten: From Faculty of Engineering

Case ten has worked in this Faculty for three years and has worked in the current position for a year. During the three years, three research projects have been completed, but publications have not yet resulted as they were commercial projects. Case ten has been learning about research methodology since starting to study for the Doctoral degree.

Case ten is interested in conducting research in Geotechnical Engineering, and has been involved in recent research projects concerned with the numerical

simulation of soil-pipeline interaction and soil stabilization. Case ten said that the numerical simulation research project did not require a large amount of research funding, therefore, it is suitable for new researchers who have just started to learn about researching.

4.12.10 Institute of Marine Science

The Institute of Marine Science was established in 1969. This Institute is an organization that emphasises research about biological problems and the cultivation of rare and endangered marine animals. The Marine Environment Department focuses on the Eastern Seaboard: the Biodiversity Department on living animals, plants, and micro-organisms in Eastern Seaboard areas; and the Marine Biotechnology Department on developing living natural products including sustainable exploitation of natural resources. At present, these are more than 80 completed projects and many ongoing ones. Examples are biological studies of sea horses, the butterfly fish, and the damselfish. There are also projects focusing on biologically active substances from bacteria and marine invertebrates.

In 2003, there were 22 research projects from 25 researchers. From among the 22 projects, four projects were published in international journals and one project was presented at an International conference and 11 projects were presented at a National conference. Each person received 271,740 baht from Government funding, and 18,518 baht from Institute funding.

Case Eleven: From Institute of Marine Science

Case eleven received Bachelor, Master and Doctoral degrees in aquaculture. Case eleven has worked in this position for seven years, and the responsibilities of this current position are:

1. The offering of research funding by examining the abilities of staff that have a lower level of research experience. There is approximately 500,000 baht a year available, depending on the quantity of proposals. The researchers must use the funding for real purchases up to 50,000-

100,000 baht per project. If this institution has existing appropriate equipment, it is permissible for researchers to use that equipment.

2. Encouraging staff to participate in research presentations based on the institution's regulations. This Institute has budget available to assist lecturers to present their papers in other countries. In the past, the Institute only offered money for staff that did oral presentations, now, they allow staff to present posters for the first time. However, if they want to attend any conference in Thailand it can be arranged, together with an offer of additional funding for registration and travel. For attending conferences abroad, researchers are allowed to go once every two years rather than every year because of the increase in financial resources needed for International travel as compared with National travel.
3. Supporting publication activities. Researchers are often confronted with time restrictions, especially those staff who are not full time workers. The full-time staff who mainly do research always have research outcomes and publications. On the other hand, other staff members who have to do extra jobs often do not have enough time, and in these situations the Case eleven encourages them to present at conferences. This means that staff are only required to write an abstract and analyse papers for presentation which is a convenient way to present their research to the public. Case Eleven encourages staff to publish papers in magazines such as agricultural and fish magazines. Moreover, there are also telephone records available for researchers who act as consultants which they can use as evidence of research activity when applying for rank promotion.

Case eleven is interested in doing research on aquaculture system design for breeding marine animals and carries out research involved with the design of houses for marine animals, and investigating how the change of water quality affects the animal's life. The completed Master and Doctoral degrees were in water cleaning systems, and these previous skills are applied in designing habitats for marine animals in order to gain new knowledge.

Last year Case eleven did not conduct much research and produced no publications. One international conference was attended. In addition, whereas generally there were 2-3 presentation projects completed twice a year, this year there has been insufficient time to write research projects but there has always been articles written in magazines. Between 1986 and 2004, he published 19 research projects in both Thai and International journals.

Case eleven was researching from soon after first graduating. During the first year post-graduation, work was done for a private organization as a researcher. Subsequently, a position was obtained at The Noble University. There are many problems to be faced here about research, especially when purchasing equipment, which is very different to that in a private organization. This is because supervisors of research in private organizations are not involved in equipment purchase, but are free to concentrate on their research programs and outcomes.

4.13 Chapter Summary

This study utilises a qualitative research methodology and used in-depth interview as the main method for data collection. This project has selected Thailand's biggest public university located in the eastern part of Thailand as a case study. Eleven participants were selected by purposeful sampling technique, eight of whom were Deans or their qualified representatives.

The ethical considerations carried out during the data collection conformed to those in the Victoria University ethical standard regulations. The rigour of this study is maintained by checking validity and reliability through member validation. This was carried out by (i) getting experts and participants to judge the accuracy of the reported findings, and (ii) by checking the details of the interpretations of the raw data made by the candidate during translations from Thai to English, by a translation expert.

Within this chapter, a description of the case institution and its faculties, and a background profile of each respondent was provided in order to contextualise the data that has been gathered during this study

The next chapter describes the data findings of the important factors that, in the opinion of the respondents, contribute to low research productivity at The Noble University.

CHAPTER 5

Presentation of Data Finding

The purpose of this chapter is to present the collected data for answering the research question "*What are the factors that impact on low research productivity of academic lecturers in a public University in Thailand?*" Before analysing the data for answering the focus questions in Chapter Six, the data findings that derive from each of the respondents should be demonstrated in order to enable a greater understanding of each department.

Within this chapter, the first part provides opinions of factors that impact on low research productivity from the broad perspective of respondents from the Graduate School and Research Development Centre. The second part demonstrates individual respondents' responses by each faculty within the case institution. Finally, the last part examines the factors that impact on low research productivity by looking at two groups that have been classified as 'science' and 'social sciences' faculties.

5.1 Data Finding of the Broad View of Institution's Research Environment

In this part, data were obtained from interview respondents from the Graduate School and Research Development Centre about their broad view of the university's research environment and the factors that cause low research productivity are presented.

The Noble University operates under the umbrella of the Ministry of Education's and the Thai Higher Education Commission's policy framework. Research is important because it is central to the university's mission and activities, and it is important to all lecturers who want to retain in their academic

status. Lecturers should carry out research in order to develop their teaching ability, because they acquire new knowledge in their area when investigating practical problems. The knowledge that derives from doing research has high value for communities and private enterprises, allowing Thailand to gain significant benefits for national development.

The research work carried out in the Noble University can be classified into three main groups. First, there is an individual or a group that does creative research. Second, there are research groups that aim to bring benefits to production process and strategic policy. Third, there are research groups that aim to develop and improve conditions in the community. To facilitate these groups, the institution is attempting to create a research culture by building a supportive research environment, and by providing academic knowledge exchange through encouraging students and lecturers to work together.

Because of its history, the Noble University has two main types of lecturers who are involved with research activities. Case one informed the project that the lecturers who have taught in this university since this institution was a teaching college generally have low competency to carry out research and they are generally not interested in doing research. In contrast, newly appointed lecturers who have research skills, especially those lecturers who have graduated from abroad, are keen to be involved in research projects. They actively seek research funding and continually seek possibilities to do research.

In the past, this university has carried out little research, but recently the number of research works is slightly increasing. An insight into the reason behind this improvement of research productivity was given by Case one, who stated that research productivity is now a criterion for promotion and researchers received salary bonuses that can be an incentive. In addition, each faculty's administrators are now trying to build a supportive research environment.

However, some lecturers argued that the research environment is not supported enough. As Case two revealed:

> The research environment is not so active and is ambiguous because the University treats all lecturers the same. The University does not categorise lecturers into highly qualified or

> under qualified staff. For instance, Professor and Associate Professor have the same treatment as new lecturers.

This approach means that it is the duty of all lecturers to find the funds and time to do research individually because University does not provide specific opportunities to researchers. The difficulty with this is that usually the highly experienced professorial lecturers have so much work to perform, in that some of them have to teach, to do research and do administrative work that it is unreasonable for them to find the extra time for research. Case Two continued this theme, stating that:

> Universities in other countries treat experienced lecturers differently from a new one. Experienced lecturers, who have expertise in doing research, generally perform less teaching and research is their main task. But in this University, the lecturers have to teach, while research is a personal responsibility to which those lecturers must donate their free time.

At the Noble University, this remains an unsolved problem. It highlights that the qualified lecturers who are likely to do research are faced with the problem of unclear and competing task priorities. At the same time, the lower qualified staff who generally do not prefer to do research tasks, are in the position where the university also does not encourage them. Under these conditions, there is the question of how either type of lecturer can efficiently contribute to the research productivity of the university.

Furthermore, some lecturers appear to ignore the importance of research. To them, the research outcomes have no benefit because no one is interested. As Case two pointed out:

> There are still some lecturers who view research work as a useless task. Published research work is usually on top of the shelf and no one requests it.

In addition, there are many lecturers who have little research experience and each faculty has limited research productivity. Consequently, the number of lecturers' works published, or invitations to lecturer at an international level, is

low. Adding to the difficulty is that it is a considerable task to solve and eliminate obstructions to doing research, which is currently not being addressed at a centralised level. Also, some lecturers actually misunderstand the nature of the research task, thinking that research works must necessarily involve a huge project. Case three, for example, said:

> Many lecturers believe if they undertake research, it must be on a large scale to enhance their reputation. There is little interest in undertaking small projects. And sometimes they might not have much persistence with their research.

According to the opinions outlined above, the broad view of factors that impact on staff and contribute to low research productivity in the case institution relate to (i) the working environment, (ii) individual staff attitudes and perspectives toward research performance, and (iii) the overall academic workload. As a result, although the university publicly states its aims to increase its research productivity, the actual outcomes are still at a low level. In the next section, the data findings will draw attention to aspects of each Faculty's research performance in more detail.

5.2 Data Finding of Individual Respondents Classified by Faculty

There are a total of seven faculties and one institute in the case institution that we refer to as 'The Noble University'. This analysis begins with a treatment of the findings that have been derived from the interviews with Cases four to eleven, and consequently a number of conclusions related to important themes that have emerged from the analysis about the factors that cause low research productivity are drawn.

5.2.1 Case Four: Faculty of Education

Case four explained that research is important to the faculty because research builds up and helps to disseminate knowledge about the discipline. Conducting research contributes to the creation of new knowledge by encouraging staff to think, to talk and to solve problems, and this new knowledge created by the research increases the researcher's ability to confront the challenges concomitant with a dynamic and complex environment.

The Faculty of Education provides a considerable range of support for staff research. This respondent noted that this faculty has four computer labs with 160 computers available for all staff. In addition, the faculty provides appropriate software programs, a central library, the Faculty's Learning Resource Centre and an Internet system.

Case four noted that the style of research in the faculty is strongly influenced by the academic origin or institution that lecturers graduated from, and in this case the majority of research projects place much emphasis on quantitative research. The faculty helps develop individual lecturers' research skills by giving them opportunities to be thesis advisers or to become members of research committees. In addition, there are a number of research seminars provided, but unfortunately these are relatively irregular.

The Faculty of Education subscribes to both Thai and English journals. There is considerable interest in contributing to these journals from both inside and outside the institution. The publication fee is around 2,500 baht. However, for lecturers in this faculty, publication is made free of charge in an attempt to increase the publication rate.

In this faculty, there are considerable funds available for all lecturers to pursue their work, especially those who have low research experience. A measure of the engagement of the staff with research can be gauged from the fact that there is about ten percent of the faculty's provision for research still left every year.

The Case four respondent recognized that one of the key factors that helps to influence lecturers to do research is their self-motivation. Highly productive faculty members often serve as models for others, and it appears that lecturers are

more willing to do research when they are praised and have the opportunity to build a reputation to become a famous researcher. Some lecturers request reinforcement of their activities as a contribution to their self-actualization. Often, whenever a lecturer gains accomplishment, they recognize that research is not a difficult task. Then they enjoy doing research, and the respondent claimed that:

> If anyone produces research work and that piece of work was quoted as a reference, it is a reminder to all staff members that this name has been referenced in others' work.

Another reason why lecturers in the Faculty of Education should be involved in research is, as Case four noted, there is a rule:

> We made it a condition for lecturers with academic achievements who become assistant professors and associate professors that they have to do research work and write academic articles.

Notwithstanding this pressure, the Faculty of Education is usually viewed from outside as having a low research productivity. It was found during the interview that this faculty does not actually emphasise the conduct of research. Our Case four respondent stated that:

> The curriculum of the Faculty of Education does not strongly focus on research.

The respondent has also suggested that there is an attitude in the faculty toward research activities that indicates that it is unnecessary for lecturers to conduct research projects. Specifically, the Case Four respondent said:

> Parts of the faculty staff should read research work and bring what they have read for discussion. Whether they have to be good at conducting research projects, I don't think it's necessary.

Although the faculty plans to encourage lecturers to do research, the focus currently seems to be to utilize the research results of others. Case four added that

> I don't think lecturers need to be competent in conducting research, but they have to know about the research work of others. They should be able to decide if a specific work is reliable. When reading a research piece, one has to know whether that work is trustworthy.

Furthermore, it was clear from the interview that lecturers have a high teaching workload. Although the faculty provides significant research funds, many lecturers are not able to do research because they have no available time. The Case four respondent said:

> In the past, our staff had high teaching loads. We offer both undergraduate and graduate programs. For undergraduate, we have normal day courses and special night and weekend courses. Anyone who teaches the special courses will not have time. Therefore, the weakness of our staff is that we hardly work on research because we spend time on teaching.

An interesting insight on this balance between research and teaching can be mentioned here. Lecturers are more interested in concentrating on teaching rather than research because doing research gains less income than teaching. The Case four respondent pointed out that:

> Doing research does not bring the same rate of income as teaching. Some lecturers earn 40,000 baht per month from teaching. Researchers cannot earn extra money at the same rate as lecturers, or even earn 5,000 baht per month. Will the teachers get the same amount of income if they stop teaching and work on only research? What can we do in order to make their income the same as when they teach? The University receives hundreds of millions of baht from providing teaching which is impossible to get from research.

Whilst it is technically possible for this University to be a Research University, our Case four respondent said that in order to actually become a functioning Research University, lecturers should have lower teaching workloads. However, what happens in reality is actually the opposite. The faculties in this case institution are now trying to increase the number of students because they are seeking more money. The respondent noted:

> This is because the government's policy states that the budget will be provided according to the number of students. Therefore, the more teaching, the more income.

Thus the question remains how can lecturers who have higher teaching workload have sufficient time to do research. This does not support the growth of research in the university. Under these conditions, it is hard to see how lecturers who have chosen a higher teaching workload for financial reasons will ever have the time, or the inclination, to do research. It was also found that while the senior lecturers in the faculty have more research skills, they also have to perform teaching tasks, and in a similar manner to other staff are nor able to do research either.

In addition, lecturers also lack confidence to do research because they have seldom been involved in research since graduation. Generally, new lecturers have only had research experience when they did their Masters or Doctoral thesis. Case four supported the notion that lecturers derived their new knowledge from reading other persons' work, and suggested that:

> There are many times that we use research work without even looking at who did it, how they did it, and if they didn't it correctly or not; whatever is exhibited will be utilized. This is dangerous.

Finally, it appears that the older and nearly retired lecturers rarely do research, and this is especially true for those without high academic rank who will usually not do any research at all.

In summary, Case four asserted that the Faculty of Education recognised that there were a number of important reasons for lecturers to be involved in productive research activity. At a pragmatic level, rank promotions are partly based upon research output, but, more substantially, it is an expectation that lecturers will conduct research in order to increase their teaching performance. Further, the nature of the research is assumed to be that which will help to define and disseminate knowledge about the discipline.

Notwithstanding these positive initiatives, several barriers to research are still perceived by Case four. There is still the issue of the high workload for all

lecturers, which makes research engagement problematical. In addition, there are a number of lecturers who are reaching retirement age, and they are unlikely to ever become contributors to research output. On the other hand, for younger staff members, there are a number of activities that compete for their attention, including the fact that the faculty places a higher emphasis upon teaching than on research, and that there is a lower income derived from research activity than from engaging in extra teaching. Clearly, there are tensions in this faculty that need to be addressed before research productivity can be increased.

5.2.2 Case Five: Faculty of Nursing

The stated purpose of conducting research in the Faculty of Nursing is to acquire and to develop new knowledge for enhancing professional growth in nursing as well as facilitating the serving of patients or other people. Generally, lecturers in this faculty are involved in a lot of research because faculty administrators try to build up a proper environment which encourages lecturers to conduct research. In addition, lecturers are generally eager to do research because this faculty has so many lecturers who have graduated with doctoral qualifications. Case Five said:

> We try to create a suitable research environment. Our faculty does a lot of research projects because we realize the importance of research.

The Faculty of Nursing offers research funding that generates about ten percent of our faculty's income, and lecturers also obtain research funding from government and overseas. Moreover, the Faculty of Nursing has its own database network that is linked to national and international nursing institutions. Both the topic and the form of the research depend on the nature of the field of teaching that aims to develop its services and could, for example, relate to the utilization of local intelligent knowledge such as to give birth by natural methods and how to use Thai herbs in therapeutic situations. The Faculty of Nursing conducts research in teams by joining with other organizations, and sometime it receives research funding from other countries. The respondent reported that the faculty has networks with all five regional (North, East, West, South, and North-East) nursing research units

in Thailand. In addition, the Dean of the faculty has received funding from Canada to do research relating to mothers and children.

The Faculty of Nursing has a research journal that has outside experts as peer reviewers. This Research journal invites outsiders to be peer reviewers in order to set up equal standards to the international journals. The Faculty has taken this approach rather than provide staff with publication funding in other Thai and international research journals, in addition to conference funding. Clearly, the Faculty of Nursing is eager to encourage lecturers to be involved with research, and as Case five suggested, the faculty provides several training topics. For instance, if lecturers have problems with statistics, experts are invited to teach them. Also, some international professors are invited to talk about the concepts of the research that they have carried out, and have been invited to be research counsellors. In addition, gaining high academic rank is also another motivation because generally Assistant Professors and Associate Professors must do research.

However, notwithstanding this positive environment for research, there are some obstructions that occur with both the new lecturers who have just graduated and staff who have been employed for a considerable time. Case five noted that:

> We have two types of lecturers who did less research. The first is the new lecturer who has just graduated and second is the very old lecturer who has less enthusiasm and a high teaching workload. Research is hampered because sometimes they have to work overtime.

The respondent indicated that, in fact, the University has not provided direct financial support to the Faculty of Nursing to encourage them to carry out research. It provides only a policy that staff have Faculty to follow. Even under these conditions, however, Case five expressed the opinion that the Faculty has planned to slightly increase number of research outcomes and variety of works, and that:

> In the future, we will put more emphasis on research which is based on National requirements, especially in the area of integrated research.

In summary, Case five stated that the reasons why staff in the Faculty of Nursing engage in research is to acquire and to develop new knowledge for enhancing both their own professional growth and that of the discipline generally. Research in the faculty broadly involves ways to improve patients' treatment and services but attends particularly to the utilization of local intelligent knowledge.

It appears that lecturers in this faculty are keen to perform research tasks because the nature of the research environment has provided significant motivation for them, and, in addition, they have a great deal of 'self-encouragement'. This latter attribute is probably linked to the fact hat many lecturers have obtained Doctoral qualifications and they are able to make use of the funds that the faculty has provided from the faculty's own income as well as government and overseas sources.

The Faculty of Nursing has also provided many supporting facilities for research projects which directly contribute to the research outcomes produced by lecturers. For example, the faculty has its own database networks linked to National and International institutions. In addition, the Faculty of Nursing has specifically provided several research training seminars, and the lecturers have been encouraged to conduct research in teams by joining with members from other organizations and engaging experts to be research advisors.

Notwithstanding these very positive initiatives, in a similar way to other faculties there are factors that impact negatively on the development of research productivity such as (i) the lack of research skills of new lecturers, (ii) the low enthusiasm for research of old lecturers, and (iii) the overall high undergraduate workload.

5.2.3 Case Six: Faculty of Fine and Applied Arts

Case six respondent revealed that research in this faculty is only slightly developed. There are not many lecturers who are willing to do research and recognize the importance of research. In the main, academic lecturers in the Faculty carry out research because they are looking for personal development and academic promotion. The respondent added that lecturers who do research are

people who love this task and are eager to explore ideas about creative knowledge, which is especially characteristic of the senior lecturers. Further, it seems that, generally, lecturers who evidence research productivity have low teaching workloads. It should be appreciated that research productivity in the Faculty of Fine and Applied Arts includes creative work such as producing a masterpiece work. Case six emphasized that the impetus for creative work usually comes from research, saying that:

> We call it 'Creative Work for Research.

The respondent continued this idea by adding that:

> Good research should be explained and supported with theory and then can be applied into lessons.

This faculty has a policy of offering a research funding every year. Case six noted that:

> We give them an opening. We offer research funding for two types of research, and consists of two creative researches and two general researches. We also have funding for writing academic works.

The Faculty of Fine and Applied Arts supports staff to achieve publication by providing a research journal that is distributed two times a year. The faculty has a policy to invite outsiders to act as peer reviewers and as a research committee to set quality standards.

Generally, research in the Faculty of Fine and Applied Arts uses field study to collect data. For example, one lecturer carried out research into the patterns of local architecture. They carried out the field study by collecting data with villagers, taking photos and finding literature. The result of his study was published in architecture journal which described the local architecture in specific tribal style.

When asked what strategies might be used to increase the research productivity in the Faculty, Case six suggested that it might be done by:

> Providing a small amount to a research funding of around 30,000 baht per project in order to allow new lecturers to practice doing research… We show them (new lecturers) examples of research projects. After they finish the projects, they must present them in an exhibition. They must learn basic skills and continue developing step by step.

Although the faculty tries to encourage lecturers to do research, there are many factors that cause low research productivity. As this faculty is a small unit, which has only 26 lecturers, there are not many people available to assist the research productivity, and there are not many lecturers who see the value of research. The respondent also disclosed that new lecturers often do not dare to do research because they think that research is a difficult task and it will consume a lot of time, adding that:

> We try to convince lecturers to do research. They should not fear the work. New lecturers sometimes misunderstand and think that research must be a huge project.

These explanations appear to demonstrate that lecturers in this faculty have insufficient knowledge about the nature of research, and the faculty is thereby hampered in its attempt to increase research productivity.

The Faculty of Fine and Applied Arts has no specific policy for monetary motivation for research output. Our respondent noted that:

> Although money is one of the motivation techniques, our lecturers normally ask for a limited amount of money for buying equipment and raw materials.

Although each year this faculty provides ten percent of faculty's income for research related matters, this fund is usually left unused, and, in the words of the respondent:

> Then we transform that money to the fund for writing academic works.

Within this research funding, the faculty has no salary provision or extra funds to support a researcher.

In addition, it was clear that the faculty faces a severe language problem. Case six revealed that lack of facility with the English language was a particular obstacle when publishing research, especially when lecturers attempted to write abstracts. Indeed, in some cases they were forced to hire a translator. Case six observed that:

> English is an obstacle. Generally they (lecturers) have problems when writing abstract because the translator sometimes does not understand art language. We need to recheck the work, and we need experts to help us.

Finally, the most important factor that contributed to low productivity is the high teaching workload. This faculty does not have many lecturers, and the nature of the subjects means that lecturers are required to teach students in a personal setting because this faculty emphasizes learning by operating and practicing. In addition, some senior lecturers have to perform a considerable amount of administrative work. This excludes the time that lecturers have for family duties. In this regard, Case six commented that:

> We may need to stop working on administrative jobs because it takes time, we have less time to concentrate on research works…I sometimes have to attend two meeting a day, I have no time to do anything else.

In summary, it appears that research activities in the Faculty of Fine and Applied Arts are only slightly developed at this time, and there are few lecturers who recognize the essential nature and place of research in the university. There are, nevertheless, some lecturers who perform research tasks, but they are generally senior lecturers who have low teaching workloads.

Even with this relatively underdeveloped research basis, the Faculty of Fine and Applied Arts continues to support lecturers to do research by providing research funding every year. In this faculty, the form of research outcomes are predominantly creative works and lecturers are encouraged to present their

outcomes in public exhibitions. In addition, this faculty also provides a research journal that publishes research articles at least two times each year.

Although the Faculty of Fine and Applied Arts is a small unit with only 26 lecturers and minimal development of research productivity, it continues to encourage lecturers to do research by providing supporting facilities and a suitable environment. As with other areas, lecturers also face constraints of time from high teaching workloads and, in some cases, having to perform administrative tasks. Moreover, language is a problem. Lecturers in Faculty of Fine and Applied Arts lack English language skill.

5.2.4 Case Seven: Faculty of Public Health

The research plan for the Faculty of Public Health is a part of the national research policy, and as a consequence the research activities in this faculty are relatively much more developed than in other faculties within the university. In the past, lecturers performed individual projects, but recently the trend has been toward research carried out in teams or for integrated projects to be developed. This faculty has a strong network linkage with other faculties and other outside organizations, such as the Faculty of Nursing, and The Health Care Centre, The College of Sport Science, and The Primary Care Unit which are in nearby provinces.

The Faculty of Public Health's research activities are ambitious, and aim to support the social development of the Eastern region. As Case seven said:

> The research plan of my faculty is a part of the national research policy. We have both integrated and individual research based on the National research policy, and also some research projects that aim to solve the problems in Eastern regions.

Lecturers in this faculty are interested in conducting research and the nature of subjects undertaken is suitable for attracting support i.e. applied research. The topics that lecturers prefer to research are often related to their field of teaching, such as factory health promotion or environmental health.

This faculty provides research training courses and seminars for their staff. In addition, lecturers also develop their skills and are motivated to carry out research by being engaged as consultants and guest speakers at other institutions. For instance, lecturers are invited to be guest speakers at the Health Promotion Unit in nearby provinces or at The Federation of Saving and Credit Cooperative of Thailand Limited.

Lecturers in the Faculty of Public Health generally are willing to publish their researches in Thailand, especially in specific journals that are related to their field of study or journals of the institution from which they graduated. The faculty plans to increase the amount of research that is published in international journals by asking overseas professors to guide lecturers in the techniques of writing and publishing research findings.

Case seven pointed out that the factors that have particular influence on research productivity within the faculty begin with the willingness of individuals to pursue personal development. The faculty has two professors, one associate professor and two associate professor on the waiting list, together with many assistant professors which is an important factor because the tenure status significantly influences research productivity. The majority of academic lecturers are of the young generation, around thirty years old, with a doctoral degree. They normally form teams to do research and are willing to encourage students to do research as well.

The second factor which impacts on research productivity is the availability of research funding. This faculty receives research both from the faculty's recurrent income and from Government funding such as funding from The Thai Research Fund Regional Office, Thai Health Promotion Foundation, World Health Organization, and The Federation of Thai Industries. The Faculty of Public Health has an abundance of funds for which individual projects receive around sixty thousand baht each.

The third important factor in this regard is the faculty's policy to open post-graduate programs. This faculty has many Master degree programs and has a plan to open doctoral programs that will encourage about 30 lecturers to do research. An important idea underpinning this move is that research is an element of quality

assurance to improve quality of teaching and learning, and in addition to discipline specific research, the implementation of classroom research and course evaluation research is envisaged.

Different from other faculties, lecturers in this area have a high teaching workload, but Case seven argued that:

> Although our lecturers have high workloads, they can manage their time. The lecturers teach students during the weekday and conduct research on the weekend.

In this Faculty, lecturers have many graduate students to be their research assistants. Case seven also insisted that:

> We don't think that our weaknesses are serious problems, but are things that we can develop. Lecturers understand that research is an important element of teaching activities. Research is part of their demonstrated productivity that can be recorded for special promotion.

Notwithstanding this favourable environment, the research productivity of the Faculty of Public Health is less than expected. Case Seven indicated that this was because half of the academic lecturers are away from the Faculty to studying for higher degrees, saying:

> Obviously the active research lecturers have Doctoral degrees. Whereas the Masters degree graduated lecturers are now busy with applying for Doctoral degree courses, and some of them are currently studying Doctoral degree. We expect that in the next four to five years, our Faculty will have all doctoral graduated lecturers.

Another personal factor that can impact upon research productivity is fatigue, especially if the lecturers have young families. But for the Faculty of Public Health, some lecturers still do research although they have family duties. As a consequence, Case seven felt that family duties do not have a particularly strong impact on research productivity:

> The majority of our lecturers are single. However, the married lecturers are still active in doing research. I don't think that to take care of family members impacts on research productivity.

Overall, Case seven insisted that the Faculty of Public Health's research productivity is relatively much more developed than for other faculties. The lecturers are generally interested in conducting research in teams with students and outside organizations and focus upon projects that aim to support the social development of the Eastern region.

Case seven insisted that there are numerous important factors that have a particular influence on research productivity. The faculty has provided a comprehensive research plan and also the nature of the projects that underpin the research are suitable for attracting support i.e. applied research. An important factor is that lecturers who have tenure status realize that they must perform research tasks, and, in addition, the majority of academic lecturers are of the younger generation who have doctoral degrees that enhance their qualifications to do research. Moreover, the research environment is also very supportive, with the faculty making available research funding and supporting a policy of open post-graduate programs. There is a shared belief that research is the main element of quality assurance to improve teaching and learning activities within the faculty.

Disappointingly, however, in a similar way to other faculties, the Faculty of Public Health has less research productivity than might be expected. Case seven explained that there are still many lecturers who are continuing to study for their further degrees, and the other staff are confronted with high teaching workloads. In addition, it emerged that some of lecturers in this faculty feel physically tired after taking care of their families, but on the positive side, this experience certainly helps to sharpen their ability for efficient time management.

5.2.5 Case Eight: Faculty of Science

Research is very important to the Faculty of Science, because it can improve and support the social and economic development of the eastern region. Case eight respondent added that research is a source of knowledge in various areas, and in their preparation of lecture. Lecturers should not use only textbooks, but should

read recent research papers. Case eight said that more than half of the lecturers are willing to do research especially the young generation whose ages are not more than 45 years old. The Faculty of Science has a number of diversified departments, and lecturers do both basic and applied research. Generally, lecturers do quantitative research because the nature of the subjects studied is based on statistics. Case eight respondent said

> We have 12-15 research projects a year from our Faculty research funding and 6-7 projects from the National funding. The 6-7 projects that I mentioned consisted of sub-projects of 3-4 topics.

and, in addition:

> Every year we have research outputs and articles published of more than 50 topics both in international journals and the rest is presented at National conferences.

Generally, lecturers conduct research in teams or in situation requiring integrated research, and as a result, the faculty is involved in a range of diversified research projects. Some lecturers do research with other organizations outside of the university or with colleagues. For instance, in a number of cases, lecturers carry out further research with their thesis advisors. For lecturers who prefer to do research in topics that it is difficult to find team members within this university, they may join a team with other universities or even participate in International research teams.

Lecturers learn to develop their research skills by practicing doing research, and this can be facilitated by budgets received from the faculty, or outside organizations such those from a post-doctoral research fund. Sometimes lecturers carry out research in pairs, combining with lecturers who have and who do not have research experience.

In this faculty one of the factors that influence research productivity appears to be related to the enthusiasm of lecturers.

Although lecturers understand that teaching and research are regarded as equal elements, Case Eight mentioned that:

> Our faculty aims to push research to be the best.

The Faculty of Science has increased the number of students, and it is the understood duty of lecturers to find outside research funding. Case eight respondent said:

> We need support money for students to do research. The students prefer to work with lecturers who have research grants. Students in this faculty of both bachelor and post-graduate degree levels have to do research. It is the nature of subjects. The costs are approximately 10,000 baht per student.

The Faculty of Science also uses research productivity as the criteria to evaluate lecturers' performance for rank promotion and, in addition, lecturers who have tenure status must produce research every year.

In contrast to these factors designed to encourage research output, there are some inherent factors that cause low research productivity. Case eight stated that lack of motivation is the first factor, and went on to explain that The Noble University proposes to be a research university. However, there is no formal regulation to motivate lecturers to do research and publication, and although the University's research policy directly supports science, the University does not provide enough funds. One example of the effect of this decision is that, to publish articles in International journals, lecturers must pay a publication fee. In some cases this amounts to five thousand baht per page, and if an average article has ten pages, there is a cost of fifty thousand baht. In many cases, lecturers are not sure that they will receive their money back if they pay in advance to publish their research in International journals. In this faculty, this situation has been somewhat corrected by the provision of a publication budget. Case eight informed us that:

> Our Faculty research committee has developed criteria to judge the members of a project. If all the members are the staff in the Faculty of Science, they receive the whole fund. Otherwise, if there are only two people from our staff, they will receive two thirds the fund. Furthermore, the Faculty of Science has budget for writing academic works as well.

The second factor inhibiting research output can be an inefficient research network. Generally, lecturers must have their own connections with other organizations and friends to be able to access research funding. For instance, it was through connection with friends in other universities, that Case eight was able to receive information about National Government funding for integrated research projects. As a result, a research project was prepared in order to join the National research team.

> It is weakness of local University.

Case eight explained, that:

> We have no qualified instructors to be a member of the National research administrative committee.

An important third factor is the inefficient allocation of resources and facilities. Case eight pointed out that some lecturers are somewhat selfish, and they are not willing to share research equipment with other persons. The respondent observed that:

> If a lecturer wants to use machine A, he must pay for maintenance and should have publications. Some lecturers have a big office, we should determine how many students they can advise and how they use resources.

The fourth factor inhibiting research in this faculty is the lack of qualified technicians. At the present time, there are twenty lecturers per one technician, and the number of technicians is not enough to maintain the complex equipment at research standard. Case eight noted ironically that:

> We should have more budgets, such as 200,000 baht a year for employing an extra two technicians. But now we have to pay 500,000 baht a year for maintenance. The maintenance cost is more expensive than to increase the amount of technicians. Then when the equipment is out of order, lecturers cannot perform their task; therefore, they waste their time and resources.

The last factor appears to be that the research committees are younger than the Faculty administrative board, and as such they cannot influence the senior staff to do research because of a Thai cultural understanding of the innate respect for the dignity and position of elders i.e. seniority.

It can be concluded from the comments of Case eight research in the Faculty of Science is very important for the social and economic development of the Eastern region. The lecturers clearly recognize that their research is the source of knowledge and also that it helps them prepare for undergraduate lectures. As this faculty has a number of diversified departments, the nature of the subjects encourages lecturers to perform both basic and applied research, especially projects with a quantitative focus. Normally, lecturers conduct research in teams, and this markedly assists lecturers to have more topics for publication. An important issue in this faculty is that research outcomes have been specifically linked to the evaluation of lecturers' performance for the purposes of rank promotion.

More than half of the lecturers in this faculty are willing to do research, and this is especially so for the younger generation. The Faculty of Science has currently increased the number of postgraduate students, and it is an understood responsibility of lecturers to find outside research funding for these students, who, in turn, admired lecturers who have the ability to find a budget to assist them to perform their project.

However, even in this productive faculty, there are some factors that hinder further research development, including the perceived lack of motivation from the university. There is no formal regulation in place to encourage lecturers to do research, and university itself does not provide any research funding. The research and publication funding is generally derived solely from the faculty's income and outside organizations. In addition, there is an inefficient research network for this area, suggesting that lecturers sometimes miss important research-related information. Furthermore, the Faculty of Science appears to have inefficient allocation of resources and facilities. Case eight revealed that some lecturers are selfish, in that they are not willing to share specialised research equipment. In

addition, when this equipment breaks down, the faculty has a lack of qualified technicians and repair budgets.

5.2.6 Case Nine: Faculty of Humanities and Social Sciences

For the Faculty of Humanities and Social Sciences, research is a powerful method for checking and enhancing social knowledge in addition to increasing a lecturer's personal development. The area of humanities relates to human understandings and human management, whereas the Social Sciences relate to subjects about human communities and the surrounding environment.

In the past, Case nine informed us that research in this faculty was not as common as it is now. There was not much research productivity during the early stages of development of the faculty, but nowadays lecturers have started to realize the importance of research. Case nine said:

> Research plays a part in everything. We have projects to enhance research knowledge. The Dean and administrative staff also support research activities.

The lecturers who want to progress in their career must do research, study about research problems and compare new knowledge with previous theories. The respondent stated that:

> They should use conceptual thinking in textbooks to integrate into modern knowledge, also supporting what they have learnt from textbooks. The textbooks are not exactly one hundred percent true and research is something that can be used to support teaching. If knowledge in the textbook is not matched with the results of the research, they can show students the difference.

The Faculty of Humanities and Social Sciences supports staff to do research by providing research funding. The first source of funding falls under the Faculty's research topics which focus on gaining new knowledge as announced in the university's strategic policy. The second source is the research funding earmarked for topics that lecturers are personally interested in. This faculty opens

opportunities for lecturers to conduct research by providing supporting resources such as when lecturers need money to search information. The faculty also supports the lecturers by providing plain paper, printer and office assistants as well as granting time release for other duties.

Moreover, this faculty has training programs, such as those concerned with classroom research. The lecturers can learn to do research by starting with small projects then move to bigger ones later. Publication is the next process after finishing a research project. Besides publishing in International journals, this Faculty has two research journals, consisting of Humanity and Social Science Research Journals which publish general articles and a Research Journal which publishes only research articles. However, Case nine stated that it is difficult to separate clearly between general and specific research articles. The faculty now prints only one research journal that has a peer review system. In addition, this faculty also encourages lecturers to offer presentations in research conferences by providing a specific budget.

Case nine remarked of the research situation that:

> We have to respond to the changes of the surrounding environment. This faculty is growing fast, but we still insist on our aims to encourage our Eastern region to become a knowledge-based society. We make slight changes to create a flexible process.

However, in future situations, the respondent said:

> I cannot guess because it depends on the faculty's and university's policy as well as other factors.

There are many factors which affect the quantity and quality of research performance. The faculty manages to raise the amount of research outputs but the outcomes are still not much. Case nine stated that there are two main factors that cause lecturers to do less research. The first relates to personal factors. The respondent said:

> Some lecturers finished Masters degrees a very long time ago and the course did not have a research program. They studied only research methods and have never done any research. As a result, they cannot do research topics that they are interested in to increase knowledge for teaching.

From this respondent's statement, it appears that the lecturers in this faculty lack appropriate researcher qualifications and aptitude. The respondent explained a pertinent point that if lecturers have not got a researcher's personality, they are hardly likely to become a researcher. Case nine pointed out that:

> Some lecturers don't have a researcher's personality. A researcher's personality requites them to be observant, love to search for information, ask questions and use what they are learning for continuing study. Lecturers who didn't have those characteristics are not interested in doing research.

Beside personal factors, there are some external factors that have a marked affect on low research productivity. The workload is the most important one, because it requires the sharing of available working time between teaching, doing research and anything else. Case nine stated that:

> As we know, our staff has the highest teaching workload. We teach general subjects which contain more than 20 credits. We have both major and minor subjects. This faculty has fourteen departments and more than 150 subjects are taught per year. There are more than four thousand students studying Bachelor and Masters degrees as well as special courses excluding those who learn Thai and the English language. That is why our lecturers have a high teaching workload. They have no time to think of doing anything else.

Moreover, this faculty's research centre has been established for only one year, and there is insufficient office and other support. Case Nine stated that:

> We are not yet strong in this area and also we have insufficient officers to assist researchers.

In summary, it is suggested that the lecturers in the Faculty of Humanity and Social Sciences do research to develop their teaching performance and in

expectation of rank promotion. Research in this area is seen as a powerful method for checking and enhancing social knowledge.

Case nine informed us that research in this faculty is not a common task because the faculty is in an early stage of development, although it is true that the faculty has provided lecturers with research funding. In addition, this faculty also encourages lecturers to do research tasks by providing a research training program and assists lecturers to gain research experience by allowing them to start with small projects before subsequently moving to bigger ones. At the final stages of research projects, lecturers are informed that they should publish their work in the faculty's journal or an outside journal in which faculty has a supported publication budget.

However, the research outcomes are, at this time, not great. This faculty has faced similar problems to those of other faculties that have been seen to impact on the research outcomes of staff. For example, some lecturers in this faculty have insufficient research qualifications and aptitude, and generally staff have low levels of research experience and a high teaching workload. In addition, the faculty has an ineffective support system because the faculty's Research Centre was established only one year ago.

5.2.7 Case Ten: Faculty of Engineering

Our Case ten suggested that:

> The lecturers in this faculty agree that research is as important as the University's commitments themselves.

However, as a result, lecturers appear to have no enthusiasm to be engaged in research. The amount of research carried out currently is not significant and it appears that the faculty is just in a beginning period. Case ten explained this by saying that:

> The research environment in this faculty is not full of vitality. The lecturers in my faculty are not interested and have no enthusiasm to do research.

It seems like the research environment in this faculty is one that does not lead to an active research area. It was observed that any lecturers who do research are confronted with some resistance. Indeed, Case ten noted that:

> Some lecturers have a negative attitude toward other lecturers who do research.

As with other faculties, there are many factors that appear to cause low research productivity. Case ten explained that the faculty is relatively new and, as a result, the faculty members are relatively young and are contemplating their own study toward a Doctoral degree. This has resulted in a lack of lecturers with research experience, and there is no experienced researcher to act as a mentor or a leader who can direct them to do research. New lecturers generally do not understand what they should do in the research area, and this is particularly so for lecturers who are not Doctoral graduates.

At this time, the faculty does not currently have a research policy to support and encourage lecturers to conduct research, as the University's policy is ambiguous. Case ten observed that

> The University is now positioning this Institution as a Research University, but I have never found out the definition of their ' research University' at all as well as there is no index to measure work performance to achieve the goal.

Hampering any development in the area is the fact that there is insufficient research funding made available to this area by the University. In addition, Case ten pointed out that research productivity of this Faculty is for commercial use, and is not suitable for publication. Case ten said:

> We rarely conduct any innovative research. The researches are in the form of practical research that aims to solve specific problems such as the problem of a production process or the creation of a new product. Those projects do not produce any new knowledge. The research is only for solving surface problems.

In contrast to faculties that have higher research productivity, there are only a few lecturers in Faculty of Engineering that have tenure status. This means there is no indirect force that encourages lecturers to do research in order to remain in their status. Case ten observed that

> We have other alternatives to receive promotions, without doing research, e.g. teaching, and administering in which lecturers are more interested.

In summary, it appears that the lecturers in the Faculty of Engineering agree that research is an important task, however Case ten noted that there are many limitations to research in this area and pointed out that the resulting research outcomes are not much. In essence, it is claimed that this faculty has not provided a particularly supportive research environment and has not developed mechanisms for encouragement of staff to engage in research projects.

The importance of this statement is that it showed that the university itself has no index to measure work performance to achieve the goal. Although the University announced its intention to become a Research University, the respondent has not found this to have happened yet.

The Faculty of Engineering is a relatively new faculty, the lecturers are new to the research environment and are currently contemplating their own study toward a Doctoral degree. Moreover, many lecturers do not choose to conduct research and those that do face some resistance from other staff. The lecturers commonly demonstrate a lack of research skills and are not capable of generating significant funding. In addition, the facilities available in the faculty are generally insufficient to support complex research investigations. Finally, in terms of strategies for rank promotion, it seems that lecturers are more willing to perform alternative tasks rather than engage in research when either can be quoted in a promotion application.

5.2.8 Case Eleven: Institute of Marine Science

For the Institute of Marine Science, research is both a method of developing new knowledge and applying it. This Institute has two main duties; the most important

one is conducting research, and the second is supplying academic services. Research outcomes generated by this Institute bring benefits to the Institution, to aqua culturists and other primary producers and specific private companies.

This Institute has 25 scientists who are specifically engaged as researchers, rather than academic lecturers, and around 125 support staff. Half of the 25 researchers are full-time workers whose main responsibilities are to do research, and to take care of and supply food for marine animals. Because some full time workers have to do other jobs as well as performing research; research only makes up 50-70 percent of their responsibilities.

Research in this institution has a heavy emphasis on quantitative methodologies using statistical analysis. Case eleven informed us that:

> We do research about marine science in which statistics plays a very important role to measure difference: for instance, when we feed the animals, we need to compare the different quantity of foods that can make them grow well.

It is interesting to note that research is carried out in this Institute that the public may not generally be interested in, therefore, this research is changed in form to become articles that are more widely accessible. Case eleven said that

> We try to encourage our staff to publish or present the outcomes in the forms of reports, manuscript and consultation to private companies or aqua culturists

As research is the main task for staff in the Institute of Marine Science, this Institution attempts to support staff in their research as much as possible. This includes the provision of basic and advanced facilities as well as expensive equipment needed, such as the equipment to measure water quality and the quantity of dissolved metals. The Institute of Marine Science has a specialized library, a computer lab, and a network system linked to the University database and outside sources of information. Although the Institute has not printed its own journal, this Institute has money to support staff to write publications and give presentations in both National and International conferences.

In spite of this well developed infrastructure, the Institute of Marine Science has a research productivity which is less than expected. Case eleven talked about many factors that impact on their research productivity. First, the financial regulations that request the collection of all financial evidence such as receipts and invoices. This is an arduous task for researchers, and our respondent suggested that the:

> University should make regulation clearer and more convenient.

As an example, Case Eleven quoted this experience:

> For instance, we do research about animals such as fish. When we purchase a fish, the University asks for the receipt. It is not possible for a fisherman to provide a receipt. When we asked them to fill out the form, they were not agreeable to this. If the regulation is the hindrance like this, we cannot use fish to do research.

A second factor is the lack of an experienced facilitator. Because the Research Development Centre has just been established, there is no appropriate person to act as coordinator, marketer, and administrator. Case eleven informed us that:

> In other universities, they have research units that are responsible for research and development. The research unit acts as the coordinator between researchers and outside organizations. Facilitators can be the marketer who sells our research outcomes to the public. Facilitators should be the centre for providing research funding, it should not be the duty of researcher to make contact directly with the owner of the research funding. Moreover, facilitator should be responsible for managing financial documents because scientists don't like to do accounting. I don't have accounting skills.

Case eleven continued this explanation by adding that:

> A Facilitator should be the source of basic information by providing a central database about aqua culturists, biological technology and social. For instance, weather forecasts and sea maps. Or if we want to enter the wild protected area, the facilitator should be the organizer.

In addition, it is the duty of the facilitator to evaluate the work progress and find the reasons why research may not be carried out.

Case Eleven said, further, that:

> The problem may occur because researcher has a high workload. We have to do an assessment case by case. We cannot use the same standard to assess all people, especially comparing full-time staff with part-time staff as they have different job activities. Moreover, in the case of a staff member who hasn't had any publication, we may examine other aspects of their work. They may make the Institution well-know in other ways, and we should give them some incentives rather than blame them.

Third, there is not enough International funding. This is possibly because of a lack of cooperation between the Institution and other organizations. Case eleven informed us that the majority of their research funds are derived from the Thai Research Fund Regional Office.

Fourth, Case eleven respondent has personally noticed that some Doctoral graduates still do not understand clearly what research entails. According to this observation, apparently:

> Higher education sometimes doesn't build a qualified researcher, as we have only ordinary researchers. We cannot assist them too much because they may not learn how to think by themselves. The real researcher must use their imagination, and know how to make their wishes become reality

Fifth, some researchers have language problems that cause them to lose chances to participate in International presentations or publish in overseas journals, and sixth, the majority of research in Thailand is required to be finished within one year, but research into technological development is very hard to finish within such a short time frame. Seventh, the University appears to place too much emphasis on publications rather than examining how to utilize research results.

Lastly, it has been observed that young lecturers are currently being promoted to be administrators rather than to a senior research post. In this

situation, they lose their chance to do significant research because of the limited time they spend in the research position. This is mirrored by the case of senior researchers who are being asked to do an administration job, as a result they have no time to do research and therefore, have many unfinished projects.

At the Institute of Marine Science, research is one of their most important tasks. Research outcomes bring valuable benefits to the Institution and to the community generally. The Institute has high research productivity because the staff are experienced scientists who conduct research as their main duty.

Case eleven stated that this Institute attempts to support staff in their research as much as possible. There is plenty of provision of basic and advanced facilities as well as expensive research equipment. The Institute has a specialized library, a computer laboratory and a network database linking the Institute to other Universities and other Institutions.

5.3 Summary Data Finding of Individual Respondents Classified by Faculty

Based on these findings, it appears that each Faculty has a common understanding of the importance of research productivity. In addition, the University is attempting to increase the research outcomes as announced in Government policy and has publicly stated that research is to be one of the main indicators of the University's success as well as it becoming one of the essential criteria against which to assess a lecturers' promotion. Overall, Faculties agreed that research builds and helps to disseminate knowledge about their discipline, and as such research provides the fundamental knowledge for lectures. Generally, it is found that students admire lecturers who perform research tasks, so a great deal of personal status can be achieved in this way.

It was observed that the Faculties that exhibit plenty of research outcomes generally have staff who are capable of 'supportive self-motivation'. These lecturers themselves are eager to perform research tasks as well as having enough experience to do significant research investigations. On the other hand, in faculties that have low research outcomes, it is obvious that lecturers are more willing to

perform other tasks such as teaching and administration because they derive immediate income from teaching but not from research. Sometimes they think that research is a daunting and time consuming task, and this is exacerbated by their self-perceived insufficiency in research skills and language skills.

In the Faculties that have high research productivity, there is a research environment which supports research and investigative projects. The senior supervisors usually realize the importance of research and become role models for junior staff. In addition, team work also assists in successful research performance. In contrast, the low research outcome Faculties such as Faculty of Engineering have a working environment that does not encourage lecturers to do research. Regrettably, in these areas lecturers attempting research sometimes face resistance from unproductive lecturers.

Whilst each Faculty has provided institutional supports such as research funding as well as other supporting funds and facilities, several Faculties such as Faculty of Science and Institution of Marine Science have argued that those funds are not sufficient. By comparison, some low research outcome faculties stated that although they provided research funding, lecturers were not interested because conducting research generates a lower income than teaching, such as in the Faculty of Education.

One issue mentioned by all Faculties is the high workload. Lecturers must perform teaching tasks, do research and provide academic service. All activities consume time and require careful time management.

After examining the common thoughts of each faculty, it appears that faculties that have a research journal and provide support for the presentation of research results have more research outputs. For instance, the Faculty of Engineering has no publication journal and has no policy to produce it, and consequently has a low research productivity.

As mentioned above, the respondent from the Faculty of Education mentioned that lecturers who conduct research gain less income. As a result, education lecturers prefer to teach as they derive income from teaching hours, whilst their Science Faculty colleagues, who have a higher research output, stated that their incomes mainly derive from doing research.

Lastly, the material that is the basis of the subjects that are traditionally part of the curriculum also provide support for some faculties to do research. This is particularly so in the Faculty of Public Health, the Faculty of Nursing, and the Faculty of Science. This suggests shows that in the Science Faculties, because of the nature of the material taught, the lecturers have a greater chance to conduct research. Hence the next section of this study will draw attention to an analysis of the comparison between the science and social science faculties.

5.4 Data Findings Classified into Science and Social Science Faculties

The analysis in this part compares the factors that cause low research productivity in science faculties with those in the social science facilities.

The Noble University is a large Institution, and there are diversified Faculties. For this part of the analysis, the data collected from respondents are analysed by dividing the seven Faculties and one Institute into Science and Social Sciences. To help with this separation, we have used the following definition:

> Science is knowledge of principles and causes that ascertained truth of facts. Science accumulated and established knowledge, which has been systematized and formulated with reference to the discovery of general truths or the operation of general law; knowledge classified and made available in work, life or the search for truth; comprehensive, profound or philosophical knowledge, especially such knowledge when it relates to the physical world and its phenomena, the nature, constitution, and forces of matter, the qualities and functions of living tissues that called natural science and physical science. Any branch or department of systematized knowledge considered as a distinct field of investigation or object of study; as, the science of astronomy, or of chemistry (Webster's Revised Unabridged Dictionary, 1913).

Within the natural science category, Kuhn (1970) specifically designates the physical and biological sciences as paradigmatic. Natural science seeks to understand the whole by identifying component parts (Kolb 1981). Knowledge is cumulative and derives from the systematic scrutiny of relationships between a few carefully controlled variables (Becher 1989).

Thus, within this study, the Faculties that have been gathered together as science are the Faculty of Nursing (Case Five), the Faculty of Public Health (Case Seven), the Faculty of Science (Case Eight), and the Institute of Marine Sciences (Case Eleven).

By comparison, social science refers to disciplines whose primary objective is to help understand behavioural and social phenomena (Ellis 1994). The social sciences are quite diverse; they all focus on some aspect of behaviour and social life and on the institutions, technology, ideas and aesthetic creations emanating from social interactions (Ellis 1994). Examples of social sciences are anthropology, economics, geography, history, philosophy, psychology, social work, and sociology. They also include areas that contain subjects that are called 'near social sciences' such as education (Ellis 1994).

Therefore, within this study, there are three faculties classified into the social sciences which consist of Faculty of Education (Case Four), Faculty of Fine and Applied Arts (Case Six), and Faculty of Humanities and Social Sciences (Case Nine), and Faculty of Engineering (Case Ten).

According to the views of the respondents, science and social science faculties are confronted with different impact factors that cause low research productivity. Historically, the Noble University was established as the teaching college, but now both Government and University's policies emphasise that graduates in science should be produced at the same rate as those in social sciences. Consequently the University was shifted to serve the Eastern Seaboard industries in science and technology. Case four argued that, unfortunately:

> When we focused on science, it meant we did not strengthen what we were good at. There are not adequate human resources in the Faculty of Science. Most of them were transferred from the Faculty of Education though.

The Noble University has two main Faculties; the Faculty of Education, and the Faculty of Humanities and Social Science, both of which are in the social science Faculty. In this study, we are attempting to get an overview of the impact factors that emerged from the changed structure of the University and the different nature of the science and social science faculties.

Research is the main task for science faculties. The research environment in science faculties is more active, the lecturers are interested in doing research because they are seeking higher academic positions and want to retain their performance where research is considered a component of a performance index. Moreover, the nature of subjects in science faculties are more conducive to research investigation, which also serves to motivate and support lecturers to perform research activities. As Case eight stated:

> The content of science subjects that we teach requires us to do research. We have both undergraduate and post-graduate students. If lecturers do not do research, they have no money to support the student's research project. The students prefer to work with lecturers who have research grants.

We can see that there is a perception that, generally, science faculties gain more advantage than social science faculties, because science research projects are more concrete while social science projects are abstract. The fund owners can see the possibility and benefits that derive from science projects more than social science topics. Indeed, as Case two stated:

> With the nature of social science faculties, it is difficult to show the clear benefits of the project to the Institutions that offer research funding, while science projects are more concrete. It quite difficult to convince the funding providers to see the importance of abstract projects, and how the project will bring them monetary benefits. Thus social science projects face difficulty in obtaining research funding.

This perception is underpinned by the observation that the research policy of the Noble University emphasises and supports science development, and as a result Social Science projects gain less Institutional attention. Case nine pointed out that:

> The University should provide us a chance, while the university gives more support to science. The university should have enough research funding and provide sufficient facilities. Please do not forget that this institution began with the Faculty of Humanities and Social Science, and the Faculty of Education.

In summary, whilst The Noble University is a large multidisciplinary institution, Government and University policies have shifted to place greater emphasis on graduates in science rather than those in the social sciences. Hence, the social science faculties have received less attention than before, and this has had a significant effect on their research productivity.

Clearly, science and social sciences are different in nature, and it can be seen that the factors that cause lower research productivity in Social Science Faculties than Science Faculties arise in part from the nature of subjects. Research in the science faculty is more active, and the content of science subjects encourages lecturers to develop research projects and produce tangible outcomes. In addition, science projects are concrete while social sciences projects are relatively abstract; this makes it difficult for the controllers of funds to clearly appreciate the benefits that might derive from social science projects, given that they prefer to focus on the anticipated benefits from scientific investigations.

5.5 Chapter Summary

The findings demonstrate that, generally, the faculties in the Noble University recognize the importance of research productivity and the university itself is attempting to increase its research outcomes.

However, it is interesting that an examination of the overall amount of research outcome shows that it is less than expected. The outstanding factors that cause low research productivity appear to be related to the lecturers themselves, because the highly productive persons are those who are willing to perform research tasks, whilst the low productivity persons are those whoshow little enthusiasm to do research. Moreover, the working environment, high workload, and lack of skills, experience and facilities also have a dramatic effect on research outcomes, and Faculties that contain more supportive funding and facilities seem to gain more research outcomes.

The science faculty, normally looks upon research as an essential task. To these faculties, research is the source of knowledge and its importance is reflected in the fact that it usually becomes the performance indicator for rank promotion.

Indeed, all lecturers who aim to obtain professional status have to do research. In addition, faculties that evidence high research productivity, such as the Faculty of Public Health and the Faculty of Nursing, have research funding, a research journal, and especially a working environment that supports investigative projects. High-output leaders are good role-models, and they also act to provide research facilities and research-dedicated time.

From the findings, science faculties produce more research outcomes than social science faculties, and it is claimed that this is because the content of science subjects encourages science lecturers to do empirical research. It was noted that science faculties have both undergraduate and post-graduate students, and if lecturers do not do successful research, they will have no money to support their student's research projects. In addition, this perception is underpinned by the observation that the research policy of the Noble University emphasises and supports science development.

In order to clearly examine the impact factors on low research productivity with more clarity, the next chapter will provide an interpretation of the data and a discussion under the aegis of the focus questions in which factors that impact upon research productivity will be classified into environmental factors, institution factors, personal career development factors, social contingency factors, and lastly demographic factors. The differences between science and social science will be discussed further in the 'Discipline' section of the next chapter.

CHAPTER 6

Data Interpretation and Discussion

Chapter Six presents the data interpretations and discussion by drawing together the related quotes and data findings in Chapter Five that derived from respondents about the factors affect them when doing research. The interpretations and discussion given here are based on the focus questions. There are six focus questions set up from reviewing the literature that have been formulated to help answer the research question "**What are the factors that impact on low research productivity of academic lecturers in a public University in Thailand?**" Within this chapter, the first five focus questions are explained and investigated, whilst focus question number six, regarding the respondents' recommendations to improve research productivity, will be presented in the conclusion Chapter Eight. This arrangement has been used to avoid repetition in analysis and discussion.

6.1 The Focus Questions

Focus Question One: In your opinion, how do environmental factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Two: In your opinion, how do institutional factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Three: In your opinion, how do personal career development factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Four: In your opinion how do social contingency factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Five: In your opinion, how do demographic factors impact on the level of research productivity of academic lecturers in your University?

Focus Question Six: From your institutional perspective, are there any steps that the university could take to enhance or improve the research engagement of academic lecturers?

6.2 Analysis by Focus Questions

6.2.1 Focus Question One: In your opinion, how do environmental factors impact on the level of research productivity of academic lecturers in your University?

> The place of employment is the single best predictor of faculty scholarly productivity…faculty members who come to productive surroundings produce more there than they did before they arrived and more than they will later when they move to a less productive environment. Resources, support, challenge, communication with producers an other compasses, all correlate with professor's productivity (Pellino 1981).

Long and McGinnis (1981) pointed out that work environment has a powerful effect on research productivity. The atmosphere of a department or college are important in stimulating high research productivity.

During the interviews, respondents expressed the differences in the climate and atmosphere within the University and Faculties. Some Faculties show that they have provided a research atmosphere, whereas other faculties are still at a level of developing a more motivated environment. Braxton (1983) found that there is a positive correlation between reinforced climate and research productivity.

Nevertheless, something that still remains in question is:

> If the faculty is provided with a proper research atmosphere, why is the amount of research productivity still less than expected?

Case one explained the broad view of his University by saying that:

> In the past, this university carried out little research, and the research environment was unmotivated. But nowadays research is important because it is central to the university's missions and activities.

Then, the possibility of increasing number of research outcomes when the University has more emphasis on motivating lecturers to do research is difficult. Bland and Ruffin (1992) described that clear organizational goals, a research emphasis, a distinctive research culture, a climate balancing between respect and intellectual jostling, assertive participative governance and a flat (decentralized) organizational structure have a positive influence on faculty research productivity.

Case three noted that this University has started to recognize research as an important task since 1977 when the University began to teach post-graduate courses. However, the research environment is not motivating enough, even though the University has tried to build a proper research environment.

Case two suggested that the reason why the University has low research productivity is because the majority of lecturers have not realized the importance of research, however, there are some groups of lecturers who do realize that research is very important task. Whilst it is widely agreed that research is the source of new knowledge for development in every area, there are still some lecturers who view research work as a useless task.

As a consequence, the research environment at this University is not so active and is ambiguous because the University treats all lecturers the same. The University does not categorize lecturers into highly qualified or under qualified staff, and therefore, a professor receives the same treatment as new lecturers. Lecturers have to teach as a university requirement, while research is more of a personal activity to which lecturers must donate their own time.

According to information contained in the interviews, it seems that the research environment at this University can be divided into three main groups for a clearer understanding of the factors acting against research productivity. The first group comprises those Faculties that provide a research environment and can increase research productivity. However, even in this group, the amount of published work is still less than the expected level. The second group is a group of Faculties that provide a research environment but still cannot raise the quantity of research productivity. The last group is a group of Faculties where there is an environment of low motivation for research leading to a low level of research productivity.

The first group of Faculties in which there is a properly motivated environment, have clearly recognized that research is a university task and are helped in this regard because the nature of subjects also supports this notion. There are three Faculties and one Institution within the first section; the Faculty of Nursing (Case five), the Faculty of Public Health (Case seven), the Faculty of Science (Case eight) and the Institute of Marine Sciences (Case eleven).

Case five highlighted that the Faculty of Nursing carries out several research projects because they realize the importance of research and lecturers themselves are eager to perform research tasks. For the Faculty of Public Health, Case seven stated that lecturers are personally interested in conducting research, saying that:

> The research activities are much more developed than before.

The staff generally have some connection with external organizations who are willing to join research projects. Moreover, Case seven's supervisor supports and motivates staff by being a frame of reference to the subordinates. The Dean of Faculty of Public Health is now more than sixty years old, but still performs research activities. There is a similarity here with Case eight who revealed that more than fifty percent of faculty staff are willing to do research. The lecturers are eager to carry out research in a self-directed manner, realising that research is an important duty for the Faculty of Science. Also, students are willing to work with lecturers who have research grants, which puts pressure on lecturers to find extra

research funding. In addition, the Case eight demonstrated that the staff have a high level of enthusiasm as lecturers quite often donate their free time during weekends to do their research. Within the Institute of Marine Science, Case eleven said that research is the main task, and noted:

> Now we can create a corporate culture to motivate lecturers to do more research especially during these 6-7 years.

In the Institute of Marine Science, the administrators act as role models by doing research and applying for large amounts of research funding from external sources.

The motivated environment drives staff to produce more research outcomes. Kuh and Whitt (1998) stated that academic environments and cultures or climates generally provide both socializing and reinforcing organizational norms, values and expectations concerning research.

The second group is made up of those Faculties that struggle to motivate lecturers to do research, even after they have provided a research environment. In these Faculties, the quantity of research productivity is low with lecturers being uninterested in conducting research because they prefer to teach and gain income from that.

According to the interviews, it is obvious that for lecturers in the second group, research is not seen as their main duty. There are three main Faculties represented in this section; the Faculty of Education (Case four), the Faculty of Humanities and Social Sciences (Case nine), and the Faculty of Fine and Applied Arts (Case six).

Case four revealed that the Faculty of Education has four main tasks consisting of teaching, researching, performing academic services, and implementing Thai culture. However, in the view of the staff the most important task is teaching while research is in the second rank, hence lecturers in the Faculty of Education are interested in teaching rather than doing research. The Faculty of Education has no one to be a frame of reference as a researcher because there is no lecturer who has received a National reward. The four showed that the Faculty try to motivate lecturers to do research, but nevertheless when comparing outcomes

with the number of lecturers, there is low research productivity. This is a weakness of the faculty, and this means that there are usually significant complaints received from the quality assurance committees.

For the Faculty of Humanities and Social Science, Case nine informed us that in the past, research in this Faculty was not as common as it is today because Thailand has just recovered from an economic crisis. Nowadays, there are some changes, however, Thailand has to compete with neighbouring countries and other countries in the world. The government has a policy to implement research and some people have started searching for more knowledge. Currently people are more interested in studying for a Masters degree and as a consequence there is little research that stems from this level of research given, furthermore, the overall research process is in an early stage of development. Case nine expressed that the Dean is trying to support lecturers to do research and support research activities by providing adequate funds and facilities. Case nine explained some of the support available in the Faculty by comparing his work-life in his previous institution and his current institution, saying that:

> I used to work in another University in which no one taught me how to write research proposals and I had no feedback for any possible corrections. In the previous University I had no hope for doing research and there was not much research funding. Also the topics were too specific. It seemed that I had to be involved in work that I didn't like. But in this University, I would like to thank the Dean of this faculty for giving me a chance.

For the Faculty of Fine and Applied Arts, Case six said that the research productivity in the Faculty was only slightly developed and that:

> The lecturers who did research were people who love to search for data and to study about theories.

Notwithstanding these efforts, there are not many lecturers who see the value of research. Case six explained that the supervisor is trying to be a frame of reference for the staff. The Dean and senior staff do in fact carry out a good deal of research and create many masterpiece works. However, the problem is that new

lecturers are not confident enough to do research, and are looking for more assistance and suggestions.

The last group is the faculty that has an inactive research environment and, as a result, has a very low level of research productivity; this is the Faculty of Engineering. Case ten mentioned that the research environment is not active in this faculty, and the lecturers are not interested and have no enthusiasm for research. Furthermore, some lecturers have negative attitudes toward lecturers who do research, and importantly, there is a lack of leaders who can direct them to perform research activities.

Focus Question One: Summary

It appears from the responses to this investigation that the type of research environment influences the level of research productivity. A positive atmosphere certainly encourages lecturers to perform research tasks. Faculty members who obtain positive reinforcement from their fellow staff continue their work and show an ability to perform research projects. The positive atmosphere that faculty members build with immediate colleagues can be a source of ideas, criticism, and provide pressure (in the form of strong motivation to succeed) to do good work (Blackburn & Lawrence 1995).

Moreover, Faculty leaders play an important role in supporting staff to do research in that they can provide a good role model. In faculties where the leaders are likely to perform research, generally the staff produce more output. Glueck and Jauch (1975) found that the behavior of the administration had a significant influence on the satisfaction of the academic members. Researchers were most satisfied with administrators who they perceived to be satisfied with them and their work, who attempted to reward them and who supported them to do more research. Kerr (1977) reviewed the literature on leadership and concluded that leadership plays an important role in research universities because leadership heightens members' morale and self-esteem, it affords opportunities to focus on and develop commitment for the task at hand and it allows subordinates to have information that increases their abilities to contribute.

An interesting observation is that within this University, respondents have expressed large differences in the research atmosphere between Faculties. Some Faculties such as the Faculty of Nursing, the Faculty of Public Health, the Faculty of Science, and the Institute of Marine Sciences have a properly motivated environment. In these areas, the lecturers are eager to carry out research in a self-directed manner, and the supervisors provide a good frame of reference for the less experienced staff.

It is also noticed that there are numbers of students who are willing to work with lecturers who have research grants because they admire lecturers who have positive research outcomes. Noser, Manakyan, and Tanner (1996) pointed out that students are challenged more effectively by faculty members who are productive researchers. Students also appear to appreciate teachers who introduce into their lectures aspects of research that the teachers have actually conducted, more than the teachers who are only discussing the work of others (Marsh & Hattie 2002).

On the other hand, faculties which have an unmotivated research environment contain a large number of lecturers who are less concerned with the importance of research. In these areas, lecturers prefer to teach or to perform administrative tasks, and this investigation has shown the following Faculties to represent this situation: the Faculty of Education, the Faculty of Humanities and Social Sciences, and the Faculty of Fine and Applied Arts. This situation similar to the situation in Chulalongkorn University where Suwanwala (1991) found that many lecturers did not realize the impact that conducting limited amounts of research has on the quality and quantity of research productivity.

Finally, a Faculty that has an inactive research environment is exemplified by the Faculty of Engineering. Some staff are not interested in research and therefore have no enthusiasm in this direction. Faculty where staff have high enthusiasm for research usually produce more research. Rathanit (1993), stated that lecturers who have a positive attitude towards research, produced more research. In addition, there are some lecturers who display negative attitudes toward lecturers who try to do research, and in addition there is a lack of leaders who can act as research role models. Jones and Preusz (1993) showed a significant relationship

between research productivity and the extent of interaction with colleagues for discussions and with involvement in joint research products.

Clearly, though, this is not the final word on this topic. Despite evidence to suggest that there are some Faculties that provide a motivated research environment and lecturers themselves who also recognize the importance of research, some lecturers still have low productivity. This implies that the strength of the research environment alone may not be enough to encourage lecturers to do research and that there may be other factors that influence them not to undertake research. .

6.2.2 Focus Question Two: In your opinion how do institutional factors impact on the level of research productivity of academic lecturers in your University?

We are looking here to determine if the nature of the Institution plays a role in determining both individual and departmental productivity. Institutional factors are those factors that directly emerge from the institution's structure, including; the type of institution, institutional policy for promotion, research policy, workload, salary, and resources and material supports.

6.2.2.1 Type of Institution

Of relevance to this investigation is whether the type of educational institution can influence the level of staff research productivity. Generally, staff in a research university publishes more than faculty members in a similar comprehensive institution (Radhakrishma, Yoder & Scanlon 1994). This case Institution is a comprehensive University which offers a full range of Baccalaureate programs, is committed to graduate education through the Master's degree programs, and is planning to be a research University. But Case Three raised an important point saying that:

> We want to be a research University, but we are currently a teaching University. The lecturers have a high workload. Although currently the University is encouraging a

> research atmosphere by offering grants and through facilitating a forum for presenting research results. However, much more is needed.

Moreover, staff behaviour can be controlled with formal bureaucratic rules. This Institution is not like a research university in which faculty members are treated like professionals in their own right, where staff can set their own agendas and can bargain agreements and contribute to the standardization of faculty work (Finkelstein 1984: Colbeck 1998). In The Noble University, staff members are treated like employees and consequently staff may find fewer opportunities to integrate research into their work practices. As Case two respondent :

> This University treats all lecturers the same. The University does not categorise lecturers into highly qualified or under qualified staff. For instance, Professors and Associate Professors have the same treatment as new lecturers. It is different from other foreign institutions that treat experienced lecturers different from new ones. Experienced lecturers, who have expertise in doing research, generally perform less teaching and research is their main task. But in this University, the lecturers have to teach, while research is a personal responsibility to which those lecturers must donate their free time.

Nevertheless, being a comprehensive institution does not completely block opportunities to do research, because the plan to open postgraduate courses has a positive impact on research productivity. To teach Doctoral Degree courses, the lecturers usually involved in conducting research assist students to do research. Pettigrew and Nicholls (1994) found that publication productivity is likely to be higher in Doctorate-granting universities. Case seven stated that in the Faculty of Public Health, lecturers are encouraged to do more research because they have a plan to open Doctoral Degree programs.

However, some faculties argued that postgraduate programs result in lecturers having lower research productivity. Case three argued that:

> The lecturers in graduate programs have limited research productivity. The number of their works published or invitations to lecturer at an international level is low.

This observation is supported by Case nine, who explained that the Faculty has many graduate programs. In this situation, the lecturers have to perform extra teaching tasks leaving them with no time to do research, and our informant suggested that:

> Our staff have the highest teaching workload. The Faculty has 14 departments and more than 150 subjects are taught per year. Our lecturers have no time to think of doing anything else.

Therefore, it can be seen that the type of institution can influence lecturers' in their ability to carry out research, especially if it is a teaching university where staff consider that their main duty is not doing research but engaging in teaching. The amount of time spent in research activities affects lecturers' research productivity (Cohen & Gutek 1991). Although the University tries to encourage staff to see the value of research, the outcomes remain at a low level.

In a comprehensive university other factors may combine with a high teaching workload leading to low research productivity.

6.2.2.2 Policy

The policies referred to in this section include both Government and Institutional policies that support research activities. The Thai Government has recently introduced more reinforcement to motivate lecturers to do research. The Prime Minister stated that universities should develop their research performance as sources of new knowledge and it is important to provide academic support to prepare the country for the knowledge-based society. Responding to the Government policy, Case one, whose task is to implement National policy in the University, said that:

> Research is important because it is central to the University's mission and activities. Lecturers should do research in order to develop their teaching ability. Lecturers acquire new knowledge when carrying out research. The knowledge derived from doing research has high value for communities and private enterprises.

Case three assisted his institution by informing them three years ago that the University did not have a research policy, and that there was no formal evidence of research activity, saying:

> Three years ago, no department had a research policy. Therefore, when requested, there was nothing official to be provided. Currently, the Graduate School has asked all Faculties to create their research policy and research focus. Those will be distributed to the public. They will guide teachers and students to put their projects on the right track. They will also assist private organizations which are interested in supporting research works to consider if our focus supports their business.

Case eleven argued that the weakness point in the Government and University's policies was that it was confusing for lecturers. Case eleven explains the source of the confusion and the impact on the University:

> We don't have a clear assessment standard because the research system is still very complex. We have to set a four years strategic plan. But the problem is the strategic plan from the Ministry of Education and the strategic plan from the Ministry of Science and Technology do not head in the same direction. This demonstrates that the upper management level also has an unclear plan.

Working to make research an essential task depends on whether the academic unit has included research within job descriptions and has identified the ways in which academic work should be evaluated. If a faculty sets an unclear policy, lecturers may not recognize research as an essential task. In this case it is clear why staff may prefer to perform the other activities. At a time when the University has announced its intention to be a Research University, it follows that the policy should be defined clearly in these terms. Case eleven said

> Now that this University has announced its plan to be a research University, we have already set the quality standard of what this University expects staff to do. This University must show an exact job responsibility because in order to be a research university, we need to reduce teaching hours and set the portion of teaching and research required to meet the standard. It is the responsibility of every department to understand their roles.

However, in the current situation some Faculties complained that University has an unclear policy to support research activities. Case two argued that both the University's and its Faculties' research policies aim to encourage lecturers to do research. Unfortunately, the performance is not matched to those policies as it is evident that lecturers have to struggle to find research funding and to manage their time by themselves without University support.

In consideration of a research production and promotion policy, obviously the University's research policy influences lecturers to do research in light of the fact that research is one of the indices used for performance evaluation in preparation for promotion (Read, Rae & Raughunandan 1998). Case one agreed that it is important to all lecturers who wish to remain in their current role to do research, and, furthermore, that many faculties use research as a criterion for promotion.

Nonetheless, some respondents argued that in fact The Noble University has not set a formal rule to force lecturers to do research, but rather has a general policy that some lecturers may choose to follow. It is policy without reinforcement. For instance, Case eight informed us that his Faculty has no regulations that force lecturers who have tenure status to do research, therefore implying that research is only a 'desirable' task. This situation is similar to that discussed by Case four, who expressed that lecturers are not forced to do research. For this Faculty, teaching is seen to be the main duty. Also, Case ten stated that his faculty has not had a formal research policy, and that lecturers can gain promotion without doing research. He said:

> This faculty hasn't had a research policy to support research and what we do only encourage lecturers to produce research productivity. Actually we do not have many lecturers who have tenure status and we have other alternatives to receiving promotions, without doing research, such as teaching, and administrating in which lecturers are more interested.

According to these research results, the Noble University apparently has not set formal regulations to instruct lecturers to do research. Some Faculties have chosen to follow the suggestion of research activity made by the University, while

the rest have chosen to ignore this direction. The current statement of research policy for promotion is not strong enough to persuade lecturers to perform research activities because there is no punishment for non-compliance. As Case eleven stated:

> Thai Universities use compromise rather than force.

Typically, high status Institutions place great emphasis on the relationship between research productivity and rewards by offering tenure and promotion. Effective research Universities help to ensure a vital Faculty establishes policies and practices that favour the appointment of highly able and motivated people (Bland & Ruffin 1992). In the case of the Noble University, the policies relating to monetary incentives and publication fees are also unclear. Some Faculties provide money for published researchers, while some do not. Case two stated that:

> This university has a policy to encourage lecturers to publish their research articles. Each faculty must provide publication funds. Nevertheless, it is unclear about the amount of funds required from each faculty because some of them said they have no money.

The observation that the University's research policy places more emphasis on science and technology research than social science also has a significant effect on the quantity of research outcomes. Case two stated that:

> University policy is based on National policies. Social science is less important than science and technology. Nevertheless, when offering research funding, I think, the amount is almost equal for both bodies. But science gets slightly more funding. The University has a policy that encourages lecturers to publicize their research articles by permitting each Faculty to provide funds for research publications. Nevertheless, the performance may be against the policy because I have no real idea about how much money each Faculty provides. Some Faculties informed me that they have no money, which means the process has ended.

Case four disputed the logic of this policy, saying that:

> Both Government and University policies emphasize that graduates in science should be produced at the same rate as those in social sciences. This University was created to serve the Eastern seaboard industries in science and technology. However, there's a difficulty in that this Institution was derived from an educational college. Our strength is education. When we were focused on science, it meant we did not strengthen what we were good at. Now, none are good. There are adequate human resources in the Faculty of Science. Most of them were transferred from the Faculty of Education though. The Faculty administrator's vision is not good enough in proactive strategies. There are two big Faculties in this University that are self-funding: the Faculty of Education and the Faculty of Humanities and Social Sciences. They did not get as much support from the University as the Faculty of Medical Science, Faculty of Science, and Faculty of Engineering. However, the supported Faculties could not utilize the resources provided since their personnel were not adequately qualified.

It can be concluded that both Government and University policy have some influence on research productivity because it is a motivation technique to encourage lecturers to recognize the importance of research. Each faculty has it's own policy to encourage lecturers to do research and publication, however, a proper policy should be seen to serve the needs of lecturers and be clearly defined, otherwise lecturers may be confused and choose to ignore the performance of these tasks. For the case Institution, a number of points are important; the Institution has a research policy which is considered as unclear by some respondents however having a research policy which expresses a need for staff to do research is further complicated by the fact that some faculties such as Faculty of Education, Faculty of Social Science and Humanities still have high workload. This results in lecturers not having enough time to perform research tasks. Coupled with a specific policy for science and technology development, it is possible that the University could destroy the willingness of social science faculties to do research when they feel that they have been ignored.

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6.2.2.3 Financial Regulations

Meltzer and Slater (1962) found that the lower the level of supervision, the greater the job satisfaction of employees. Case eleven respondent pointed out that

in 1997, he discussed with University administrators the reasons why lecturers did not do research. He found that the financial regulations were one of the obstructions that restricted research performance, saying:

> We do research about animals such as fish. When we purchased a fish, the University asks for the receipt. However, it is not possible for a fisherman to provide a receipt. Then we asked them to fill out the form, they were not agreeable to this. If the regulation is the hindrance like this, we cannot use fish to do research.

Hence, the obstructive and pedantic regulatory protocol leads to inconvenience for researchers in performing their tasks.

6.2.2.4 Disciplines

For a Faculty or discipline, there are also differing amounts of research productivity. A common perception was that the nature of subjects in various faculties is different and can markedly influence lecturers' performance, especially when comparing science with social science faculties.

Case eight stated that lecturers in the Faculty of Science are eager to do research suggesting that:

> The nature of subjects that we teach requires us to do research. In this situation, we need support money for students because students prefer to work with lecturers who have research grants.

Many of Case eight's Bachelor degree students request opportunities for continuing onto their Masters degree course by doing research with him. In such an environment lecturers have a strong motivation to obtain research funding to encourage students to do research with them. Similarly, Case two explained that lecturers in the Faculty of Nursing clearly realize the importance of research. This is because of the nature of the discipline, and indeed Science based areas generally have more research because the nature of the discipline's subjects requires

empirical experimentation. On the other hand, the nature of the humanities and social sciences makes it more difficult to demonstrate clearly the need for research projects. Case two explained that the Institutions that offer research funding often cannot fully understand what the projects will actually entail. In this situation, it is not surprising that projects in social science are harder to fund when compared with science projects. Humanities and social science projects are abstract, while science projects tend to be concrete.

Case four added that Faculty of Education is in the social sciences in which 10-20 pages of information is requested for a research proposal. This indicates that Social sciences are very flexible and cannot define exactly and succinctly what benefits can be derived from a research project. Moreover, research topics may be similar to projects that other people have conducted, leaving lecturers with little enthusiasm to continue. This is in contrast to science projects which are generally continuous works, and this leads to easier forms of reporting and publication. In addition, science projects often gain more admiration from public, and this can be one reason why social science lecturers avoid doing research. This comment was the same as made by Case six, who revealed that the nature of subjects in her faculty impact on research performance as does the limited amount of funding to purchase reference books and databases (Case Six's Faculty is a small Faculty, meaning that, income from students is therefore lower than larger Faculties such as the Faculty of Humanities and Social Sciences). Case six said:

> Science subjects are often carried out using laboratory research. But research is a new task for my faculty. We need more time to collect data and do field studies than science projects. Moreover, the public accept data and skills that derive from science more than social science. Social science is usually ignored and has fewer reference books because of the limited funding. The subject that I teach demands that I contact students in person.

Therefore, the innate nature of the discipline's subjects has supported science Faculties to perform research tasks in a way that is not characteristic of the social science area. This means that social science produces fewer research outcomes than science. The Faculties in hard science areas such as physics have more opportunities to work with students than Faculties in soft science like English

(Colbeck 1998). Physics often integrated research and teaching as staff worked alongside undergraduate and graduate research apprentices. The physics Faculty perceived the process of exploring physical reality as something that could be enhanced by sharing and subdividing experimental tasks.

Wanner et al. (1981) have indicated, soft science staff are more likely to have published books, not articles, whereas the natural scientists are more likely to produce articles. Many of the articles of the natural scientist have three or four authors since it is in the natural sciences where hard science requires expensive equipment and consequently teams of researchers. Hence, social sciences favour books, which may address problems that are not easily divisible. The work includes the development of assumptions and copious citations (Becher 1989).

6.2.2.5 Research Funding

Kelly and Warmbrod (1986) stated that 'perceived institutional and departmental supports for research are seen as the most important enablers for research productivity. Jones et al. (1982) said the amount of direct expenditures on material support can be used as an indicator of research performance.

The sources of research funding for Thai Universities come from four main sources. First, there are Government Institutions such as the Thai Research Fund Regional Office and the Thai Higher Education Commission. Second, money can come from the Governor of each province because research funds made available from the government also pass through the local administrative team (for example, a CEO Integrated Administrative Project). Third, there are funds made available from individual Faculty's incomes from tuition fees, and lastly, there is outside support from private organizations.

When comparing research funding between hard and soft science faculties, although the exact amount cannot expressed, it can be found that from all National research projects conducted between 1989 and 2004 totaled 58,004 projects. There were 18,267 science projects and 8,153 social science projects while the remainder were agricultural projects (National Research Council of Thailand 2005). For the Noble University, in 2007, the amount of research funding received totaled

36,636,300 baht. Of this 1,425,000 baht was distributed to social science Faculties(information derived from a Noble University research committee meeting document, Friday, December 21, 2007).

In the Faculty of Education, Case four informed us that the Faculty received funding from both the Government and from the Faculty's incomes, noting:

> We reserve 5-10 percent of our income every year for research. We saved 10 percent last year but we didn't use it all. The other sources of funding were from outside sources, such as from private organizations who employed us to do research for them.

Therefore, in this Faculty it seems that lack of research funding is not the problem that causes low research productivity.

In the Faculty of Nursing, Case five stated that lecturers received research funding from both research Institutions in Thailand and in other countries. For instance, the Dean conducted research focussed upon mothers and sons using funding from Canada. However, Case five pointed out that if lecturers in this Faculty are interested in doing research, then they expect to receive more funding. Case five mentioned that the University should provide more research funding and if the University has any existing linkage with other institutions, the University should inform researchers of these opportunities Therefore, if this Faculty can gain more funds, it is likely that they will increase their research productivity because lecturers are eager to do research and the nature of subjects are conducive to investigative projects. It appears that insufficient funding may be more of a cause of lower research productivity than expected for this Faculty.

For the Faculty of Fine and Applied Arts, Case six expressed that the senior lecturers in this Faculty received research funding from the Thai Research Fund Regional Office, while young lecturers receive small amounts of research funding from the Faculty. The Faculty has a policy of offering research funding to lecturers every year as a means of giving them an opening into the research area. The Faculty offers research funding for two types of research, in the form of two grants for creative research and two grants for general research. In case of under committed research funding, the Faculty has transformed this into a fund for

academic writing. This indicates that in the Faculty of Fine and Applied Arts, low output of research productivity is not due to a lack of research budget.

Within the Faculty of Public Health, Case seven said that the Faculty has adequate budgets available which are derived from two main sources. The first source of funding is to support new researchers. The second source of funding is from external sources, such as The Thai Research Fund Regional Office, the Thai Health Promotion Foundation, the World Health Organization, and the Federation of Thai Industries. Therefore, it appears that research funding is not the problem causing low research productivity in this Faculty.

In the Faculty of Science, Case eight informed us that:

> We have research funding of around 230,000 baht to support our researchers. The research funding derives from ten percent of faculty's incomes in which 6-7 percent is distributed to the lecturers, while four percent is for undergraduate and post-graduate students. In 2005, we had research funding of around one million baht.

The Faculty of Science has continuous research outcomes because there is a plentiful budget, and it is generally accepted within the Faculty that it is the main duty of lecturers to search for research funding from outside sources.

For the Faculty of Humanities and Social Sciences, Case nine stated that:

> In the past, we have a lack of research funding, but now we have an amount of research funding three times more than before.

The reason why the Faculty of Humanities and Social Sciences has more research funding is because this Faculty is a very large Faculty. Income is increased when the number of students increases. The Faculty also has special programs and graduate courses. Hence, it appears in this Faculty that the lack of research funding is not the current problem that causes lecturers to avoid research tasks.

In the Faculty of Engineering, Case ten informed us that lecturers receive funds equivalent to ten percent of the Faculty's incomes from outside organizations, in addition to, National research funding. As a consequence, it

seems that for this Faculty, lecturers have adequate research funding to do research, and the problem of low research productivity appears to stem from the resistance from some staff who are not willing to do research.

From within the Institute of Marine Sciences, Case eleven stated that researchers who have worked in the institution for a long time generally apply for outside funds, in the same way as lecturers in other universities did. They accept that it is duty of researchers to find research funding. According to Case eleven, the majority of research funding is from the Thai Research Fund Regional Office, suggesting that:

> The Thai Government provides 0.1 percent of GDP for research funding which is quite a large amount.

Therefore, there is plenty of research funding in this Institution. However, Case eleven raised the important point that there is not much International funding because of the lack of cooperation between the Institution and overseas organizations. It is also important to note that the receiving of funds from the Government depends on the ability of researchers to write applications for funds. Clearly, this state of affairs has arisen because of high competition for the restricted amounts of funding available. Hence, the problem of low research productivity here is not directly related to lack of funds, but there are other underpinning reasons such as low ability to obtain research grants via University effective proposals.

Regarding the funds for publication, it is noted that some faculties provide publication funding, while some do not, even though the University has provide the opportunity for each Faculty to make these funds available. Hence, any Faculty which provides publication funding usually writes more publications than a faculty that does not distribute funding.

The University itself does not provide publication funding, but assists lecturers in this area by providing an English language journal. Unfortunately, many lecturers are not interested in publishing in this way, preferring to publish their papers in their own Faculty's research journals. Case one pointed that the

reason why lecturers do not want to publish the papers in the University's journal is because of the problem of writing scholarly papers in English. Generally, each faculty has a research journal that is provided to motivate lecturers to do more research. In the Faculty of Engineering, Case ten stated that the publication problems are confounded by the fact that the Faculty has no publication funding or a Faculty journal.

Concerning the availability of funds for international presentation, it appears that several high productivity faculties prepare contingency budgets for their staff who aim to join National and International conferences. For instance, Case eleven said encouragement is given for faculty staff to engage in presentations once or twice a year depending on their developmental level. Generally, they can present a poster the first time, but the second time, they should give an oral presentation. Case seven from the Faculty of Public Health stated that:

> For a lecturer who wants to attend an overseas presentation conference, we give 20,000 baht per head.

Case Five said

> This Faculty provides funding for research conferences as well. In order to give an oral presentation, the researchers get 70,000 baht, but providing the poster receives 50,000 baht. We provide 500,000 baht a year.

Therefore, it can be seen that where a Faculty that has a research journal, publication funding and conference funding, the environment stimulates lecturers to be interested in undertaking more research and subsequently publishing their outcomes. However, it is not necessarily a perfect solution because a faculty like the Faculty of Education has both a research journal and publication funding and they still receive complaints about low research productivity. In this instance, there may be other factors that strongly influence lecturers against doing research. While the publication and research funding clearly are a support, other factors appear to be present that reinforce a lecturer's ability to produce research outcomes.

6.2.2.6 Salary

Some faculties have salary incentives to motivate lecturers to do research. This is not included in the usual monthly payment, but is an amount of funding that the University, Faculty or the research Institutions can offer to a researcher on an *ad hoc* basis. Butler and Cantrell (1989) found that salary was the most desirable rewards for tenured faculty. Higher salary may result in attracting productive faculty, while at the same time minimizing the possibility of losing active faculty to other institutions (Jacobson 1992).

Usually, though, as Case four informed us, the faculty has a salary level that is set for a researcher. For instance, from the research funding of 50,000 baht, there is 10,000-20,000 baht allocated for a research salary, but the salary that a researcher could receive from doing research is less than that obtained from teaching. In this situation, it is not surprising that lecturers are more interested in teaching rather than spending their time in research. Case four stated that:

> Doing research does not bring the same rate of income as teaching. Some lecturers earn 40,000 baht per month from teaching. Researchers cannot earn extra money at the same rate as lecturers, or even earn 5,000 baht per month. Will the teachers get the same amount of income if they stop teaching and work on only research?

Therefore, it would appear that the lower income obtained from doing research in part causes low research productivity because lecturers prefer to do teaching jobs which attracts the higher salary.

6.2.2.7 Facilities

The research facilities referred to here consist of resources, materials, machinery, books, research assistants, technicians, facilitators and stationery. Normally, research productivity has a relationship with the amount of support facilities provided by Institutions. For example, Jones et al. (1982) found that the amount of direct expenditure on material support can be used as an indicator of research performance.

Dandar and Lewis (1998) developed and tested a more comprehensive model of faculty research productivity and found that library expenditures represented one of the important institutional attributes. Unequal facilities and funds are important since departments with more money and better laboratories, libraries, and other facilities are better equipped to train their staff and students, resulting in higher publication rates (Payne & Spieth 1935).

From the broad view of Case one, the institution had a serious lack of laboratory and research assistants. Case two informed us that the University's database is underdeveloped, saying:

> This university has a database that links to the Ministry of Higher Education's database system in which lecturers can find literature reviews especially for education, humanities and social sciences. They can print out a full paper. Whereas, the social sciences (such as Education, Humanities and Social Sciences) have full papers, science (such as Medical and Heath Science) can get locate abstracts.

The complexity of the issue is indicated by Case four who notes that the Faculty of Education has computers in every department, four computer labs with 160 computers available for all staff, and a Learning Resource Centre and Internet system linked to the sources of data and sources of funds. Case five explained that her Faculty set up a research database by having established a network with National and International nursing institutions. Case eight stated that his Faculty has provided facilities, but they face problems of ineffective resource allocation, whilst Case nine said that his Faculty has insufficient supporting factors because the research-supported centre has been established for only one year. In a similar vein, Case ten said that there are not sufficient facilities for conducting research, noting:

> Our Faculty's facilities are only for teaching Bachelor degree students. The faculty needs to invest more funds. Hence, when lecturers ask to buy new machines to conduct their research projects, they may face some resistance. It can be said that if the Faculty has provided facilities, lecturers in Faculty of Engineering can do research; however, the purchasing process is so fussy. Moreover, the source of information is underdeveloped.

> Both the Faculty's and the University's library does not have enough books for engineering.

Lastly, Case eleven focused upon the lack of research facilitators as being an obstacle that causes staff to do less research than expected. He pointed out that this University has not set up any unit which takes direct responsibility for research productivity. However, nowadays the system is getting better because the University now has a Vice-President for Research Affairs.

Case eleven also stated that in contrast to other universities, they have no facilitative centre. In other universities, they have a research unit that is responsible for research and development. The research unit acts as the coordinator between researchers and outside organizations, and as a result a researcher will gain more knowledge from doing research. However, it is also felt that some lecturers may do research as a normal part of their professional life, and they may not recognize the value of their work. It is one of the facilitator's duties to identify the benefits that this sort of research can make and the outcomes available to the public. Furthermore, a facilitator should be the centre for providing research funding; it should not be the duty of researcher to contact directly to the owner of research funding. For instance, facilitators should have access to persons who are responsible for managing financial documentation because the scientists do not like to and feel that they do not have the skills to carry out the necessary accounting procedures. The facilitator should take a leading role here and also be the source of fundamental information such as a central database about agriculture, biological technology and social information. For example, the central database should have a weather forecast and a sea map. Currently, it is the duty of researchers to directly contact the sources of information, it was felt that, for example, if researchers want to enter a wild protected area, the facilitators should be the organizers for access and arrange the appropriate documentation.

Hence, the research-related support provided by each faculty and the University generally has a direct impact on quantity of research productivity. In this investigation, the majority of respondents complained about insufficient and ineffective research allocation that restrict them in their work and causes them to have lower research productivity than expected.

6.2.2.8 Work-load

Generally, the amount of time that a faculty member chooses to spend on research activities affects their research productivity (Cohen & Gutek 1991; Vasil 1992). It is observed that those Faculties in which lecturers have a high teaching workload, produce less research. It appears that in this circumstance, the lecturers have no time to work on their projects or to publish results of work carried out. Case four stated that the high workload causes less productivity in his Faculty because staff do not have time to do research. They have to teach thirty hours a week, both in the ordinary programs and in special courses. Case six supported this view that workload has an affect on research productivity, suggesting that in the Faculty the nature of the subjects requires the lecturer to spend a great deal of time with students in personal contact. In addition, some lecturers have to spend time dealing with administrative tasks, and this again means they cannot find enough time to do their research. In the Faculty of Science, where it is normal for research to be half of the lecturer's task, lecturers have to confront high teaching workloads because of the increased number of students. As indicated earlier, lecturers receive more income when they teach more, especially in the compulsory subjects such as physics, chemistry, and mathematics, and this provides a powerful reason why some lecturers choose to have a lower research productivity.

However, there are lecturers who try to increase their research performance. For instance, the physics department has just received research funding from the Thai Research Fund Regional Office, and in this instance the lecturers have donated their free time for researching. Working against this approach, however, is the fact that some lecturers have to perform administrative tasks. For example, Case eight added that:

> Last year, I did one research project but I haven't published it yet. I spend fifty percent of time working in the administrative position. I have to do many kinds of jobs. Sometime I am worried and cannot concentrate on my work. It wastes my time. I would like to spend

> my time doing research and have publications rather than work in an administrative position.

Case nine insisted that workload is the major external factor that directly affects low research productivity in his faculty, asserting:

> Workload. As we know, our staff has the highest teaching workload. We teach general subjects which contain more than twenty credits. We have both major and minor subjects. The Faculty of Humanities and Social Sciences has 14 departments and more than 150 subjects were taught per year. There are more than four thousand students studying in Bachelors courses and Masters degrees as well as special courses (Continuing programs) excluding those who learn Thai and English language. That is why our lecturers have a high teaching workload. They have no time to think of doing anything else.

Case eleven reported that in the Marine Sciences Institute, the staff members' main duty is to do research. However, Case eleven informed us that his staff also faces a major workload problem, especially those staff who have an administrative position, and this can result in unfinished projects.

> The administrators should be the role model by submitting research projects for bigger funds such as ten million baht to encourage other researchers in following their lead. But the problem is the administrators generally have high workload. Thus some of them cannot finish their research works.

Therefore, it can be seen that many Faculties feel the impact of high workload and this appears to cause low research productivity. It has been suggested that the University can partially solve this problem by encouraging lecturers to realize the important of research, and showing the benefits that a lecturer can receive from performing research activities. Bailey (1992) showed an increase in research productivity that was supported by amount of time spent on research activities. Williams (2000a), found that the balance of time spent in teaching, research, service and administration can explain a significant proportion of the variance found in research productivity.

Focus Question Two: Summary

The type of institution can influence lecturers in their ability to carry out research, especially if it is a Comprehensive University where the staff consider their main duty to be teaching, rather than research. In such an environment staff are not treated like professional researchers as in the Research Universities, and we have found that Noble University staff members are treated like employees who consequently have less opportunity to integrate research into their work practices. Staff cannot set their own agendas and cannot bargain agreements as in a Research University.

With regard to the role of policy in research productivity, although both the Government's and the Institution's policies try to support academic lecturers to do research, our work indicates that staff still insist that the University should set specific job descriptions and performance assessment criteria. In addition, in the current economic climate lecturers struggle to find adequate research funding, and to date the University has not shown much support. Moreover, the promotion policy does not force lecturers to do research, and as a consequence there are many staff who opt for a lecturing or administrative career.

When examining the role of financial regulation in regard to research productivity, the respondents stated that current financial regulations are one of the main obstructions because they are so fussy and lead to significant inconvenience.

Interestingly, for the different disciplines there is a common perception that the nature of subjects in various Faculties is somehow different and this markedly influences lecturers' research performance. This is especially noticed when comparing subjects in the Science and the Social Science Faculties. The staff in the Science Faculties generally carry out research into natural and physical systems which are tangible and well understood by funding authorities. In addition, historically people have admired research in Science.

Concerning matters related to research funding, our enquiries showed that some Faculties perceive that they have insufficient research funding, while some of them stated that they provide an adequate research budget but no one appears interested. Generally, faculties like the Faculty of Science and the Faculty of

Nursing obtain research grants from outside the University and have continual requests for greater budgets whereas the Faculty of Education stated that there is research funding left over every year. Moreover, in some areas lecturers have identified a lack of publication funding as obstructing research outcomes, and we have seen that those faculties that provide publication funds usually have greater productivity outcomes.

Viewing the issue of salary, it appears that some faculties have salary incentives to motivate lecturers to do research in the form of researchers' income. However, in some areas, lecturers actually receive higher incomes from teaching than doing research, and this is a significant factor in lowering possible research productivity.

When considering the topic of research facilities, it is normally expected that research productivity depends heavily on the amount of support facilities. In this research, the majority of respondents complained about insufficient and ineffective research allocation and suggested that this restricts their work performance. Informants have indicated that, in addition, there is no university research unit to act as a coordinator between researchers and outside organizations, nor can they assist with resource allocation management.

The last important factor is workload, and the amount of time a faculty member chooses to spend in research activity affects their research productivity. This is especially significant at the Noble University, because when lecturers have a high teaching work-load, they produce less research. In addition, some lecturers also have to perform administrative tasks. Hence, it requires lecturers to manage their time.

This section also does not exhaust the possibilities for creating obstructions to research productivity. Even taking into account the above factors cannot fully explain the observed low level of output. This implies that there may be other factors that have significant influences on the staff preventing them from engaging with research, and the strength of the Institutional factors therefore may not be enough to encourage lecturers to do research.

6.2.3 Focus Question Three: In your opinion how do personal career development factors impact on the level of research productivity of academic lecturers in your university?

6.2.3.1 Attitude and Interest

Pfeffer and Langton (1993) reported that job satisfaction was positively related to productivity, and noted that faculty staff opinions of their personal circumstances may influence productivity, whether it is an opinion of job satisfaction, research environment, funding adequacy or freedom to collaborate. It is also claimed that, together with interest, attitude to research can be the best prediction of research productivity (Noser et al. 1996)

In the following section, the attitudes and interest of lecturers in faculties that do more research are examined. Case seven stated that lecturers in the Faculty of Public Health are interested in conducting research. The majority of lecturers are of the younger generation, being around thirty years old, and are also Doctoral graduates. They normally form teams to do research, while trying to encourage their students to do research as well in order to build a second generation of researchers. This correlates with comments of Case eight, who noted that his staff are eager to do research by their self-directed efforts, believing that research is an important duty for Faculty of Science by which they can generate new knowledge.

On the other hand, there are Faculties in which lecturers are interested in doing research, but in fact they produce less research. Case three said that it was the attitude of the lecturers themselves that caused innate obstruction to their motivation. Many lecturers thought that if they ‘do’ research, it must be large scale and superior work, and they were not willing to tackle small projects that might result in unimportant results or not contribute to creating a good reputation. It was felt by Case three that these thoughts can destroy self-motivation, and it was suggested that doing research is like building a house. Inexperienced workers should start with small jobs first and this will allow them to consider larger tasks because they will have gained appropriate knowledge, competency and self confidence. Clearly, this experience will help them learn to improve their skills and

after that they will know and understand what they should do. This is similar to the lecturers who want to conduct large scale research works. They should start with small, successful projects because if they try a bigger work without sufficient research skills, a failure could destroy their motivation. A good example is found in the Faculty of Science which appears to be on the right track. Here, the lecturers are willing to conduct research to find any answers to both small and large projects so long as they can increase their knowledge.

Case four stated that one important factor that influences research productivity is the lecturer's feeling of whether they want to or do not want to do research. The lecturers appear more willing to do research when they are praised for their efforts, and therefore have a resulting drive to develop a reputation to become famous researchers. The Case four respondent said some lecturer request reinforcement of their work as a contribution to their self-actualization. Whenever they gain positive accomplishments, they recognize that research is not difficult task, and as a result they begin to enjoy doing research.

In a similar way, Case nine stated that the staff in the Faculty of Public Health are more interested in doing research because of the environmental change in the area. People are starting to seek more knowledge, and people are more interested in studying for a Masters degree. Lecturers are generally interested in doing research. However, research productivity is low among project that have currently been completed, because the faculty is just starting to mount a serious research program. The respondent gave a personal example, saying that:

> I am interested in doing research and understand that lecturers who want to progress in this career must do research, study about the research problems and bring new knowledge compared with previous theories. They should use conceptual thinking in textbooks to integrate into modern knowledge, also supporting what they learnt from the textbooks. The Textbooks are not exactly one hundred percent true and research is something that can be used to support teaching. If knowledge in textbooks is not matched with the results of my research, I can then show my students the difference. Students should not believe without their own assessment, they should learn to solve problems and get results themselves. I use research outcomes to make lessons clearer and bring ideas to students by letting them to think and find their own answer using research methods.

Regrettably, there are two Faculties that have lecturers who are not interested in doing research and have low research outcomes. Case six informed us that the Faculty places strong emphasis on learning by operating and practising, and as a result there are few lecturers who recognize the importance and value of research, except for some senior lecturers. Case ten also informed us that some of his staff are not interested and have no enthusiasm to do research. Whilst there are some lecturers who are still young and looking forward to continuing their PhD studies, there are also some lecturers who have a negative attitude toward lecturers who do research.

This review about attitude and interest of lecturers toward research activity shows that staff who have high research productivity generally have a positive attitude toward research. They seem to have their self-drive to motivate them. Case nine pointed that whenever lecturers are interested in doing research and are eager to search for answers and utilize new knowledge, they have ability to do research. Case six supported this by noting that whether a lecturer does research or not depends on their innate commitment and interest. Case eight said that a person who wants to do research should have a personal willingness to perform their task. On the other hand, where there is a Faculty in which lecturers have negative attitudes towards, and have no interest in conducting, research, then that Faculty produces less research. Beehr, Walsh and Taber (1976), indicated that role stresses can interfere with the way in which a person interprets the notion that working hard and effectively will bring about the satisfaction of higher order needs.

6.2.3.2 Research Experience, Skills and Training

Research generally links to the advancement of professional career (Middlewood 1999). According to the findings of this investigation, the case institution is confronted with staff who have low research experience and skills that contribute to its low research productivity. Currently there are not many lecturers who have high research skills which are normally gained when completing a Doctoral degree. However, it is found in the case Institution that even new Doctoral graduates still make requests for learning more about research, indicating they have low self-esteem as independent researchers.

Respondents mention that insufficient research experience and skills impact markedly upon productivity. Case one stated that low research experience has a large influence on low research productivity in this institution. Case four revealed that one of the reasons why the Faculty has less productivity is because:

> Lecturers lack confidence, especially if they seldom do research following graduation. They have only had experience when they did their Masters and Doctoral thesis.

Case ten also stated that lack of research experience is related to low research productivity. The lecturers in the Faculty of Engineering are still young and lack experienced persons to guide them on how to do research. The new lecturers did not understand what they should do, especially the lecturers who are not Doctoral graduates, and they consequently do not know what research roles a lecturer should perform.

In addition, Case six stated that the staff often misunderstand that research must involve a large project and they think they therefore have insufficient skills to do research, and need more practice. Moreover, many staff also face a language problem that obstructs them when trying to write the project, stating:

> English is obstacle. Then we need experts to help us.

In consequence, Faculties have begun to recognize the importance of developing lecturers' research skills, and have started to provide research training programs and improvement methods to assist their staff. Case one informed us that the University provides research seminars every year in the form of a workshop. For example, there are seminars about how to write research proposals, and how to find information. Respondents in each faculty also develop their staff's skills using several methods. For instance, the Faculty of Education provides research seminars, but unfortunately this does not occur regularly. The Faculty motivates lecturers by offering them chances to be thesis advisors or inviting them to join thesis presentations. In this way lecturers have more opportunities to exchange their opinions and learn about other people's ideas and to share knowledge. This Faculty (Education) also encourages teachers to conduct more classroom research.

The Faculty of Nursing provides several training topics, for example, if lecturers have problems with statistics, experts are invited to teach them and sometimes the faculty is able to arrange academic visits to other institutions

6.2.3.3 Personality

Personality is one of the most important factors that influences the willingness of lecturers to do or not do research. Several respondents mentioned the characteristics of a researcher which impact significantly on their accomplishments. Hunter and Kuh (1987), found that creative individuals were suggested to be confident, sensitive, open-mined, curious, flexible in their thinking and intellectually playful.

For example, Case eight informed us that a researcher should be a person who loves knowledge generation and makes sacrifices to perform research tasks through donating their free-time. In addition, a successful researcher should have the vision to clearly see their own development strategies. Case nine pointed out that an improper personality has a marked affect on low research outcomes, suggesting that:

> Some lecturers don't have researcher's personality. A researcher's personality requires them to be an observant, love to search for information, ask questions, and use what they are learning for continuing study. Lecturers who don't have those personalities are not interested in doing research. However, some of them prefer performing academic works, such as writing books or other documents.

Case eleven supported the idea that a good researcher should not block their possible ideas too quickly, and should give themselves a chance to prove their worth. Sometimes researchers failed because they did not understand themselves. They do not understand what they like or know the field in which they want to become well-known. This applies especially to new researchers. Such people usually follow the trend, and it is thought that in these cases, they must have the experts to guide them how to think. Unfortunately, the current Thai education system does not assist people to learn how to think.

6.2.3.5 Academic Origin

The term academic origin is defined as the College, University or other academic Institution from which an academic member graduated or received their highest degree (Rhodman 2002). Generally academic origins influence research outcomes. The top academic institutions generally produce high research productivity because high-status universities enjoy advantage in terms of financial resources and research support that encourage publication (Beyer et al., 1995). A wide assortment of studies demonstrated that over time, graduates of research universities produce more scholarship than faculty who graduated from any other institutions (Reskin 1977).

Case one stated, the quality of the graduating institution has an affect on research productivity because lecturers have been absorbing the research environment since they first started studying. They are acquainted with the research environment and after they come back to work, they are enthusiastic and continue researching. However, some respondents argued that academic origin has no affect because it depends on personal interest to do or not do research. Case eight, for example, indicated that the graduating institution has no affect on research productivity:

> The lecturers in Faculty of Science, despite where lecturers graduated either government or private universities, Thailand or abroad, if they have both innate and added talent plus confidence, I do believe that they can carry out research.

6.2.3.6 Highest Degree Earned

The faculty members in higher education areas require research recognition and a history of resource accumulation in their previous experience to form a base for raising opportunities to gain additional resources in the future (Brocato 2001). The attribute of accumulative advantage makes it easier to achieve success in publishing because of prior research project experience, research membership,

development of research skills, collaboration on research project and research sponsorship (Collins 1993; Fox 1996).

According to the interviewees, there is a significant impact on the quantity and quality of research productivity by the level of degree obtained by the lecturer. Case three stated that lecturers who have Doctoral degrees normally have higher expectations for quality research outcomes rather than do lecturers who have a lower level degree. For example lecturers who have a Masters degree generally have lower motivation to conduct research. Case seven supported this observation that the majority of lecturers who like to do research are Doctoral graduates, whereas lecturers with Masters degrees graduated lecturers are now busy with their further study. Case seven expected that in the next four or five years, her Faculty will have all Doctoral graduate as teachers. This is the same for Case ten, who explained that lecturers who are Doctoral graduates generally recognize how good researchers should act, especially the lecturers who have graduated from abroad. They learn from their advisors and looked at their advisors as a model for research development.

On the other hand, Case six argued that the level of education does not have a large affect on research productivity because it mainly depends on personal commitment and interest. This is similar to Case nine who insisted that there is no difference between lecturers' output on the basis of their education. Whatever level of education lecturers obtained, if they are interested in doing research, searching for answers, and utilizing knowledge, they have the ability to do research. But the level of research may differ because lecturers have an unequal level of experience. Persons who have more experience can see the world in a wider way than ones who have less experience. Therefore, Doctoral graduates usually have more knowledge than the lower qualified staff because they have had more opportunity to discuss ideas with their advisors and other persons. It is these type of advantages that drive people to greater research productivity.

However, as a testament to the complexity of this issue, when examining the quantity of work produced by different levels of graduates, we cannot exactly justify that Doctoral graduates produce more work than the lower qualified staff. A lecturer's personal interest certainly has a role, but in most cases, those people

who gain more opportunities to do research are usually the higher graduates. The Thai Research Fund Regional Office now has research funding for Bachelor degree graduates as well as for projects that can be implemented by young researchers, for example in the form of action research. Thus, it can be concluded that lecturers who have different levels of education may have contributions to make with different levels of research. Doctoral graduates conduct research for finding new knowledge, while the lower graduates may do research for utilizing knowledge and researching their environment. But this discussion is not meant to imply that a person who has higher level of education necessarily has greater research productivity than lower qualified staff. Normally, the Doctoral graduates publish their Doctoral work following graduation, but after they begin to work, they may not publish for 4-5 years, as Case eleven clearly reminded us. The dissertation experience not only certifies research skills but also demonstrates the kind of perseverance scholarly required. Ph.D. programs provide those prerequisites (Blackburn & Lawrence 1995).

6.2.3.6 Tenure Status/ Rank

The University uses research as an index for measuring work performance as a route to promotion and research output helps academic lecturers advance in their career (Creamer 1998). For example, research that contains a respect for ethics generates appropriate new knowledge and can be used when a lecturer applies for a higher rank.

According to Finkelstein (1984), academic rank is a significant predictor to publication success because the academic lecturers in higher ranks generally have more control over their workload assignment, allowing faculty of higher rank to produce more research than those of a lower rank. Fulton and Trow (1974) found that 29 percent of full professors, 20 percent of associate professors, 13 percent of assistant professors, and 2 percent the instructors have published five or more articles in a two-year period.

As Case eight stated, his faculty use research productivity as one of the criteria to evaluate lecturers' performance for rank promotion. After lecturers gain

a higher rank, research productivity will be linked to salary incentives and reputation.

Normally, those at Assistant Professor, Associate Professor, and Professor levels must do research to retain in their status. However, within the case Institution, Case eight said there are no regulations compelling them to do research, and whether lecturers want to do research really depends on their willingness. Obviously, any faculty which has more professional lecturers, usually shows a higher research productivity. For instance, the Faculty of Engineering has lower research productivity than Faculty of Public Health because the Faculty of Engineering does not have many lecturers who have tenure status whereas the Faculty of Public Health has two Professors, one Associate Professor and two Associate Professors on the waiting list, in addition to many Assistant Professors.

Focus Question Three: Summary

Regarding the importance of personal attitudes and interests of lecturers toward research, it appears that if the lecturers understand that research is an important task, they are willing to perform appropriate investigative projects. It has been further noted that in those Faculties that have high research outcomes, such as the Faculty of Public Health, lecturers usually form teams to do research. These teams consist of staff with positive attitudes towards investigation. In sharp comparison, in some Faculties, the lecturers have a negative attitude to persons who do research and, as a result, they prefer to perform other tasks. Also, another confounding issue is that many lecturers thought that if they do research, it must be a large scale and superior work. This perception leads to the idea that research exceeds their ability to carry it out, and as a result it destroys any self-motivation.

Furthermore, it appears that the staff in the Noble University are also confronted by their perceptions of their own insufficient research experience and skills. This observation also includes lecturers who have obtained their Doctoral degree, and arises from the notion that the lecturers are too young and therefore lack experienced lecturers to guide them.

Respondents to this investigation suggested that innate personality traits contribute to the important factors that influence the willingness of lecturers to do research. Successful researchers should be persons who are naturally observant, who love to search for information, continually ask questions, and use what they are learning for continuing study. A researcher should be prepared to make personal sacrifices in order to perform research tasks and, further, to have the vision to clearly see their own development strategies.

In terms of academic origin, the quality of the graduating Institution from which the staff member has obtained their higher degree has a profound affect on research productivity because in a quality institution, a lecturer would have been absorbing the research environment since they commenced their degree. However, it has also been noted that the academic origin of the lecturer may not significantly contribute to research output if the researcher has no innate talent or personal confidence.

Regarding the question of the effect of the highest level of degree earned by lecturers, those who have Doctoral degrees normally have high expectations placed upon them for quality research outcomes. This is because those with Master degree qualifications are often now busy with their further study, and are precluded for the time being from publications. However, overall the level of degree earned by lecturers may not influence research productivity if lecturers are not interested in carrying out research.

Lastly, it has been suggested that, in order to increase productivity, lecturers who have tenure status should be required to do research in order to retain their tenured status. However, in the Noble University there is no regulation to encourage lecturers to do research, and whether they want to do research still depends on their personal willingness to sacrifice their own time.

The complexity of this question of factors that influence research productivity is clearly apparent at this stage. The contributions from environmental factors, institutional factors and personal career development factors have been noted to this point, but upon questioning further, respondents have indicated there may be other factors that also have influences on them in relation to research conduct. However, whilst the strength of the personal development factors may not

alone be enough to encourage lecturers to do research, it seems that it is one of the essential factors that underpin a lecturer's self-motivation.

6.2.4 Focus Question Four: In your opinion how do social contingency factors impact on the level of research productivity of academic lecturers in your University?

Social contingency factors are those factors that have direct effects on an academic staff member's ability to carry out research because they typically place constraints on the time and energy that individuals have to engage in work activities (Hunter & Kuh 1987). These social constraints include the faculty member's health, extent of obligations to significant others such as spouse, children and parent, financial strains and pregnancy.

Case two agreed that health directly affects research because when doing research people must donate their time and their efforts. As Case seven stated, one the factors that obstructs staff from doing research is fatigue because some lecturers have babies. This corresponds with the comments of Case eight, who said that family duties impact on research productivity. Some lecturers have to take care of their children, and as a consequence they cannot put all their efforts into research.

Nevertheless, Case one argued that:

> Lecturers who have to do housework normally have no time to do research because lecturers have to pick up children from school, and if they have a young child, they have extra responsibilities. But I do not agree that it is always true, I am married and have two children, and I still conduct research. It depends on each person.

Case ten also noted that his family members do not obstruct him from doing research by saying:

> I receive a great support from my family as my spouse is a University lecturer. She understands my work and also helps motivate me.

Case Six said:

> Sometimes family duties have an effect on research productivity because lecturers have to spend time taking care of their families. But some lecturers can manage their time.

Focus Question Four: Summary

The above analysis indicates that the respondents agree that social contingency factors have an affect on research productivity. These social constraints include the Faculty member's health, extent of obligations to significant others such as spouse, children and parent, financial strains and pregnancy. Some lecturers have to take care of their children, and as a consequence they cannot put all their efforts into research. However, the respondents indicated that if lecturers can manage their time in appropriate ways, social contingency factors are not always a serious problem because sometimes lecturers get support from their spouses.

6.2.5 Focus Question Five: In your opinion how do demographic factors impact on the level of research productivity of academic lecturers in your University?

Demographic factors are those factors related to the personal characteristics of academic member, such as age, gender, and marital status. According to the findings of this investigation, demographic factors have only a slight affect on research productivity because the respondents said that the outcomes depend on the enthusiasm and willingness of lecturers rather than those based on age, gender or marital status. Cases five, nine and eleven respondents insisted that demographic factors, including gender, have no affect on research outcome.

6.2.5.1 Marital status

In examining marital status, marital status can be a supportive factor. Married women are more productive than single women (Astin & Davis 1985), particularly if the lecturer's spouse is a lecturer as Case ten pointed out:

> I receive a great support from my family as my spouse is a university lecturer. She understands my work and also helps motivates me.

On the other hand, marital status can be an obstruction to research productivity for those lecturers who want to spend time with their family. Kyvik (1990) found that married lecturers especially women who have children have evidenced a significant negative effective on publishing productivity.

6.2.5.2 Age

The age of lecturers seems to be the outstanding demographic factor that influences the number of research outcomes. Bland and Berquist (1997) noticed that the average productivity of faculty seems to decrease with age.

Case three suggested that youth could be an obstacle to conducting a research since it is related to the lack of research experience. As Case six explained:

> New lecturers who are still young do not dare carry out research because they think that research is a difficult task, while senior lecturers have more experience and skills.

However, when examining the amount of research outcomes, it appears that it is not always the case that senior lecturers have more output. Williams (2000a) studied academic lecturers in a Human Resource Development Faculty in the USA and found that there is no significant relationship with age. Respondents from faculties that produce high rates of research outcomes noted that nowadays the new generation lecturers (25-35 years old), especially those who graduated from

abroad, are likely to do research. This is in contrast to the lecturers who are close to retirement (nearly 60 years old). These lecturers rarely do any research work.

6.2.5.3 Gender

Blackburn et al. (1991) stated that the relationship between gender and researcher productivity has been addressed in many studies. These findings are sometimes contradictory and sometimes show correlation. Bailey (1992) and Vasil (1992) showed that men had higher levels of research productivity than women. Naturally, women faculty members often have family demands that compete with time to conduct research (Creamer 1998).

Within this study, respondents stated that gender has slight effect on research productivity. As Case one said:

> Gender has a small affect on research productivity. According to my own view, female lecturers generally have more enthusiasm to do research than the males.

While Cases two, nine, and eleven argued that gender has no affect on research outcomes. This statement is supported in research by Teodorescu (2000) and Omundson and Mann (1994), who found no difference in publication outputs for males and females.

Focus Question Five: Summary

It can be concluded from these interviews that, of the demographic factors investigated here, namely age, gender, and marital status, it appears that only age influences on the amount of research productivity. This relationship is a complicated one, but essentially it has to do with the impact that age has on the amount of research experience and the personal willingness of lecturers to commit to a research direction. There are responses that indicate that there are some lecturers who are still young and also those who are nearly retired that seldom do research, which suggests that age is not an influence. However, there are new, young lecturers who have graduated from abroad that are research active, and it is

because the older lecturers do not pursue higher degrees that age becomes a determining factor here. Regarding the effects of gender and marital status on research productivity, the respondents stated that it has a slight affect on research outcomes because the dominating effect on outcomes is the enthusiasm and willingness of lecturers to commit personal time to research projects. Interestingly, there were some suggestions that some married lecturers actually derive support from their spouses to become research active, which shows that a simple relationship between research activity and time availability does not hold.

6.3 Chapter Summary

The data interpretation in this chapter is based on the five focus questions that were used to help investigate the factors which influence low research productivity. Clearly, there are many factors that have emerged from the interviews, but an important observation was that the degree of impact from each of these factors is variable. In Table 3 a summary of the findings of this chapter is presented.

Table 6.1: Summary of responses to the focus questions

Factors	Influential actions
Environmental factors	In the past, the Noble University has had very low research productivity because the environment did not support research endeavours. But now some Faculties' lecturers are interested in doing research. They form teams and look to leaders to provide their role models, whilst staff also support each other. By comparison, some Faculties have a negative research environment and also confront resistance from unproductive lecturers.
Institutional factors	The Noble University is a comprehensive Institution that has teaching as its main task. There is no formal regulation to support and direct how lecturers work. The policy from both the government and the University is still unclear and the financial regulations usually make it an inconvenience for lecturers to perform research tasks. Moreover, lecturers have a high workload and the income from teaching is higher than doing research.
Personal career development factors	The respondents insisted that the main factors that encourage lecturers to do research are their own self-directed motivation. In addition, staff now lack appropriate skills to do research. They sometimes evidence little innate interest in knowledge generation as well as having a misunderstanding of perspectives toward research.
Social contingencies factors	These factors have a slight impact on research productivity because several respondents demonstrated that the research outcomes can depend on personal interest.
Demographic factors	Demographic factors have a slight impact on research productivity. It is only age that contributes to the number of research outcomes as the younger and the nearly retired lecturers perform less research. Nevertheless, the research outcomes depend on personal interest.

The next chapter provides a discussion regarding the factors that impact on research productivity by demonstrating the importance of those factors.

CHAPTER 7

Discussion

Because of world-wide economic and social imperatives, universities in all countries are engaged in significant reconceptualisations of their public roles. In Thailand, the National Government is currently looking to institutions of higher learning to contribute in increasing ways to the solution of pressing technological and social problems, and in some cases to restructure their traditional courses to engage a wider cohort of the population in higher education. In addition, universities are being asked to *extend their research and development activities*, and, in response, are attempting to be more selective in their research efforts by identifying specific areas of research strength. This investigation has attempted to provide a contribution to a more detailed understanding of the factors that are currently hindering staff in their efforts or willingness to be more research productive. In particular, it examines the barriers to research involvement from the standpoint of expectancy and efficacy theories, and identifies some strategies that might be introduced to enhance levels of research output.

7.1 Rationale of This Study on Professional Development for Academic Lecturers

The major responsibilities of academic staff in the modern university include teaching and research as well as performing administration and community service, many institutions are faced with the task of encouraging a large proportion of lecturers to be active in both teaching and research. In this regard, many authors say that teaching and research are mutually supportive, if not inseparable, (Volkwein & Carbone 1994; Ramsden & Moses 1992; Marsh & Hattie 2002) and that teaching effectiveness and research outcomes are complementary.

Consequently, I have noticed that studying research productivity of academic lecturers is essential to assisting the University to give lecturer's the opportunity to develop professionally. My research results are important in that they assist universities is to identify the ways to increase number of lecturers who are interested in carrying out research projects and also to help them to access new skills, which, will boost their professional standing. One essential step in this task is for universities to clearly recognise the factors that either encourage or block lecturers in making the shift to being research active.

7.2 Discussion

It is now important to note at this point why some faculties are able to produce significant research outcomes whilst others can not, is still in question (Cresswell 1985). Universities in Thailand, as well as universities in other countries, all face similar problems in this regard, which makes any relatively simple answer to an institution's research productivity problem unlikely. Also, because each university is different in that they have a different environmental background that affects research productivity, this case study has mainly focussed on the situation in a public university in Thailand named 'Noble University'.

Due to the major responsibilities of academic staff in the modern university being teaching and research as well as performing administration and community service, many institutions are faced with the task of encouraging a large proportion of lecturers to be active in both teaching and research. In this regard, many authors say that teaching and research are mutually supportive, if not inseparable, (Volkwein & Carbone 1991, 1994; Ramsden & Moses 1992; Marsh & Hattie 2002) and that teaching effectiveness and research outcomes are complementary.

Consequently, in identifying lecturers who are interested in carrying research projects one essential step is for universities to clearly recognise the factors that either encourage or block lecturers from becoming research active. As Gibbon, Ivancevich and Donnelly (1994) said, self-directed motivation is a very important factor in encouraging lecturers to perform research tasks, because it

underpins the various situational and personal reasons why lecturers choose whether or not to engage in academic tasks. Regrettably, however, there are currently not many lecturers in Thailand who have recognized the importance of research to their teaching practice. As Suwanwala (1991) stated in her investigations regarding perceptions of research productivity of academic lecturers in Chulalongkorn University (Thailand), many lecturers did not realize the importance of conducting research. In a similar situation, but ten years later, Burapha University's research outcomes and publications still appeared to be unacceptably low (Burapha University 2002). The reasons for this are in part explained by the results of this study which suggest that there are several factors that affect research outcomes.

Consistent with expectancy theory, Vroom (1964) pointed out that people are motivated to work when they expect that job performance will lead to desired outcomes and when they value work activities. In this study, results indicated that research productivity is not high because of lecturers' perceptions of a lack of a motivating environment; for instance, they face resistance from their fellow staff members. Moreover, lecturers sometimes face an unacceptable complexity of institutional regulations and have insufficient equipment and materials to pursue research in a satisfactory manner. In addition, it appears that appraisal of lecturers' job performance also does not enhance desired outcomes, because such reviews do not proportionally value research tasks. Consequently, lecturers prefer to teach and perform administration works.

Lawler and Porter (1967) discussed the efforts that have been put into driving performance relating to the catch-all of abilities, such as intelligence, skills, aptitudes, personality traits, and perception of role that should be engaged in to enact performance successfully. The faculty staff do what they believe that they are good at and devote energy to what interests them, and engage in activities in which they think can influence outcomes (Blackburn and Lawrence 1995).

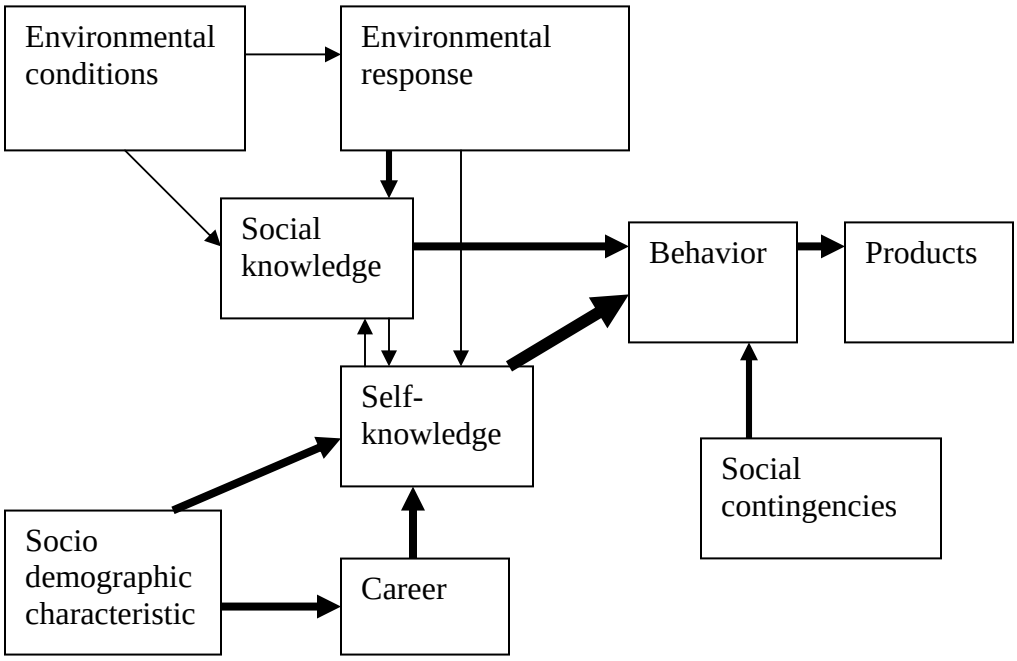
This study has identified some important reasons regarding the factors that cause low research productivity, and it is anticipated that these findings can be used as guidelines for those who are charged with stimulating research

development, and provide sources for suggesting a change in directions for better research performance.

It is now important to note why some Faculties are able to produce significant research outcomes whilst others can not. Universities in Thailand, as well as universities in other countries, all face similar problems in this regard, which makes any relatively simple answer to an Institution's research productivity problem unlikely. Also, because each University is different in that they have a different environmental background that affects research productivity, this case study has mainly focussed on the situation in a public University in Thailand. However, although this study has concentrated upon the one University for reasons of economy, scale and specific environmental factors, the investigation has been designed in such a way as to be potentially useful to a wide range of situations, particularly where demographic and cultural factors are similar to the studied institution.

As mentioned in Chapter Three, the Figure 3.2 shows the conceptual model of this study that derived from the study of Blackburn and Lawrence (1995). The discussion in this part demonstrates the relationship between the findings from the respondents and factors based on expectancy theory, efficacy theory and Blackburn and Lawrence's (1995) conceptual model.

From Figure 3.1 Theoretical framework of Blackburn and Lawrence (1995)

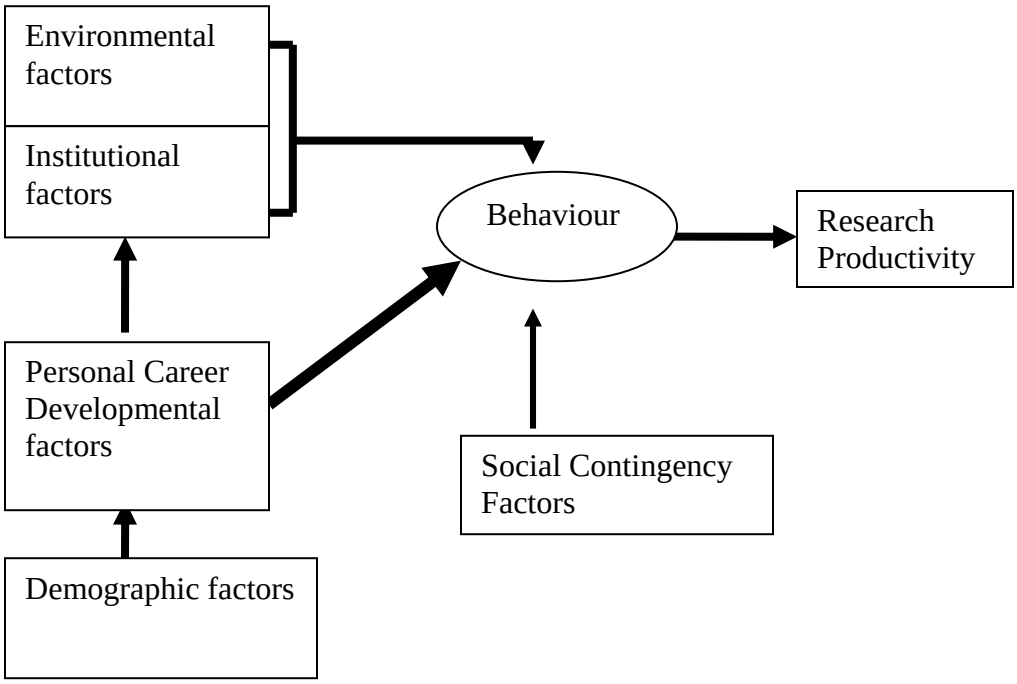


Note: the thick arrows signify strong or direct effects of the variables. The thin arrows acknowledge that there are weaker effects between several or the principal constructs.

From Figure 3.1, the framework posits that each set of variables will directly affect the one it precedes. Sociodemographic characteristics influence career and self-knowledge, career influence self-knowledge, self-knowledge and environment response influence social-knowledge, social knowledge influence behaviour and then productivity.

As I explained in Chapter three, the conceptual model for this study was derived from a re-arrangement of the concepts shown in Figure 3.1 into five importance factors: environment factors and institutional factors (from social knowledge and environmental conditions and responses), self-knowledge and career factors were grouped into personal career development factors, demographic factors (incorporated sociodemographic characteristics), and the fifth group is social contingency factors.

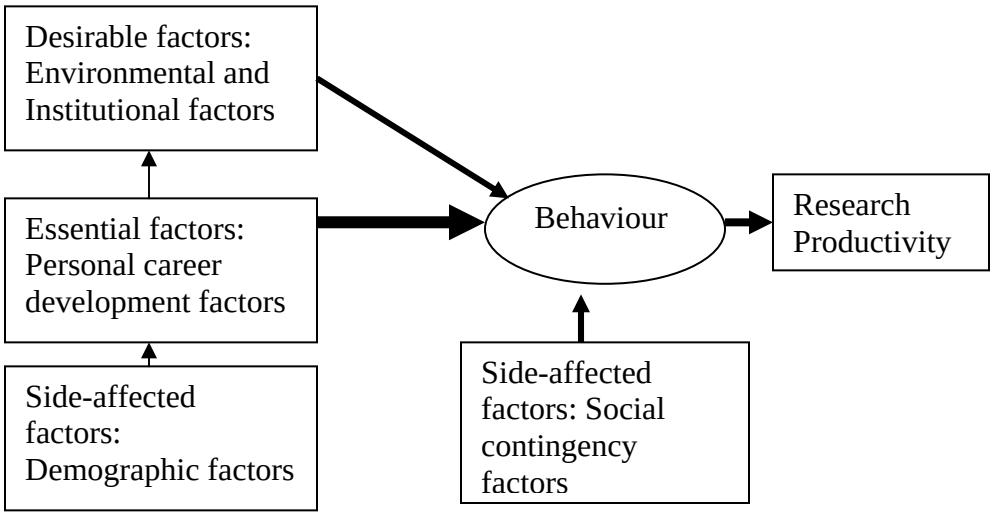
From Figure 3.2: Conceptual model of this study



According to Figure 3.2 and information gained in the interviews, it appears that the five related factors suggested by the literature can be collapsed into three main groups, consisting of Essential factors, Desirable factors, and Side-affected factors as show in Figure 7.1.

The rationale to divide the factors into three categories derived from Blackburn and Lawrence (1995) diagram. Blackburn and Lawrence (1995) stated that there were indirect and direct factors which affect the behaviour of academic lecturers. The direct factors are categorised into essential factors. The indirect factors are grouped into desirable factors as these are essential factors which drive behaviour The side-affected factors are indirect factors that may or may not affect on academic lecturers' research productivity.

Figure 7.1 Essential factors, desirable factors, and side-affected factors that affect on research productivity



The following discussion will provide further explanation of how these factors are distributed into each category.

7.2.1 The Essential Factor

The essential factors are the career development factors consisting of attitude, skills, experience, academic origin, tenure status, and highest degree. According to the social cognitive theory, Bandura (1977, 1982, 1986, 1991, 1995, 1997) noted that self-efficacy plays an important role in a person's self-regulation processes. In the context of this theory, self-efficacy provides the confidence in one's capabilities to organize and execute the courses of action required to produce given attainments (Bandura 1997).

People will participate in, and try to deal with, situations that they have the ability to handle, but avoid situations that they perceive as being beyond their abilities. Suwanwala (1991) investigated perceptions of research productivity of academic lecturers in Chulalongkorn University, the most famous public institution in Thailand, and found that lecturers had insufficient knowledge, skills and experience as well as not realizing the important of conducting research. The

results obtained by Suwanwala (1991) are similar to the findings that have emerged from the interviews with the eleven respondents of this study. Social cognitive theory suggests that people can specify their ability to perform different roles by estimating their competence to do specific functions and to accomplish certain kinds of tasks on the basis of various kinds of evidence (Blackburn & Lawrence 1995).

In the light of this suggestion, it becomes clear that a local or regional university such as The Noble University is often confronted with the problem that its lecturers have low research experience and skills which appear to be the cause of low research productivity. As Case six stated, one of the weaknesses of the local university is that there are no qualified instructors. Lecturers are often required to learn to develop their research skills alone in order that they develop the ability to receive funds and network with outsiders. Therefore, it is suggested that factors that are related to the lecturers' personal improvement as researchers are essential.

According to the interview data, several respondents mentioned that the level of the lecturer's degree has an influence on the quantity and quality of research productivity. Gist and Mitchell (1992) stated that the attribution analysis of experience provides some sense of what it will take to do well on the task in terms of ability and motivational components.

Bandura (1986) showed that this was consistent with the efficacy theory and suggested that personal accomplishments require both skills and belief in what they can do or ability to use their skills and knowledge. Blackburn and Lawrence (1995) pointed out that doctoral graduates produce dissertations that not only certified research skills but could enable quality publications to be produced. Case three stated that the lecturers who have Doctoral degrees normally have higher expectations for quality research outcomes rather than lecturers who have lower degree. While Case seven respondent added that the majority of lecturers, who like to do research are Doctoral graduates. In addition, Case ten explained that lecturers who are Doctoral graduates are generally recognized for how good lecturers should be.

These statements are supported by the study of Harington and Levine (1986), Collins (1993) and Flanigan et al. (1998). The earning of a PhD apparently

teaches lecturing staff those academic norms and values needed for high research productivity. In addition, the attribute of accumulative advantage makes it easier to achieve success in publishing because of the prior experience with research projects and development of research skills (Creswel, 1985; Collins, 1993; Fox 1996).

Furthermore, Doctoral graduates have a chance to produce higher quality research outputs because the individual skills of the lecturer are supported by the institution from which they have graduated. The graduate school experience such as courses on research methods, working on research projects, working with other researchers, teaching research, discussing research with other graduate students, receiving help from advisors or researchers, research fellowships or grants are all found to be enabling experiences for faculty members (Kelly and Warmbrod 1986). Of relevance to this investigation is that it has been widely observed that the type of educational institution from which a staff member graduates can significantly influence the level of their research productivity (Gottlieb 1994; Ramsden 1994; Noser et al. 1996).

In the current investigation it has been especially observed that the status of an individual's academic origin is related to his or her research performance. It is thought that this is because the high-status institutions, (for example, those educational institutions in the top ranks in USA), are better suited to successfully produce Doctoral staff of perceived higher quality and potential (Beyer et al. 1995). According to D'Aveni (1996), Doctoral graduates from institutions which required higher Graduate Management Aptitude (GMAT) scores, who were more likely to be recruited from high-status schools, indeed produce better Doctoral graduates.

In addition, such graduates should possess a high propensity to succeed in an academic career. This implies that if the university plans to increase its research productivity, the institution should raise the number of Doctoral graduated lecturers from high status areas, and as long as the number of Doctoral lecturers remains small it is difficult to see how there will be a rise in research outcomes.

Whilst some respondents claimed that Masters degree graduates also can do research, a point of contention is that the quality and the level of knowledge

developed by each level of graduate is unequal. Doctoral graduates carry out research which is involved in the generation of new knowledge, while Masters graduates may do research primarily for utilizing knowledge. Usually, those lecturers with Doctoral qualifications have publication experience after graduation, and their fundamental knowledge in the field is wider because they have learned more and have had a greater opportunity to talk and learn from more experienced researchers. This is particularly so for those Doctoral graduates who have graduated from famous or high-status universities. They could conceivably provide at least three types of human capital, which are scholastic capital, social capital in the form of personal contacts and network ties, and cultural capital which is based on the value society places on symbols of prestige (Rhodman 2002). Notwithstanding these observations, some doctoral lecturers seldom do research, and ignore the opportunities that present themselves to improve their research skills. In the Noble University, every Faculty tries to encourage lecturers to do more research by providing research training courses and mentors, as well as offering chances to be thesis advisors, encouraging them to produce more classroom research, and providing academic trips. This is certainly supported by the findings of Kelly and Warmbrod (1986), who stated that perceived institutional and departmental supports for research are seen as the most important enablers for research productivity. According to the efficacy theory, people who view themselves as highly efficacious link personal accomplishments that require both skills and belief in what they can do or ability to use their skills and knowledge.

Several respondents in this study pointed out that although the degree earned, the lecturer's academic origin and experience are all essential factors to implement research outcomes, the productivity of a lecturer may not increase if the lecturer is unmotivated. Bandura (1997) proposed that individuals can give up trying because they lack a sense of self-efficacy in achieving the required behaviour, and as Boice (1987) observed, personal motivation was the strongest of the productivity factors.

The feeling toward doing or not doing research strongly impacts on the willingness of an individual to do research tasks that are directly related to the amount of research outcomes. This means although the university has provided a

supportive environment and facilities, if the lecturers have no willingness to do research, then the research productivity is not enhanced.

Case nine noted the characteristics of a researcher which seem to impact on their accomplishments. He pointed out that a successful researcher's personality should include being observant, loving to search for information, and being willing to ask questions. Lecturers who lack a researcher's personality hardly do any research. Case eleven added that researchers should have a good research imagination and always try to make their ideas become true. This is an example of lecturers' effort-performance expectancy as described by expectancy theory (Vroom 1964). People evaluate their ability and belief that one's effort will result in attainment of desired goals. Furthermore, evidence that personal characteristics such as intelligence, aptitudes, and personality traits link positively to research productivity can be found in Gottileb (1994).

In addition, in a faculty where lecturers have negative attitudes toward people doing research, the environment can block and hinder those staff who are trying to become successful in research. Many people have suggested that satisfaction with work and career relates to productivity (Blackburn & Lawrence 1995), and it has been shown that satisfied lecturers turn out more and better products. An important element of self-efficacy theory is that how much effort people spend and how long they persist with complexity (Bandura 1977) can predict their level of effort. In parallel with this, the study of Pfeffer and Langton (1993), showed that job satisfaction had a positive relationship with productivity.

According to the interview data, in those faculties that have relatively high research productivity, lecturers generally have a positive attitude toward research. It is this self-knowledge and confidence that underpins an individual's personal attitudes and values with respect to the importance of certain aspects of faculty performance. As a result of this positive attitude, they have the self-drive to motivate them especially during times in which the environment is undergoing change and people have the opportunity to generate new knowledge.

Regrettably, a related impact that has an important influence on the production of negative attitudes toward research is the attitude of the lecturers themselves. This often has a stronger impact than similar attitudes from their

colleagues. Case two stated that lecturers sometimes overlook the value of research. They consider research papers as being of no practical benefit because many research papers do not explicitly show any contribution to the public good. They think that such work is going to be only kept on the shelves and no one would bother to read it. This leads to the attitude that many lecturers have, that if they do research, it must be a big and superior work. They do not want to do small projects that produce unimportant outcomes and as a result do not contribute to their research reputation. Case three gave an example:

> I view the research as building a house. Inexperience workers should start with small jobs first and then begins to conduct some harder work after they gain enough knowledge and competency. They should learn to improve their skills and after that they will know and understand what they can do. Similar to the lecturers who are willing to do superior works, they should start with small projects because if they want to do a bigger work without sufficient research skills, these can destroy their motivation.

This echoes the opinion of Case six, who stated that newcomers sometimes have a misunderstanding that research must be a large project. In this situation, they are not interested in tackling smaller research projects and are frightened by the thought of doing a large project; consequently they have no enthusiasm for research generally. Again, if lecturers have no self confidence and face a situation that they feel is beyond their ability, they are hesitant to perform research tasks (Bandura 1991). Efficacy theory clearly points out that a person's behaviour is motivated and regulated by self-evaluation reactions to their own actions. This is usually done by comparing tasks easily accomplished by them with those that appear to be more difficult. Not surprisingly, they select to do only those tasks that they perceive to be possible to accomplish (Bandura 1997) which is in agreement with many of the responses found in this investigation.

As a result, the most important factor that strongly impacts on low research productivity is self-motivation which is a person's attitude toward the tasks and a personal willingness to be involved. If lecturers have the self-motivation to do research tasks, then they can at least start a research career. Role efficacy expectations seem to be very important in serving to provide proactive behaviour

(Bandura 1977). In essence, people may engage in behaviours when they judge their coping skills are sufficient, and this also seems to determine the level of effort to extend their activities and also their level of persistence (Bandura 1977).

In summary, self-motivation, essential skills and experience are the fundamental drivers that encourage lecturers to do research. If there are no fundamental drivers when the University provides other supportive factors, the University's efforts will be fruitless. On the other hand, if the University can provide supportive factors and lecturers have plenty of willingness to do research, then it is most likely that significant research outcomes will be produced. The following section will discuss the nature of the supportive factors by sequencing them, ranging from the most desirable factors to the least desirable on the basis of the data that has been derived from the interviews.

7.2.2 Desirable Factors

'Desirable factors' are those factors that have been requested by lecturers that the university can provide for their staff. It is suggested here that if any university provide and maintain all these factors and have an efficient management system to manage them, the expected research outcomes will be brought about.

Generally, the different fields of teaching and the nature of subjects taught within them means that there are different desirable supports, needed by the lecturers from the Government and University. Blackburn and Lawrence (1995) reported that the level of routine or predictability was closely related to productivity.

By comparison, in soft science faculties, teaching is usually seen to be the main task and the research projects seem to be more abstract rather than concrete. This is an example of where the nature of subjects is one cause of the difficulties in doing research. As a result, it appears that the science faculties receive more advantage in terms of support than social science faculties. However, at a fundamental level, the most important factor that causes lecturers in both science and soft science faculties to produce less research than expected is the high teaching workload.

This research suggested that problems inherent in the first two related desirable factors. These are the factors that lecturers would like to ask the University to solve, that is, how to reduce teaching work-loads and how to overcome the inequity in salary loading for researchers (Jacobson 1992). The reduction of teaching workloads is not an easy task to deal with because the University's incomes and lecturers' incomes are mainly derived from teaching. Government funds are distributed to the University on the basis of the number of students enrolled. If any university can enrol a higher number of students, that university will gain more funding. However, when the University tries to increase the number of students, this impacts on the teaching workload, especially in the Faculty of Education and the Faculty of Humanities and Social Sciences. Research outcomes from these two faculties are already below the desirable level, and with increasing numbers of students lecturers are likely to opt for teaching duties rather than research because they can obtain much more money.

As Case four noted some lecturers earn 40,000 baht a month from teaching, but when conducting research, they receive only 5,000 baht a month. This presents a significant conundrum; how can the University increase research productivity when it is impossible for a lecturer to maintain an equitable level of income. Clearly, a lecturer must receive as much income from doing research as from an equal amount of teaching. If a university can act to reduce teaching hours while at the same time maintaining salary levels, there will be more willingness on the part of lecturers to do research. In addition, it is not only teaching workload that impacts on research productivity, but also the number of required management tasks. Because many young and able lecturers are promoted to be administrators, they lose the chance to do research because their time and energies are directed elsewhere.

The third desirable factor is the provision of sufficient research facilities. Research facilities consist of resources, materials, machinery, equipment, databases, books, and stationery, and also includes research assistants, technicians and facilitators. A study by Jones et al. (1982), found that the amount of direct expenditure on material support can be used as a good indicator of research performance. Staff at institutions with richer resource bases can, and do, publish

more. This result is confirmed by the study of Van (1990), who found that the amount of library resources also had a strong relationship with research productivity. When there are more serials, larger collections, and more professional librarians, this significantly increases a university's research outcomes.

Taking a broad view of his Institution, Case one mentioned that there was a definite lack of research facilities and research assistants; while Case two added that her institution has an ineffective database system. Case eight made the point that his faculty has provided material facilities, but they face a problem of ineffective resource allocation and a serious lack of technicians. Case ten said that his faculty generally has insufficient facilities for conducting research, and the available facilities are only suitable for teaching Bachelor degree students. Case eleven, from the Institute of Marine Science in which the main duty is doing research, stated that the lack of a research facilitator is an important problem. He said this University has not formed any unit which takes direct responsibility for the facilitation of research matters. The provision of such facilitators should bring a great deal of convenience to research, especially when assisting with outside organizations and organising research accounts because generally scientists do not like to do accounting tasks. In addition, the facilitator should maintain the central database, whilst fundamental data or documentation necessary for research should be kept at the central library.

The fourth factor is financial regulation and policies. Case eleven pointed out that as early as 1997, he discussed the reasons why lecturers did not do research with University administrators. He found that financial regulation was one of the obstructions that severely restricted research performance, because nowadays demanding financial regulations cause significant inconvenience to research practitioners. Kerlin and Dunlap (1993) showed that prolonged austerity and retrenchment in higher-education system has contributed to very low morale of faculty and a researchers' perception toward research. Similarly Case four mentioned that the strict financial regulation makes it necessary for lecturers to collect all research related bills and to do complicated accounting procedures themselves.

Together with stringent financial regulations the nature of the research policies of both the Government and the Institutions also has an influence on low research productivity. The responses of Case eleven showed that Government policies make lecturers feel confused. He said:

> We don't have a clearly assessment standard because the research system is still very complex. We have to set a four year strategic plan. But the problem is the strategic plan is from the Ministry of Education and the Ministry of Science and do not head in the same direction. This demonstrated that the upper management level also has an unclear plan.

In addition, The Noble University has an unclear policy about supporting research activities. Although the Noble University has announced its intention to be a Research University, unfortunately this pronouncement is not matched with practice because the lecturers have to struggle to find research funding and to manage their time by themselves, a task that the University does not support. Hence some Faculties, especially the Science Faculties, have to work hard to search for outside funds. Generally, the lecturers who have tenure status have higher chance of obtaining money, which makes the research task even more difficult for beginning researchers.

In parallel with these issues, although the University has regulations it does not strongly force lecturers who have tenure status to do research. The current research policy for promotion is not strong enough to persuade lecturers to perform research activities because there are no obvious penalties for non-compliance. In such an environment, lecturers prefer to pursue other tasks, particularly if there are short term financial gains available.

The policies about monetary incentives for research productivity and publication fees are quite unclear. Some faculties have provided money for researchers in various guises, whilst some faculties do not have any incentive schemes. It is apparent that some faculties have followed the University rules, while other faculties have chosen to ignore them. In such a mixed situation, there is no clear performance standard that can be used across the University in a systematic way.

The fifth factor relates to the fourth one, and relates to insufficient research funding and ineffective research funding allocation. The University's research policy shows that it places more emphasis upon science and technology than social science, and as a consequence the social science faculties appear to have a reasonable complaint. The information about research activities, the amount of funding, and the availability of books and texts in the social sciences are considerably less than what is found in the science areas. However, there is somewhat of a paradox here in that the information obtained during the interviews suggested generally, the social science faculties have plenty of research funding left every year whereas, the science faculties, noted as receiving more funding, claimed that each year there is a shortfall.

Researchers have found that financial gain has the potential to motivate academics to reallocate their time toward their most profitable roles (Slaughter & Rhoades 1990). Research support has become important in contributing to the robustness of individual faculties, and it is becoming recognised that the duty of lecturers to find and apply for research funding.

Nowadays, the proportion of academic research funding contributed by private industry has increased steadily. There are many faculties that conduct research for private enterprise, such as lecturers in the Faculty of Engineering, where research projects are often for commercial use. Examples include projects to improve production processes or the creation of new products that have immediate commercial relevance. The ability to secure research funding has now become a criterion for success in the academic field (Etzhowitz 1992).

Within the institution, students often prefer to work with lecturers who have research grants, and this observation was reinforced by Case eight who noted that many of the Bachelor degree students request permission to continuing studying toward a Masters degree course by joining his research team.

The sixth factor relates to environmental conditions. Academic environments and cultures or climates generally provide both socializing and reinforcing organizational messages about norms, values and expectations concerning research (Kuh & Whitt 1998). Any faculty that contains a supportive climate in their working area generally has good research outcomes (Braxton 1983). In such a

climate, faculty members can obtain reinforcement from their colleagues to continue their work and finally develop collaborative research projects.

Nowadays research works are undertaken in the form of integrated projects that require collaboration from a team of researchers. This collegial commitment is one of the outstanding influences on research productivity, and is a factor that demonstrates the perceived strength of faculty commitment in the institution as a whole and with the member's department (Blackburn & Lawrence 1995). Lecturers not only do research with their colleagues within a faculty, but also work together with outsiders. For instance, the Faculty of Nursing's lecturers have formed a team with lecturers in Faculty of Engineering, the Health Care Centre, and the College of Sport Science. Furthermore, Dundar and Lewis (1998) report that high ratios of graduate student to faculty had a high correlation with research productivity. Those faculties that allow graduate students to be assistant researchers give the lecturers more chance to produce higher research outcomes. A good example of this system is in the Faculty of Public Health.

In some areas, an inexperienced researcher is given a chance to conduct research with an experienced researcher within the faculty, whilst some lecturers conduct research tasks with their advisors in overseas institutions. Because of the availability of high-speed communications, there is now a borderless network available for researchers that depends only on the ability and willingness of the workers to commit their time.

In many highly productive faculties, the leaders or administrators are role models for good research behaviour. They have continual research works and are likely to perform huge projects that gain a large amount of money. Although the problem of insufficient time occurs, they nevertheless can be a good example for the subordinates to follow. Glueck and Jauch (1975), discovered that the behaviour of the administration had a significant influence on the level of work satisfaction of academic staff. Researchers were most satisfied with administrators who they perceived to be satisfied with them and their work, and with those who attempted to reward them and who supported them to do more research. Case nine , who stated that he loves to perform the research tasks, really appreciated this opportunity to thank his Dean who gave him the chance to do research.

It can be concluded from these research findings that there are six important desirable factors that lecturers think are necessary to motivate them to do research. The University should reduce teaching workloads or increase the salaries that can be received from doing research equal to the salary that they can gain from teaching. The University should provide enough support research facilities and effective resource allocation methods, and work to eliminate obstructive and complicated financial regulations that cause significant inconvenience. It is important to provide a clearer policy that has the same standard and criteria to measure performance across the University. The University should provide more research funds for science faculties, and encourage social sciences faculties to allocate their total research budgets each year. Lastly, the working climate should be more encouraging toward the development of self-driven and motivated academic staff.

7.2.3 The Side-affect Factors

The demographic and social contingency factors are classified as side-affect factors because these factors facilitate lecturers in undertaking research if the social situation they are currently in is suitable and the demographic qualifications show they are qualified to carry out research projects.

However, these side-affect factors apparently do not strongly impact on low research productivity because the respondents in this study insisted that productivity is mainly dependent on both the personal willingness and abilities of lectures to be involved in research and the desirable supporting factors provided by the University. According to the study by Blackburn and Lawrence (1995), demographic and social contingency factors are not the direct effects on research productivity.

Support by findings from the interviews and the study of Blackburn and Lawrence (1995), social contingency factors are those factors that have effects on academic an staff member's ability to carry out research because they typically place constraints on the time and energy that individuals have to engage in work activities. Those social contingencies include the faculty members' health, and

extend the obligations to significant others such as spouse, children, parents, financial strains and pregnancy.

As Case seven stated, factors that obstruct her staff members' ability to do research include physical fatigue, something that is particularly noted if a lecturer is caring for babies. Whilst Case one argued that it depends on each person, it appears that those lecturers who have support from their family generally have time to do research. An example of this was evident with Case ten who reported that his wife understands his institutional duty and always encourages him to do research.

Demographic factors relate to the personal characteristics of academic members such as age, gender, and marital status. Respondents agree that the most important of these demographic factors is the age of the staff member. Age of lecturers can be classified into two main groups; the very new generation (25-35 years old), and the old or near- retirement group (nearly 60 years old).

This study found that lecturers who are part of the new generation typically like to perform research tasks, but because of their inexperience they request programs to help them improve their research skills. By comparison, the group of old lecturers, especially those who have taught at the Noble University when it was a teaching college and who nearly at retiring age, rarely participate in doing research at all. The results of this study supports the findings by Levin and Stephan (1991), who reported in a longitudinal study that the life cycle effect varies significantly by field.

Examining the effect of marital status, Creamer (1998) found that there was either no significant effect or a positive effect for married lecturers on research productivity. However, the effects of children on female faculty's publishing productivity are less clear (Creamer 1998). According to the interview data gathered in this study, respondents stated that marital status has a small effect on research productivity. Whilst single lecturers usually have more time to do research than lecturers who are married, Case one respondent made the point that it largely depends on each individual's attitude. He himself has a family but this does not preclude him from being a professor as he loves to do research.

The question of determining the relationship between gender and researcher productivity were addressed in many studies (Bailey 1992; Vasil 1992; Billard 1993; Gottlieb 1994; Blackburn & Lawrence 1995, unfortunately, many of these findings are contradictory, with some showing positive correlation and others claiming there is no correlation. For example, many researchers have insisted that males have had higher levels of research productivity than women (Bailey 1992; Vasil 1992; Billard 1993; Gottlieb 1994; Blackburn & Lawrence 1995). The current study, however, found that gender has no effect on research outcomes because respondents insisted that research productivity essentially depends on the lecturers' willingness and their interest.

7.3 Chapter Summary

According to the compiled findings compiled from the data collected during the interviews, together with previous research, there appears to be many factors which influence the quality and quantity of academic lecturers' research productivity. From the previous studies, researchers divided the impacting factors into five groups, consisting of environmental factors, institutional factors, personal career development factors, social contingency factors, and demographic factors. These earlier studies, however, did not go on to show the relative level of importance of these factors, therefore, this study has extended the investigation to classify these factors into three main groups, that were termed essential factors, desirable factors, and side-affect factors.

The essential factors, which are the most important classification provide the confidence in one's capabilities to organize and execute the courses of action required to produce given attainments. People will participate in, and try to deal with, situations that they have ability to handle, but avoid situations that they perceive as being beyond their abilities. Essential factors are those necessary elements that are very important and strongly affect the desire of lecturers to do or not do research. These are personal career development factors that directly influence self-motivation (willingness to do research) and self-confidence (which derives from experience and skills) to perform research activities.

At the next level of importance are the desirable factors, those supporting systems that encourage more willingness for research, thereby increasing motivation. In addition, these factors can sometimes help to change negative attitudes and, in fact, become a positive motivation. They consist of institutional Factors and environmental factors. The University should reduce teaching work-loads or increase salaries that one can receive from doing research such that it is equal to the salary that can be gained from teaching, and provide enough supporting research facilities and effective resource allocation methods. The University should also make more research funds available. Furthermore, the working climate could be more encouraging toward the development of self-driven motivated academic staff.

The final factors of importance are the demographic and social contingency factors. Social contingencies include the faculty members' health, and which extends to obligations to significant others such as spouse, children, parents, financial strains and pregnancy. Both demographic and social contingencies factors bring out the side-affect factors that may either place some constrains on the lecturers' ability to do research, or in some cases support the abilities of the researcher, depending on the individual.

CHAPTER 8

Conclusion, Implications and Recommendations

Within this chapter, there are three main sections; the Conclusion, a number of Implications of this study and some Recommendation for further study. In addition, the closing remarks will point out some limitations of the current findings in order to facilitate their possible use in similar contexts.

8.1 Conclusion

Currently, National Governments expect Universities to become both more efficient and effective in teaching and research. As a consequence, personnel in universities generally realise that they should develop their research performance because it is an important source of new knowledge and it provides academic support in preparing the Country for entry into the knowledge-based economy. Because of this national need, research productivity in universities has become a most important criterion for making promotion and tenure decisions.

However, although there is clear evidence that administrators at many institutions together with the academic staff realize the important of research within the University structure, there is still an unacceptably low level of research productivity. There are many obstructions to research productivity which require resolution and elimination in order that lecturers can increase their research output. Thailand is no exception to this, and many of the public Universities are confronted with low research productivity problems. For instance, at Chulalongkorn University, which is the most famous institution in Thailand, Suwanwala (1991), found that many lecturers did not realize the important of conducting research, and many of them lacked the knowledge, skills, experience and resources to do research. In a similar way, many issues were evident to the

researcher of this current study, when she worked in another Thai public University, which led to this case study in the “The Noble University”.

This thesis contributes to research in the field of education. Higher education emphasises professional advancement. One of the criteria for moving up the hierarchy from one position to the next is engagement in research activity. Research work can contribution to lecturers’ need for professional growth and self-actualization and can contribute to their teaching (Altbach & Lewis 1995). Gray (1998) stated that research can provide ‘evidence and argument’. It can help teachers identify, conceptualize problems, activities, and outcomes related to teaching and learning. Hence, to conduct valid and reliable research in the area of research activities will contribute to efforts to improve lecturers’ preparation, as well as instruction and learning in the institution (Fresko 1997).

The conceptual framework for this study was conceived to integrate research on faculty role performance and productivity with motivation theories. The selected cognitive motivation theories in this research consist of an amalgam of expectancy theory and efficacy theory. Expectancy theory (Vroom 1964) was included because it involves the relationship between academic staff members and their work environment factors. Key issues here are institutional factors, because academic members normally have to interact with their surrounding institutional environment, which includes their colleagues and their supervisors, together with the system of institutional regulations and all other organizational supporting systems. Efficacy theory, in contrast, involves the relationship between the academic members’ personal characteristics (demographic factors) and their individual ability (personal career development factors). In this area, the concept of self-knowledge is important, since it encompasses an individual’s personal attitudes and values with respect to the importance of certain aspects of faculty performance.

The research methodology of this study utilises qualitative methods, in particular, in-depth interviews. Eleven participants were invited for in-depth interviews in relation to the research question “What are the factors that impact on low research productivity of academic lecturers in a public University in Thailand?” They are responsible for managing research activities within each

faculty. Of the eleven participants, eight were Deans or Associate Deans for research affairs, while the remaining participants were administrators from the Research Development Centre and the Graduate School.

Based on the review of literature and previous studies, there are five important factors that appear to impact on academic research productivity: these are environmental factors (Braxton 1983; Louis et al. 1988; Blackburn & Lawrence 1995; Gardner 1995, The Medical College of Wisconsin 2003), institutional factors (Gottlieb 1994; Ramsden 1994; Radhakrishma et al. 1994; Noser et al. 1996), personal career development factors (Gottlieb 1994; Ramsden 1994; Noser et al. 1996), social contingency factors (Blackburn & Lawrence 1995), and demographic factors (Finkelstein et al. 1998; Teodorescu 2000; Williams 2000a). However, as one outcome of the data findings of this study, these factors can be condensed into three main groupings, which we have termed essential factors, desirable factors, and side-effected factors.

The essential factors are those necessary elements that are very important and strongly affect the desire of lecturers to do or not to do research. If the essential factors are present in a proper environment there is the possibility that a higher quantity and quality of research outcomes will emerge. This concept is based on the social cognitive theory of Bandura (1977, 1982, 1986, 1995, 1997) that highlights the importance of self-efficacy, a concept that relates to the confidence in one's capabilities to organize and execute various courses of action. This theory predicts that people will participate in and try to deal with situations that they have the ability to handle, but avoid situations that they perceive as being beyond their abilities. Therefore, the first of the important factors that we see as impacting on low research productivity is personal self-motivation.

In addition, the ignorance that we have observed about the importance of research amongst lecturing staff may result from the history of the institution because the Noble University was initially a teaching university rather than research university. This may reinforce why some lecturer's appear to demonstrate a lack of researcher's characteristics and also explains why some faculties have lecturers who show a negative attitude toward research performance.

The paper demonstrates why a local university like the Noble University is often confronted with the problem that lecturers have low research experience and skills that cause low research productivity. Generally, lecturers can practice research skills and increase research experience when they are engaged with their Doctoral degree. However, the percentage of Doctoral graduates is markedly lower than the percentage of Masters degree graduates in many faculties.

As a result of the above situation, the essential factors of self-motivation and the experience/skills of academic lecturers to do research, which relate to personal career development factors, are often lacking in some of the staff in the Faculties of the Noble University.

Secondly, Desirable factors for research productivity are those that support and encourage the willingness of staff to be involved in research and act to increase an individual's motivation to engage in project work. There are environmental factors and institutional factors that can be grouped to explain the important role of desirable factors. We have found that the first two desirable factors are high teaching work load and insufficient salary. Generally, academic lecturers who teach a large number of students usually receive a higher income than those who do research. The third desirable factor is a sufficiency of research facilities. Respondents have suggested that the resource allocation in the case University is not necessarily effective and some Faculties have a lower level of supporting facilities than they have requested. The fourth factor has been found to be the complicated financial regulation and policies that are required from researchers. The fifth factor was insufficient and ineffective research funding allocation, especially for the science faculties, and the last factor found by the investigation was the need for environmental support within the faculties.

When considering the side-effect factors, which include demographic factors and social contingency factors, it was found that these normally do not strongly impact on research productivity. Respondents insist that research productivity depends mainly on the willingness of lecturers and the appropriate provision of desirable factors. One exception to this was that one side-effect factor, the age of lecturers, was found to be important because lecturers who are older and nearly at retiring age, seldom do research.

8.2 Implications

This section discusses the aims that were mentioned in Chapter One. The project attempted to provide information that will assist the design, development and formulation of institutional research policies in the changing global situation, and, in particular, to highlight those factors that should be emphasized in order to further encourage academic lecturers to increase their research outcomes. It is expected that the results of this study will provide significant benefits to all related persons, including policy makers, leaders of institutions, lecturing staff, and postgraduate students.

Research productivity is not only an important route to academic promotion, it is also important for enhancing an institution's reputation and economic status (Blackburn, et al. 1991). An increase in research productivity leads to high prestige for the institution. In this work, we have implicitly compared the Noble University with those universities which have outstanding records for research performance. In Thailand, the high productivity institutions are located in Bangkok, whilst local universities generally have fewer research outcomes.

To help the project identify and understand the implications of low research productivity, the respondents were asked the following research question *'From your institutional perspective, are there any steps that the University could take to enhance or improve the research engagement of academic lecturers?'* The responses presented in the discussion chapter gave some suggestions of those factors that should be implemented by the university as a matter of some urgency in order to stimulate research productivity. It was found that:

1. Lecturers do less research because of lack of self-motivation, and they need to be helped to develop an intrinsic drive for knowledge creation that will build a positive attitude toward doing research. The lecturers should learn about how a researcher behaves and what research coordinators value. Some lecturers act quite autonomously as far as their research effort and outcomes are concerned, and it may be more beneficial for them to work in a team situation. The level of

effort put into research is also a strong predictor of success, and can be viewed as an indicator of personal valuation of the activities.

According to the recommendations from the respondents derived from the interviews, it is necessary to search for strategies to make lecturers realize how important research is and make them understand what they will gain from working on research projects. Further, lecturers should realize that they can not use textbooks as the only source of knowledge. They should also read current research papers and engage in developing knowledge themselves. Hence, it is an important task for the University to find solutions that can encourage lecturers to realize the importance of research because the respondents agreed that the willingness of a lecturer to do research directly influences the research outcomes. What is especially important is that lecturers understand that doing research is a routine job and that they should tend to do it every day. In this way they will get used to conducting investigations and finally, with appropriate university support, can produce good research results.

2. The University can support lecturers by educating lecturers to have more research skills and experience because when they have sufficient skills, they have more confidence to do research. In this regard, it would be helpful if the University made a policy to increase the number of doctoral graduates on the staff. If this were the case, then many of them would bring research knowledge and experience to the University which can be shared with existing staff. However, it is recognised that their qualifications are not a sufficient basis upon which to design and plan large research projects or to find research topics of national interest. For this, new graduates will need to have the support of an experienced mentor. In addition, many respondents noted that new lecturers make requests for training courses and expert researchers to assist them. Whilst the University has generally made efforts to provide research seminars, it appears that there is a perceived problem in that the topics are not interesting enough to attract staff. Often seminars only deal with the basic knowledge that lecturers already have, and, as respondents have stated, lecturers do not attend seminars because they can find basic information in other places and prefer to spend time on doing other tasks. Hence, it is suggested that the University

provide more interesting and innovative seminar programs, such as introducing new statistical programs or innovative data collection methods.

3. Is it possible to reduce teaching workloads? This is a key question raised by many of the respondents, but in reality it is quite difficult to reduce teaching time because it is the main duty of the university, and there is a competing need to increase the overall number of students to gain more income. Hence, one way to overcome this problem recommended by a respondent is that the University should reduce teaching workloads for qualified research staff who are the professorial and experienced lecturers.
4. The University should also consider the possibility of increasing a researcher's salary and rewards, ensuring that the income derived from doing research is equal to or higher than income derived from teaching. One significant insight from a respondent was that the University should provide both intrinsic and extrinsic rewards for staff who engage with research, however, punishment is not a good idea. Appropriate rewards can be promotion, recognition, and money, providing a difference in terms of rewards between staff with research productivity and those without, in order to encourage research motivation. In addition, the University might consider a kind of special leave for the development of research, allowing teachers to take leave for one semester to be completely free from their workload.
5. The recommendations made by respondents showed a general agreement that research facilities need to be provided. First of all, respondents recommended improving the database system by making it easier to access and compile information, and the Noble University should be linked to other institutions both in Thailand and overseas. Second, respondents requested better facilities allocation system that could act as the intermediary of resources allocation and facilities management. All staff should have the right to use University purchased equipment and share in the maintenance costs. A third recommendation was that the university should have a central system of facilitators who can assist researchers to do accounting tasks, to be the information centre, and to be the marketer for selling patents. Lastly, the University should increase the number of research assistants and technicians to

a ratio of at least 1:3 or 1:2. There are now twenty lecturers per one technician. Currently, maintenance costs are higher than the cost to employ new technicians, and when the machine is out of order, lecturers' work is stopped and time and effort are wasted. A research assistant could also play an important role in making sure research is accomplished. These might be Bachelor and Masters degree students, and this has the added advantage that when such students join research projects, they can learn how to do research. In this way, the University is beginning to develop experienced personnel who will become good researchers in the future.

6. Respondents mentioned those problems related to university regulations that are complicated and create unnecessary inconvenience for research staff. It was suggested that regulations should be more clearly defined and be more convenient by reducing rules that are tightly restrictive, such as reducing or removing complicated purchasing processes. In the same discussion of regulations, it appears that several institutions' policy for promotion, as well as their tenure and reward systems, is based on quality and quantity of research productivity (Read et al. 1998; Kotrlik et al. 2002). For the Noble University, research products are used as part of staff performance appraisals, and lecturers who want to have, and who do have tenure status must do research. The criteria for appraisal of full-time and part-time staff should be different, and it appears that there is no formal regulation to indicate that lecturers should be research active. It seems that this unclear situation means that some lecturers pay less attention to doing research for promotion because there are other alternatives from which to receive promotions, for example, teaching and administration in which lecturers are more interested. If the university wishes to become more research active, the view of the respondents was that it should set up formal regulations to require lecturers to perform research as their routine job.
7. In many areas, it was thought that the university should provide more balanced research funding. Currently, lecturers must struggle to find outside funding, and they have to face high competition. It is the science faculties that have the most insufficient level of research funding while, paradoxically, the social science faculties have research funding left every year. It was also noted that

the University should provide publication funding and specific budgets for attending conferences both in Thailand and overseas.

8. The research environment should be supported, and it was suggested that administrators in low research performance faculties should provide role models for other staff. However, administrators have to carefully manage their time, and one formula suggested a division of time as 40% for doing research and 60% for teaching and administration. In this situation, it is possible to show research productivity results every year. To assist in this approach, it was suggested that lecturers can also do research in teams, whereby they have support from their colleagues.

8.3 Limitations of this Study

1. Because the amount of time and research funds were restricted, the research has been limited to one institution only, which has been investigated as a case study.
2. It quite difficult to obtain information about research funding or exact amount of research productivity from each faculty. It is still a problem for each faculty and also the University in that a central research productivity database does not exist. Documents from faculty members could not be obtained as I was not in position to ask all faculty members to give me their information.

8.4 Recommendations for Further Study

Further study of this important question of research productivity might be implemented in a more involved action research plan, where the determination and solving of problems step by step can be carried out. By determining the urgency in which factors should be corrected and by implementing intervention schemes, an evaluation of the effectiveness of the program can be quickly achieved. Fine tuning of the process in a second action cycle could involve the less critical supporting factors.

It is also suggested by the result of this study, that further research should be focused on determining how to help individual lecturers recognize the importance of research. The study method may involve in-depth interviews with experts or highly productive researchers. These ideas could then be introduced into an action plan. In parallel with this further research, it will be useful to determine what research skills are required by the lecturers.

References

Abelson, P 1967, 'Justifying academic research', *Science*, p.157.

Adams, J 1963, 'Toward an understanding of inequity', *Journal of Abnormal and Social Psychology*, vol. 67, pp. 422-436.

Adams, J 1965, 'Inequity in social exchange', *Journal of Abnormal and Social Psychology*, vol. 62, pp. 335-343.

Adler, P & Alder, P 1994, 'Observational techniques', in N Denzin & Y Lincoln (ed.), *Handbook of Qualitative Research*, Sage, London, pp. 377-393.

Alderfer, C 1969, 'An empirical test of a new theory of human needs', Organizational *Behavior and Human Performance*, vol. 4, pp. 142 – 175.

Albach, P & Lewis, L 1995, 'College teachers-attitudes', *Change*, vol. 27, no. 6, p. 50.

Allen, F 1990, 'Indicators of academic excellence: Is there a link between merit and reward', *Australian Journal of Education*, vol. 34, no. 1, pp. 87-98.

Alschuler A, Tabor, D & McIntryre, J 1970, *Teaching achievement motivation: theory and practice in psychological education*, Education Venture Inc, Middletown, Connecticut.

Astin, H & Davis, D 1985, 'Research productivity across the life and career cycles: Facilitator and barriers for women', in J Glazer, E Bensimon & B Townsend 1993, *Women in higher education: A feminist perspective*, Ginn Press, Needham Heights, MA.

Austin, A 1992, 'Faculty cultures', *Encyclopaedia of Higher Education*, Pergamon Press, Oxford, NY.

Austin, H 1984, 'Academic scholarship and its rewards' *Women in Science*, pp. 259-279.

Auth, M 1999, *Lecture on Motivation*, CSUDH, Carson.

Babbar, S, Prasad, S & Tata, J 2000, 'An empirical assessment of institutional and individual research productivity in international operational operations management', *International Journal of Operation & Production Management*, vol. 20, no. 12, pp. 1392-1410.

Babbie, E 2001, *The Practice of Social Research*, 9th edn, Warsworth, Belmont, CA.

Bailey, T 1992, 'Faculty research productivity', ASHE Annual Meeting Paper, 1 November 1992, viewed 8 September 2005, retrieved from ERIC Document Reproduction Service database.

Baldwin, R 1990, 'Faculty vitality beyond the research university: extending a conceptual concept', *Journal of Higher Education*, vol. 52, pp. 598-614.

Bandura, A 1977, 'Self-efficacy: Toward a unifying theory of behaviour change', *Psychological Review*, vol. 84, pp. 191-215.

Bandura, A 1982, 'The self and mechanisms of agency', in J. Subs (ed.), *Psychological perspective on the self*, Lawrence Erlbaum Association Inc., New Jersey.

Bandura, A 1986, *Social foundations of thought and action: a social cognitive theory*, Prentice-Hall Inc., New Jersey.

Bandura, A 1991, *Self foundations of thought and action: a social cognitive theory*, Prentice-Hall Inc., Englewood Cliffs, NJ.

Bandura, A 1995, 'Exercise of personal and collective efficacy in changing societies', in A. Bandura (ed.), *Self-efficacy in changing societies*, Cambridge University Press, New York, pp. 1-45..

Bandura, A 1997, 'Self-efficacy: toward a unifying theory of behavioral change', *Psychological Review*, vol. 84, no. 2, pp. 191-215.

Bandura, A & Locke, E 2003, 'Negative self-efficacy and goal effects revised', *Journal of Applied Psychology*, vol. 88, pp. 87-89.

Bandura, A, Reese, L & Adams, N 1982, 'Microanalysis of action and fear arousal as a function of differential level of perceived self-efficacy', *Journal of Personality and Social Psychology*, vol. 43, pp. 5-21.

Bartol, M, Tien, M & Matthews, G 1998, *Management: A pacific rim focus*, 2nd edn, The McGraw-Hill Company, Sydney.

Bateman, T & Zeithaml, C 1993, *Management function & strategy*, 2nd edn, Irwin, Homewood, IL.

Becher, T 1989, *Academic tribes and territories: intellectual enquiry and the cultures of disciplines*, SRHE and Open University Press, Great Britain.

Beehr, T, Walsh, J & Taber, T 1976, 'Relationship of stress to individually and organizationally valued states: higher order needs as a moderator', *Journal of Applied Psychology*, vol. 61, no. 1, pp. 41-47.

Berg, B 1989, *Qualitative research methods for the social sciences*, Allyn & Bacon, Boston.

Beyer, J, Chanove, R & Fox, W 1995, 'The review process and the fates of manuscripts submitted to AMJ', *Academy of Management Journal*, vol. 38, pp. 1219-1260.

Beyer, J & Steven, J 1974, *Difference between scientific fields in patterns of research activities and productivity*, Buffalo State University, School of Management, NY.

Billard, L 1993, 'A different path into print', *Academe*, p. 28.

Black, S 1991, *An evaluation of the impact of the Florida State University/University of West Florida cooperative doctoral program as perceived by graduates and their employers*, Doctoral dissertation, Florida State University, Tallahassee.

Blackburn, T, Bieber, J, Lawrence, J & Trautvetter, L 1991, 'Faculty at work: focus on research, scholarship and service', *Research in Higher Education*, vol. 32, no. 4, p. 385.

Blackburn, T & Lawrence, H 1995, *Faculty at work: motivation, expectation, satisfaction*, The Johns Hopkins University Press, London.

Blake, J 1994, 'Library resources for problem-based learning the problem perspective', *Compute Method Programs Biomes*, vol. 44, no. 34, pp. 167-173.

Bland, C & Berquist, W 1997, *The vitality of senior faculty members: Snow on the roof-fire in the finance*, viewed 8 September 2006, retrieved from ERIC Document Reproduction No.ED415733.

Bland, C & Ruffin, M 1992, 'Characteristics of a productive research environment: Literature review', *Academic Medicine*, vol. 67, June, pp. 385-397.

Bobic, M & Davis, W 2003, 'A kind word for theory X: or why so many newfangled management techniques quickly fail', *Journal of Public Administration Research and Theory*, vol.13, no. 3, pp. 239-264.

Boice, R 1987, 'Habits of research productivity', *Accounting Education News*, Late Fall, p. 7.

Bolman, L & Deal, T 1991, *Reframing organization artistry, choice and leadership*, Jossey-Bass, San Francisco, CA.

Boyer, E 1990, *Scholarship reconsidered*, The Carnegie Foundation for the Advancement of Teaching, Princeton, New Jersey.

Brand, M 2000, 'Changing faculty roles in research universities: using pathways strategy', *Change*, vol. 32, no. 6, pp. 42-45.

Braskamp, L & Ory, J 1994, *Assessing faculty work: enhancing individual and institutional performance*, Jossey-Bass Publishers, San Francisco.

Braxton, J 1983, 'Department colleagues and individual faculty publication productivity', *Review of Higher Education*, vol. 6, no. 2, pp. 115-128.

Braxton, J & Toombs, W 1982, 'Faculty uses of doctoral training: consideration of a technique for the differentiation of scholarly effort from research activity', *Research in Higher Education*, vol.16, no. 3, pp. 265-286.

Brocato, J 2001, *The research productivity of family medicine department faculty: A national study*, Doctoral dissertation, Michigan State University.

Brown, S, Lent, R, Ryan, N & McPartland, E 1996, 'Self-efficacy as an intervening mechanism between research training environments and scholarly productivity: A theoretical and methodological extension', *The Counselling Psychologist*, vol. 24, pp. 535-544.

Burapha University 2001, *Handbooks 2002-2004*, Burapha University, Thailand.

Burapha University 2002, *Self-assessment Report/SAR*, Burapha University, Thailand.

Bureau of International Cooperation Strategy Commission on Higher Education 2003, 'Summary of the Prime Minister's keynote address on higher education development policy delivered to executives and faculty members of all higher education institution on Friday 10 January 2003', *Thai Higher Education Review*, vol. 1, no. 3, pp. 5-6.

Butler, J & Cantrell, R 1989, 'Extrinsic reward valence and productivity of business faculty: a within and between subjects decision modelling experiment', *Psychological Reports*, vol. 64, pp. 343-353.

Campbell, J & Prichard, R 1976. 'Motivational theory in industrial and organizational psychology', in M Dunnette (ed.), *Handbook of industrial organizational psychology*, pp. 95-107.

Caplow, T & McGee, R 1958, *The Academic Marketplace*, Basic Books, NY

Cardinell, C 1981, 'Burnout? Mid-life crisis? Let's understand ourselves', *Contemporary Education*, vol. 52, no. 2, pp.103-108.

Cargile, B & Bublitz, B 1986, 'Factors contributing to published research by accounting faculties', *The Accounting Review*, January, pp.158-178.

Carnegie Foundation 1991, 'The payoff for publication leaders', *Change*, March/April, pp. 27-30.

Carnegie Foundation for the Advancement of Teaching 1987, *A classification of institutions of higher education*, Carnegie Foundation for the Advance of Teaching, Princeton, NJ.

Carrell, M & Dittrich, J 1978, 'Equity theory: the recent literature, methodological considerations, and new directions', *The Academy of Management Review*, vol. 3, no. 2, pp. 202-210.

Centra, J 1981, *Research productivity and teaching effectiveness*, Princeton, NJ, viewed 8 September 2005, retrieved from ERIC Document Reproduction Service database.

Chaichanapanich, P 1998, *Learning for leadership in Thai higher education: Career paths of public University presidents*, Doctoral thesis, Michigan State University, viewed 8 September 2005, retrieved from UMI database.

Chen, Y, Gupta, A & Hoshower, L 2006, 'Factors that motivate business faculty to conduct research: An expectancy theory analysis', *Journal of Education for Business*, vol. 81, no. 4, pp. 179-189.

Chieng Mai University 2006, *Mission Statement*, viewed 8 May 2006, <www.chiangmai.ac.th>.

Chubin, D 1994, 'Grants peer review in theory and practice', *Evaluation Review*, vol. 18, pp. 20-30.

Clark, B 1987, *The academic life: Small worlds, different worlds, Carnegie Foundation for the Advancement of Teaching*, Princeton, New York.

Clement, R & Stevens, G 1989, 'Performance appraisal in higher education: Comparing department of management with other business units', *Public Personal Management*, vol. 18, pp. 263-278.

Cocklin, B 1996, 'Applying qualitative research to adult education: reflections upon Analytic processes', *Studies in the Education of Adults*, vol. 28, no. 1, pp. 88-116.

Cohen, A & Gutek, B 1991, 'Sex differences in the career experiences of members of two APA divisions', *American Psychologist*, vol. 46, pp. 1292-1298.

Colbeck, L 1998, 'Merging in a seamless blend: how faculty integrate teaching and research', *The Journal of Higher Education*, vol. 69, no. 6, pp. 647-671.

Cole, S & Cole, J 1967, 'Scientific output and recognition: a study in the operation of the reward system in science', *Human Sociological Review*, vol. 32, pp. 377-399.

Collins, B 1993, 'A review and integration of knowledge about faculty research productivity', *Journal of Professional Nursing*, vol. 9, May-June, pp.159-168.

Cooper, R & Schindler, S 2006, *Business Research Methods*, 9th edn, McGraw-Hill, Singapore.

Cosier, R & Dalton, D 1983, 'Equity theory and time: a reformation', *Academy of Management Review*, vol. 8, no. 2, pp. 311-319.

Creamer, E 1998, *Assessing faculty publication productivity: issues of equity*, The George Washington University, USA.

Creswell, J 1985, *Assessing faculty publication productivity, issues of equity*, vol. 26, The George Washington University: Graduate School of Education and Human Development.

Creswell, J 1986, *Measuring faculty research performance*, Jossey-Bass Inc., San Francisco.

Creswell, J 1998, *Qualitative inquiry and research design: choosing among five tradition*, SAGE Publication Inc, USA.

Creswell, J 2003, *Research design: qualitative, quantitative, and mixed methods approaches*, 2nd edn, Sage, Thousand Oaks.

D'Aveni, R 1996, 'A multiple-contingency, status-based approach to interorganizational mobility of faculty and input-output competition among top business schools', *Organization Science*, vol. 7, pp. 166-189.

Darke, K & Dahl, D 2003, 'Fairness and discounts: the subjective value of a bargain', *Journal of Consumer Psychology*, vol. 13, pp. 328-338.

Davis, K 1957, *Human relations in business*, McGraw-Hill Book Company, NY.

Dundar, H & Lewis, D 1998, 'Determinants of research productivity in higher education', *Research in Higher Education*, vol. 39, no. 6, p. 607.

Eerde, V & Thierry, H 1996, 'Vroom's expectancy models and worked –related criteria: a meta-analysis', Journal of Applied Psychology, vol. 81, pp. 575-586.

El-Khawas, E 1991, 'Senior faculty in academe, committed to the teaching role', *Research Brief*, vol.2, no.5, pp.2-12, viewed 8 September 2005, retrieved from ERIC Document Reproduction database.

Ellis, R 1994, *The Study of Second Language Acquisition*, Oxford University Press, Oxford.

Epstein, C 1988, *Deceptive distinctions: Sex, gender, and the social structure*, Yale University Press, New Haven, CT.

Etzhowitz, H 1992, 'Individual investigators and their research groups', *Minerva*, vol. 30, pp. 28-50.

Evans, E 1992, 'Liberation theology, empowerment theory and social work practice with the oppressed international social work', *International Social Work*, vol. 35, pp. 135-147.

Ewart, C 1995, 'Self-efficacy and recovery from heart attack: implications for a social-cognitive analysis of exercise and emotion', in J Maddux (ed.), *self-efficacy, adaptation, and adjustment: Theory, research, and application*, Plenum Press , New York, USA.

Faia, M 1976, 'Teaching and research: Rapport or misalliance', *Research in Higher Education*, vol. 4, pp. 235-246.

Festinger, L 1957, *A theory of cognitive dissonance*, Row Peterson, Evanston.

Fielden, J & Gibbons, J 1991, 'Merit myopia and business school faculty publications', *Business Horizons*, vol. 34, no. 2, pp. 8-12.

Filstead, W 1970, *Introduction Qualitative methodology: firsthand involvement with the social world*, Markham, Chicago.

Finkelstein, M 1984, *The American academic profession: a synthesis of social scientific inquiry since World War II*, Ohio State University Press, Columbus.

Finkelstein, M, Seal, R & Schuster, J 1998, *The new academic generation: A profession in transformation*, John Hopkins Press, Baltimore.

Flanigan, K, Ballinger, P, Grant, H & Bennett, D 1988, 'Research productivity profile of allied health faculty', *Journal of Allied Health*, vol. 17, May, pp. 87-100.

Flick, U 1998, *An introduction to qualitative research*, SAGE Publications, London.

Folger, J, Astin, H & Bayer, A 1970, *Human resource and higher education*, Russell Sage Foundation, New York.

Fox, M 1996, 'Publication productivity among scientists', *Social Studies of Sciences*, vol. 13, no. 2, pp. 285-305.

Fresko, B 1997, 'The research and evaluation unit at Beit Berl College', in N Efraty & R Lidor (ed.), *Teacher Education: Stability, Evolution and Revolution*, Mofet Institute, Tel-Aviv, pp. 1435-1440.

Fulton, O & Trow, M 1974, 'Research activities in American higher education', *Sociology of Education*, vol. 47, Winter, pp. 29-73.

Gaertner, J & Ruhe, J 1983, 'Occupational stress in men and women accountants: is there a different?', *The National Public Accountant*, pp. 38-42.

Gardner, H 1995 *Leading minds: an anatomy of leadership*, Basic Books, New York.

Garkland, K 1990, 'Gender differences in scholarly publication among faculty in ALA accredited library schools', *Library and Information Science Research*, vol. 12, no. 2, pp.155-166.

Gaston, J 1970, 'The reward system in British Science', *American Sociological Review*, vol. 35, pp. 718-732.

Geertz, C 1973, *The interpretation of cultures*, Basic Books, New York.

Geiger, R 1986, *To advance knowledge: the growth of American research universities: 1900-1940*, Oxford University Press, New York.

Gibbs, P & Locke, B 1989, 'Tenure and promotion in accredited graduate social work program', *Journal of Social Work Education*, vol. 25, no. 2, pp.126-133.

Gibbon, J, Ivancevich, J & Donnelly, J 1994, *Organizations: behavior structure and processes*, Irwin. USA.

Gilner, J 1994, 'Reviewing qualitative research: proposal criteria for fairness and rigor', *The Occupational Therapy Journal of Research*, vol. 14, pp. 78-90.

Gist, M & Mitchell, T 1992, 'Self-efficacy: a theoretical analysis of its determinants and malleability', *Academy of Management Review*, vol. 17, pp. 183-211.

Glueck, W & Jauch, L 1975, 'Sources of research ideas among productive scholars', *Journal of Higher Education*, vol. 46, January/February, pp.103-114.

Gomez-Mejia, R & Balkin, B 1992, 'Determinants of faculty pay: An agency theory perspective', *Academy of Management Journal*, vol. 35, pp.921-955.

Gomm, R, Hammersley, M & Forter, P 2000, *Case study method*, SAGE, London.

Gottlieb, E 1994, *The ambivalence of the Israeli academic profession: research vs. teaching, the academic profession approaches the 21st century*, Paper presented at the annual meeting of the American Education Research Association, on April 4-8, 1994, viewed 8 September 2005, retrieved from ERIC Document Reproduction database.

Gray, J 1998, 'An episode in the development of educational research', in J Rudduck & D McIntyre, *Challenges for Educational Research*, New BERA Dialogues, pp. 23-39.

Greenberg, J 1999, *Managing behavior in Organization*, 2nd edn, Prentice Hall New Jersey.

Grover, V, Segars, A & Simon, S 1992, 'An assessment of institutional research productivity in MIS', *Data Base*, vol. 23, no. 4, pp. 5-9.

Hancock, T, Lane, J, Ray, R & Glennon, D 1992, 'Factors influencing academic research productivity: a survey of management scientists', *Interfaces*, vol. 22, no. 5, pp. 26-38.

Harrington, M & Levine, D 1986, 'Relationship between faculty characteristics and research productivity', *Journal of Dental Education*, vol. 50, September, pp. 518-525.

Hattie, J & Marsh, H 1996, 'The relationship between teaching and research: a meta-analysis', *Review of Educational Research*, no. winter, pp.507-542.

Heneman, H & Schwab, D 1972, 'Evaluation of research on expectancy theory predictions of employee performance', *Psychological-Bulletin*, vol. 78, pp. 1-9.

Henthorne, T, LaTour, M & Loraas, T 1998, 'Publication productivity in three leading US advertising journals', *Journal of Advertising Provo*, vol. 27, no. 2, pp. 53-63.

Herzberg, F, Mausner, B & Snyderman, B 1959, *Motivation to work*, 2nd edn, Wiley, NY.

Hicks, R 1974, 'The relationship between publishing and teaching effectiveness', *California Journal of Educational Research*, pp.140-146.

Hill, H 1993, *Informal discussions research management in higher education*, Centre for Research Policy, University of Wollongong.

Holden, G 1991, 'The relationship of self-efficacy appraisals to subsequent health related outcomes: a meta-analysis', *Social Work and Health Care*, vol. 16, pp. 53-93.

Holden, G, Moncher, M, Shinke, S & Barker, K 1990, 'Self-efficacy of children, and adolescents: a meta-analysis', *Psychological Reports*, vol. 66, pp. 1044-1046.

Horning, L 1984, 'Women in science and engineering: Why so few?', *Technology Review*, vol. 87, no. 8, pp. 30-41.

Hughes, C 1996, *Factors related to faculty publishing productivity*, viewed 16 September 2006, <www.iatul.org/conference/proceedings/vol08/hughes.pdf.>

Hunter, D. & Kuh, G. 1987. 'The 'write wing': characteristics of prolific contributors to the Higher Education Literature', *Journal of Higher Education*, vol. 58, no. 4, pp.443-462.

Im, J & Hartman, S 1997, 'The role of research in MIS Faculty performance evaluation: an exploratory study', *Journal of Computer Information Systems*, vol. 37, no. 3, pp. 37-40.

Jacobs, N, Reinmuth, J & Hamada, R 1987, *Final report of the AACSB task force on research*, AACSB, St.Louis, USA.

Jacobs, F, Hartgraves, A & Beard, L 1986, 'Publication productivity of doctoral alumni: a time adjusted model', *The Accounting Review*, vol. 61, pp. 179-187.

Jacobson R 1992, 'Colleges face new pressure to increase faculty productivity', *Chronicle of Higher Education*, vol. 38, no. 32, pp.16-18.

Jauch, L, Glueck, W & Osborn, R 1978, 'Organizational loyalty, professional commitment, and academic research productivity', *Academy of Management Journal*, vol.21, no. 1, pp. 84-92

Jenoks, C & Riesman, D 1968, *The academic revolution*, The University of Chicago Press, Chicago.

Jitiaurnchai, S 1993, *An analysis of research environment in Chulalongkorn University and Mahidol University*, Master Thesis, Chulalongkorn University, Thailand.

John, G & Saks, A 2005, *Organizational behaviour*, 6th edn, Pearson, Toronto.

Jones, L, Lindzey, G & Coggeshall, P 1982, *An assessment of research-doctorate programs in the United States: social science*, National Academy Press, Washington DC.

Jones, J & Preusz, G 1993, 'Attitudinal factors associated with individual faculty research productivity in academic dentistry', *Perceptual and Motor Skills*, vol. 76, pp. 1191-1198.

Joseph, R 2005, *A qualitative study of the strength of correlation between the characteristics of institutional and faculty vitality with research productivity of selected allied health faculty at public health science university within the united states*, Doctoral dissertation, Capellar University, viewed 24 March 2005, retrieved from UMI database.

Juthawattanathorn, M 1994, *Thailand Research and Development*, National Research Council of Thailand, Thailand.

Kanfer, R & Ackerman, P 1989, 'Motivation and cognitive abilities: an integrative/aptitude-treatment interaction approach to skill acquisition', *Journal of Applied Psychology*, vol. 74, pp. 657-690.

Kaplan, N 1965, 'The norms of citation behaviour: prolegomena to the footnote', *American Documentation*, vol. 16, pp.179-184.

Katz, E & Coleman, M 2001, 'The growing importance of research at academic colleges of education in Israel', *Education and Training*, vol. 43, no. 2, pp. 82-93.

Keawmani, J 1991, *An analysis of the research productivity of academic lecturers and institutional officers in Ramkarmhang University*, Ramkarmhang University Press, Thailand.

Kelly, M & Warmbrod, J 1986, 'Developing and maintaining productive researchers in agricultural education', *Journal of the American Association of Teacher Education in Agriculture*, vol. 27, no. 1, pp. 27-32.

Kerlin, S & Dunlap, D 1993, 'For richer, for poorer: faculty morale in period of austerity and retrenchment', *Journal of Higher Education*, vol. 64, pp. 348-377.

Kerr, S 1977, 'Subsititutes for leadership: some implication for organizational design', *Organization and Administrative Sciences*, vol. 8, pp. 135-146.

Kfir, D, Libman, Z & Shamai, S 1999, 'The role of research activities in academic colleges of education', *Dapim*, vol. 28, pp. 8-16.

Kirkpatrick, S & Locke, E 1992, 'The development of measurement of faculty scholarship', *Group & Organization Management*, vol. 17, pp. 5-23.

Kolb, D 1981, 'Learning styles and disciplinary differences', in A Chickering (ed.), *The modern American college*, Jossey Basss, San Francisco.

Konrad, A & Pfeffer, J 1990, 'Do you get what you deserve? factors affecting the relationship between productivity and pay', *Administrative Science Quarterly*, vol. 35, pp. 258-285.

Korman, A 1974, *Contingency approach to leadership*, Southern Illinois University Press, Carbondale

.Kostoff, R 1995, 'Federal research impact assessment: axioms, approaches applications', *Scientometrics*, vol. 34, no. 2, pp.163-206.

Kotrlik, J, Bartlett, J, Higgins, C & Williams, H 2002, 'Factors associated with research productivity of agricultural educational faculty', *Journal of Agricultural Education*, vol. 43, no. 3, pp. 1-10.

Krugman, P 1991, *Geography and Trade*, MIT Press, Cambridge.

Kuennen K 2002, Job satisfaction among nurse educators of private colleges and universities, Doctoral Dissertation, University of Northern IOWA, view 25 September 2005, retrieved from UMI database.

Kuh, G & Whitt, E 1998, 'The invisible tapestry: culture in American colleges and universities', *Higher Education Reports*, Washington D.C.

Kuhn, T 1970, *The structure of scientific revolutions*, 2nd edn, The University of Chicago Press, Chicago.

Kurz, R, Mueller, J, Gibbons, J & DiCataldo, F 1989, 'Faculty performance: suggestions for the refinement of the concept and its measurement', *Journal of Higher Education*, vol. 60, pp. 43-58.

Kvale, S 1996, *Interviews: an introduction to qualitative research interviewing*, SAGE, Thousand Oak, CA.

Kyvik, S 1990, 'Motherhood and scientific productivity', *Social studies of Science*, vol. 20, no. 1, pp. 149-160.

Landino R & Owen, S 1998, 'Self-efficacy in university faculty', *Journal of Vocational Behaviour*, vol. 33, pp. 1-14.

Landy, F & Trumbo, D 1980, *The Psychology of Work Behaviour*, Dorsey Press, Homewood, IL.

Lane, J, Ray, R & Glennon, D 1990, 'Work profiles of research statisticians', *The American Statisticians*, pp. 9-13.

Laviton, A & Ray, R 1992, 'Personal and institutional characteristics affecting research productivity of academic accountants', *Journal of Education for Business*, vol. 67, no. 3, pp. 195-206.

Lawler, E & Porter, L 1967, 'Antecedent attitudes of effective managerial performance', *Organizational Behaviour and Human Performance*, vol. 2, pp. 122-142.

Lawrence, J & Green, K 1980, *A question of quality the higher education rating game*, American Association for Higher Education, Washington DC.

Lee, S 2007, 'Vroom's expectancy theory and the public library customer motivation model', *Library Review*, vol. 56, no. 9, pp. 788-789.

Lending, D & Wetherbe, J 1992, 'Update on MIS research: A profile of lending', *Journals and US. University*, vol. 23, no. 3, pp. 5-11.

Levin, S & Stephan, P 1991, 'Research productivity over the life cycle: evidence for academic scientific', *The American Economic Review*, vol. 81, no. 1, pp. 114-132.

Levine, J 1997, *Research and the promotion, proceeding of the annual Midwest research to practice conference in adult, continuing and community education*, Michigan State University, viewed 9 September 2006, retrieved from ERIC Document Reproduction Service database.

Levy, R & Cooke, D 1990, 'Hang the faculty', *Syracuse University Magazine*, pp. 35-39.

Liddle, B, Westergren, A & Duke, D 1997, 'Time allocation and research productivity among counselling faculty', *Psychological Reports*, vol. 80, pp. 339-344.

Line, M 1984, 'Citation decay of scientific papers: variation according to citations received', *Journal of Information Science*, vol. 9, pp. 90-91.

Locke, E, Shaw, K, Saari, L & Latham, G 1981, 'Goal setting and task performance: 1969-1980', *Psychological Bulletin*, vol. 90, pp. 125-152.

Lofland, J & Lofland, H 1995, *Analysing social settings: a guide to qualitative observation and analysis*, 3rd edn, Wadsworth, Belmont, CA.

Logue, D 1991, 'Comment: Some observations on the significance of the research requirements in academia', *Financial Practice and Education*, vol. 1, no. 1, pp. 89-102.

Long, L 1987, *Problems and prospects for research difference in the scientific career', Women: their under representation and career differentials in science and engineering- proceedings of a workshop*, National Academy Press, Washington DC.

Long, J 1990, 'The origins of sex differences in science', *Social Forces*, vol. 68, no. 4, pp. 1297-1315.

Long, J & Robert, M 1981, 'Organizational context and scientific productivity', *American Sociological Review*, vol. 46, pp. 422–442.

Long, S & McGinnis R 1981, 'Organizational context and scientific productivity, *American Sociological Review*, vol. 46, pp.422-442.

Louis, S, Blumenthal, D, Gluck, M & Stoto, A 1988, *Entrepreneurs in academe: Exploration of behavior among life scientist*, Paper presentation at the annual meeting of association for the study of higher education, Boston.

Luthans, F & Kreitner, R 1975, *Organizational behavior modification and beyond*, Foresman, Glenview, IL.

Marchant, G & Newman, I 1994, 'Beyond teaching and research: changing engineering academic work', *Journal of Higher Education*, vol. 19, no. 2, pp. 145-152.

Marsh, W & Hattie J 2002, 'The relation between research productivity and teaching effectiveness: complementary, antagonistic or independent constructs?', *The Journal of Higher Education*, vol. 73, no. 5, pp. 603-641.

Maslow, A 1954, *Motivation and personality*, Harper & Row, NY.

McCelland, D 1961, *The achieving society*, Van Nostrand Reinhold, NY.

McClelland, D 1980, *Achievement motive*, Irvigton Publishers, NY.

McGregor, D 1985, *The human side of enterprise*, McGraw-Hill, NY.

McGuire, J, Richman, M, Daly, R & Jorjani, S 1988, 'The efficient production of reputation by prestige research universities in the United States', *Journal of Higher Education*, vol. 59, pp.365-389.

McKenzie, N 1986, *Teaching tips*, 8th edn, Health, Lexington, MA.

McNamee, S, Willis, C & Rotchford, A 1990, 'Gender difference in patterns of publications in leading sociology journals 1960-1985', *American Sociologist*, vol. 21, no. 2, pp. 99-115.

Medical College of Wisconsin 2003, *4 habits of highly effective faculty*, viewed 5 September 2005, www.mew.edu/display/route.asp?docid=2040.

Meltzer, L & Slater, J 1962, 'Organizational structure and performance and job satisfaction of scientists', *American Sociological Review*, vol. 27, no. 3, pp. 351-362.

Mento, A, Steel, R & Karren, R 1987, 'A meta-analytic study of the effects of goal setting on task performance: 1966-1984', *Organizational Behavior and Human Decision Processes*, vol. 39, pp. 52-83.

Merriam, S 1998, *Qualitative research and case study applications in education*, Jossey Bass, San Francisco.

Merriden, T 1998, 'The way we were', *Management Today*, pp. 111-112.

Merton, R 1968, 'The Matthew effect in science', *Science*, vol. 159, pp. 56-63.

Middaugh, F 2001, *Understanding faculty productivity: standards and benchmarks for colleges and universities*, Jossey-Bass Publishers, San Francisco.

Middlewood, D 1999, 'Some effects of multiple research projects on the host school staff and their relationships', in D Middlewood, M Coleman & J Lumby (Eds), *Practitioner Research in Education: Making a Difference*, Paul Chapman Publishing, London.

Miller, A & Serzan, S 1984, 'Criterion for identifying a refereed journal', *Journal of Higher Education*, vol. 55, no. 6, pp. 763-699.

Minichiello, V, Aroni, R, Timewell, E & Alexander, L 1995, *In-depth interviewing*, 2nd edn,, Longman, Australia.

Nadler, D & Lawler E 1977, 'Motivation: a diagnostic approach', in R Steers & L Porter (eds), *Motivation and Work Behavior*, McGraw Hill, NY.

National Research Council of Thailand 2002, *The Report of Academic Seminar on The National Research Plan and Policy*, National Research Council of Thailand, Thailand.

National Research Council of Thailand 2005, *Annual Report 2005*, National Research Council of Thailand, Thailand.

Nelson, T, Buss, A & Katzko, M 1983, 'Rating of scholarly journal by chairpersons in the social sciences', *Research in Higher Education*, vol. 19, pp. 469-497.

Nigel, B & Geoffrey, C 2005, 'Does Herzberg's motivation theory have staying power?', *Journal of Management Development*, vol. 24, no.10, pp. 929-943.

Norgaard, C 1989, 'A Status Report on academic women Accountants', *Accounting Education*, pp. 11-28.

Noser, T, Manakyan, H & Tanner, J 1996,'Research productivity and perceived teaching effectiveness: a survey of economics faculty', *Research in Higher Education*, vol. 37, no. 3, pp. 299-321.

Offermann, L & Growing M 1990, 'Organizations of the future: changes and challenges', *American Psychologist*, vol. 45, pp. 95-108.

Oklahoma State Regents for Higher Education 1993, *Faculty productivity report and recommendations to the Oklahoma State Regents for Higher Education*, viewed 8 September 2005, retrieved from ERIC Document Reproduction Service database.

Olsen, J 1994, 'Institutional and technical constraints on faculty gross productivity in American doctoral universities', *Research in Higher Education*, vol. 35, no. 5, pp. 549-567.

Omundson, J & Mann, G 1994, 'Publication productivity and promotion of accounting faculty women: a comparative study', *Journal of Education for Business*, vol. 70, pp. 17-24.

Oshagbemi, T 1997, 'Job satisfaction and dissatisfaction in higher education', *Education and Training*, vol. 39, no. 9, pp. 354-359.

Oxford University 1995, *Oxford Advanced Learner's Dictionary*, 7th edn, Oxford University Press, NY.

Panit, W 1997, 'Research development in higher education', *Chulalongkord Research Journal*, vol. 16, no. 2, pp.14-15.

Parsons, R, East, J & Boeson, M 1994, 'Empowerment: a case study with AFDC women', in L Gutirrez & P Nurius, *Education and research for*

empowerment practice, Center for Policy and Practice Research, University of Washington.

Patchen, M 1961, *The choice of wage comparisons*, Prentice-Hall, Englewood Cliffs.

Patisampita, P 1989, *The investigation of the factors affecting academic research productivity in Sinakarin Tharavirot Prasanmit University*, Sinakarin Tharavirot Prasanmit University, Bangkok, Thailand. .

Patton, M 1990, *Qualitative evaluation and research methods*, 2nd edn, SAGE, Newbury Park.

Payne, F & Spieth, E 1935, *An open letter to college teacher*, Principia Press, Bloomington, Indiana.

Pellino G 1981, *Planning and evaluating professional growth programs for faculty*, Monograph series, 14, Michigan State University, East Lansing Center for the Study of higher education.

Pellino, G, Blackburn, R & Boberg, A 1984, 'The dimensions of academic scholarship: faculty and administrator views', *Research in Higher Education*, vol. 20, no. 1, pp. 103-115.

Perkins, J 1973, *Organization and functions of the University:The University as an Organization*, McGraw-Hill, NY.

Perry, R, Clifton, R, Mence, V, Struthers, C & Menges, R 2000, 'Faculty in transition: A longitudinal analysis of perceived control and type of institution in the research productivity of newly hired faculty', *Research in Higher Education*, vol. 41, no. 2, pp.165-194.

Petcharat, M 1989, *The investigation of problems and requirement of academic research in the universities in the South of Thailand*, Sinakarin Tharavirot Prasanmit University, Bangkok, Thailand.

Pettigrew, K & Nicholls, P 1994, 'Publication patterns of LIS faculty from 1982-1992: Effects of doctoral programs', *Library & Information Science Research*, vol. 16, no. 2, pp. 139-156.

Pfeffer, J & Langton, N 1993, 'The effects of wage dispersion on satisfaction, productivity and working collaboratively: evidence from college and university faculty', *Administrative Science Quarterly*, vol. 38, pp. 382-407.

Phillips, J & Russell, R 1994, 'Self-efficacy as a predictor of academic performance in science', *Journal of Advanced Nursing*, vol. 27, no. 3, p. 596.

Pongwuttisak, P 1991, *The analysis about academic lecturers' citation count in Ramharmkeagn University*, Bangkok, Thailand.

Print, M & Hattie, J 1997, 'Measuring quality in universities: an approach to weighting research activity', *Higher Education*, vol. 33, pp. 453-469.

Prpie, K 1996, 'Characteristics and determinants of eminent scientists' productivity', *Scientometries*, vol. 36, no. 2, pp.185-206.

Quinn, J, Doorley, T & Paquette, P 1990, 'Beyond products: service-bared strategy', *Harvard Business Review*, vol. 68, pp. 58-63.

Radhakrishma, R & Jackson, G 1993, 'Agricultural and extension education department heads' perceptions of journals and importance of publishing', *Journal of agricultural Education*, vol. 34, no. 4, pp. 8-16.

Radhakrishma R, Yoder, E & Scanlon, D 1994, *Determinants of faculty productivity: Perspectives of agricultural and extension education faculty*, National Agricultural Education Research Meeting, Paper presented at the National Agricultural Education Research Meeting, December 1994, viewed 9 September 2005, retrieved from ERIC Document Reproduction Service database.

Ramsden, P 1994, 'Describing and explaining research productivity', *Higher Education*, vol. 28, pp. 207-226.

Ramsden, P & Moses, I 1992, 'Associations between research and teaching in Australian higher education', *Higher Education*, vol. 23, no.3, pp.273-295.

Rathanit, S 1993, *The Analysis of Research Management of the Academic Lecturers in Surin Teaching College*, Chulalongkorn University, Bangkok, Thailand.

Rathavoot, R & Ogunlana, O 2003, 'Testing Herzberg's two-factor theory in the Thai construction industry', *Engineering, Construction and Architectural Management*, vol. 10, no. 5, pp. 333-341.

Read, W, Rae, D & Raughunandan, K 1998, 'Are Publication requirements for accounting faculty promotion still increasing?', *Accounting Education*, vol. 13, no. 2, pp. 327-339.

Rebne, D 1990, *Determinants of individual productivity: a study of academic researchers*, UCLA: Institute of Industrial Relations Publications Center, USA.

Reskin, B 1977, 'Scientific productivity and the reward structure of science', *American Sociological Review*, 42, pp. 491 -504.

Rhodman, A 2002, *The effects of academic origin and academic affiliation on research productivity: an empirical investigation of information system faculty*, Doctoral Dissertation, Mississippi State University, USA, viewed 4 May 2005, retrieved from UMI database.

Richan, W 1994, 'Empowering social work students', in L Gutirrez & P Nurius (Eds.) *Education and research for empowerment practice*, University of Washington, Center for Policy and Practice Research, USA, pp.59-71.

Rieger, S 1990, *Characteristics of knowledge producers in teacher education, Doctoral Dissertation*, Ohio State University, view 5 September 2005, retrieved from UMI database.

Roach, S 1991, 'Service under siege: the restructuring imperative', *Harward Business Review*, vol. 69, pp. 82-91.

Roberto, K & Jean P 1986, 'Friendships of older men and women: exchange patterns and satisfaction', *Psychology and Aging*, vol. 1, pp. 103-109.

Robins, S 1983, *Organizational behaviour: concepts, controversies, and applications*, Prentice-Hall, Englewood Cliffs, NJ.

Rotten, J 1990, 'Research productivity, course load, and ratings of instructors', *Perceptual and Motor Skills*, vol. 71, p. 1388.

Rowland, J 1996, 'Developing constructive tension between teaching and research', *International journal of Educational Management*, vol. 10, no. 2, pp. 6-10.

Rowley, J 1996, 'Motivation and academic staff in higher education', *Quality Assurance in Education*, vol. 4, no. 3, pp. 11-16.

Rubin, A & Powell, D 1987, 'Gender and publication rates: A Reassessment with population data', *Social Work*, vol. 32, no. 4, pp. 317-320.

Rubin, H & Rubin, I 1995, *Qualitative interviewing: the art of hearing data*, Sage Publications, London

Sangjan, P 1985, *The work environment and the requirement of the lecturers in teacher colleges in the central region in Thailand toward research productivity*, Master Degree thesis, Chulalongkorn University, Thailand.

Sax, L, Astin, A, Korn, W & Gilmartin, S 1996, *The American College teacher: national norms for the 1998-1999 HERI faculty survey*, Higher Education Research Institute, Los Angeles, CA.

Schultz, J, Mead, J & Hamana, I 1989, 'The changing roles of teaching, research, and service in the promotion and tenure decisions for accounting faculty', *Accounting Education*, Spring, pp. 109-119.

Sechrest, L, Stewart, M, Stickle, R & Sidani, S 1996, *Effective and persuasive case studies*, Jaguar Graphics, USA.

Sinsiri, V 1991, *Higher education strategy*, Metsai Printing, Bangkok, Thailand.

Sirichana, W 1997, *Higher education quality assessment, academic conference report*, Sinakarin Tharavirot University, Bangkok, Thailand.

Skinner, B 1953, *Science and human behaviour*, Macmilan, NY.

Skonik, M 2000, 'Does counting publications provide any useful information about academic performance?', *Teacher Education Quarterly*, vol. 27, no.2, pp. 15-25.

Slaughter, S & Rhoades, G 1990, 'Renaming the social relations of science: technology transfer', *Educational Policy*, vol. 4, no. 4, pp. 341-361.

Smith, L 1978, 'An evolving logic of participant observation, educational ethnology, and other case studies', in L Shulman (Ed.), *Review of research in education*, Peacock, Chicago.

Sophon, J 1998, *The study on trend and operational guideline related to National R&D expenditure of Thailand*, National Research Council Thailand, Thailand.

Sonert, G & Holton, G 1995, *Who succeeds in Science? The gender dimension*, Rutgers University Press, Brunswick, NY.

Staw, B 1984, 'Motivation research versus the art of faculty management', *College and University Organization: Insights from the Behaviour Sciences*, pp. 63-83.

Suwanwala, J 1991, *The road of University*, Chulalongkorn University Press, Bangkok, Thailand.

Swanson, E & Ramiller, N 1993, 'Information systems research thematic', *Submission to a New Journal 1987-1992*, vol. 4, no. 4, pp. 299-330.

Taesiji, A 1989, *The satisfaction of academic lecturers in Sinakarintheravirot University on the opportunity to get promotion*, Sinakarintheravirot Pasanmit University, Bangkok, Thailand.

Tavorn, A 1983, *Problems and requirement for doing research of academic lecturers in the central teaching college*, Sinakarintraravirot University, Bangkok, Thailand.

Taylor M, Lockes, E & Gist, M 1984, 'Type a behaviour and faculty research productivity: what are the mechanism?', *Organizational Behaviour and Human Performance*, vol. 34, pp. 402-418.

Taylor, S & Bogdan, R 1984, *Introduction to qualitative research methods*, 2nd edn, Wiley, NY.

Taylor, W 1993, 'Opening address for the general conference of the international network of quality assurance', *Agencies in Higher Education Conference*, pp. 24-28.

Tein, F & Blackburn, T 1996, 'Faculty rank systems, research motivation and faculty research productivity measure refinement and theory testing', *Journal of Higher Education*, vol. 67, pp. 2-22.

Teodorescu, D 2000, 'Correlates of faculty publication productivity: a cross-national analysis', *Higher Education*, vol. 39, pp. 201-222.

Thorndike, E 1911, *Animal intelligence*, Macmillan, NY.

Toren, N 1991, 'The nexus between family and work roles of academic women in Israel: reality and representation', *Sex Roles*, vol. 24, no. 11, pp. 651-667.

Tornquist, K & Kallsen, L 1992, 'Out of the ivory tower: an analysis of the institutional characteristics of universities from which firms acquire scientific result', *Journal of Higher Education*, vol. 65, no. 5, pp. 523-539.

Turnage, J 1990, 'The challenge of the new workplace technology for psychology', *American Psychologist*, vol. 45, no. 3, pp. 171-178.

Upali, W, Hebert, W & Nigel, B 2001, 'Peer review in the funding of research in higher education: the Australian experience', *Educational Evaluation and Policy Analysis*, vol. 23, no. 4, pp. 343-364.

Vancouver, J, Thompson, C & Williams, A 2001, 'The changing signs in the relationships among self-efficacy, personal goals, and performance', *Journal of applied Psychology*, vol. 86, pp. 605-620.

Van, H 1990, *Measuring academic library performance: a practical approach*, American Library Association, Chicago.

Vasil, L 1992, 'Self-efficacy expectations and causal attributions for achievement among male and female university faculty', *Journal of Vocational Behaviour*, vol. 41, p. 259.

Vasil, L 1996, 'Social process skills and career achievements among male and female academics', *Journal of higher Education*, vol. 67, no. 1, pp. 103-114.

Volkwein, J & Carbone, D 1994, 'The impact of departmental research and teaching climates on undergraduate growth and satisfaction', *Journal of Higher Education*, vol.65, no.2, pp.147-167.

Vroom, V 1964, *Work and motivation*, Wiley, NY.

Wahba, M & Bridwell, L 1973, *Maslow reconsidered: a review of research on the need hierarchy theory*, Paper presented at The Academy of Management Conference, New Orleans, LA.

Wanner, R, Lewis, L & Gregorio, D 1981, 'Research productivity in academia: sciences and humanities', *Sociology of Education*, vol. 54, pp. 238-253.

Ward, K & Grant, L 1996, 'Gender and academic publishing', *Higher Education Handbook of Theory and Research*, vol. 6, pp. 172-212.

Webster's Revised Unabridged Dictionary 1913, The University of Chicago, viewed 4 January 2006, http://machaut.uchicago.edu

Webster, C & Rice, S 1996, 'Equity theory and the power structure in a marital relationship' , *Advances in Consumer Research*, vol. 23, pp. 491-497.

Weiner, B 1985, 'An attributional theory of achievement motivation and emotion', *Psychological Review*, vol. 92, no. 4, pp. 548-573.

Weller, L 1982, 'Principals, meet Maslow: a prescription for teacher retention', *NASSP Bulletin*, vol. 66, no. 456, pp. 32-36.

West Virginia University 1996, *Reinforcement theory*, viewed 25 December 2007, <http://www.as.wvu.edu/~sbb/comm221/chapters/rf.htm>

Wikens, L & Timm, R 1978, 'Perceived communication inequity: a determinant of job satisfaction', *Journal of Management*, vol.4, pp.107-119.

Wikimedia Foundation 2007, *Goal-setting theory*, viewed 25 December 2007, <http://en.wikipedia.org/wiki/Goal-Setting_Theory>

Wilke, M, Rutte, C & Knippenberg, V 2000, 'The resentful sucker: do rewards ease politics', *Journal of Business Ethics*, vol. 25, no. 4. pp.329-342.

Williams, A 2003, *A mediated hierarchical regression analysis of factors related to research productivity of human resource education and workforce development postsecondary faculty*, Doctoral Dissertation, Lousiana State University and Agricultural and Mechanical College, retrieved from UMI database.

Williams, A 2000a, *Research productivity of nursing faculty*, Doctoral Dissertation, University of Louisville, viewed 6 March 2005, retrieved from UMI Database.

Williams, H 2000b, 'A critical review of research and statistical methodologies within Human Resource Development Quarterly', *Academy of Management Journal and Personal Psychology 1995-1999*, pp. 841-847.

Witzel, M 1999, *Dictionary of Business and Management*, International Thomson Business Press, England.

Wongwichai, A 2000, *A research project to investigate cooperation among a group of research supporters, a group of researchers and a group of organizations that apply the results of the researchers and to establish the cooperative center for promulgating research in local development, Lampang province*, Master Degree thesis, Faculty of Humanities and Social Sciences, Rajabhat Institute Lampang, Thailand.

Yin, R 1984, *Case study research: design and methods*, SAGE, Beverly Hills.

Zamarripa, E 1995, 'Evaluating research productivity', *SRA Journal*, vol. 26, no. 3, pp. 17-27.

Zimmerman, B 1995, 'Self-efficacy and educational development', in A Bandura, (ed.), *Self-efficacy in changing societies*, Cambridge University Press, NY.

APPENDICES

Letter of Invitation

Date…….

Faculty of ……..

Burapha University

T.Seansuk, A.Muang, Chonburi 20131, Thailand

Dear……..,

My name is Miss Sarunya Lertputtarak, a candidate in the Doctor of Education program in partnership between Victoria University of Technology and Burapha University. As part of my research studies, I am interested in investigating factors related to research productivity in a public University in Thailand. The aim of this project is to provide information that will assist in the design, development and formulation of institutional research policies by highlighting factors that should be emphasized in order to further encourage academic lecturers to increase their research productivity.

I would appreciate your assistance in this important project by allowing conducting an in-depth interview. It is anticipated that this investigation will provide new perspectives on this issue because this research method employed will focus on qualitative understanding drawn from key informants in the area.

If you have any questions, please do not hesitate to contact me on the provided address and telephone number.

Thank you very much for your valuable time and your contribution to this significant research project.

Yours Sincerely,

Sarunya Lertputtarak

Any inquires arise about this study, please contact Miss Sarunya Lertputtarak, a student (Ph.01-5767907, email: sarunya_l@hotmail.com), Principal Supervisor: Associated Professor Jim Sillitoe (Ph. +61-3-9688-4410, email:Jim.Sillitoe@vu.edu.au) or Co-supervisor: Dr.Wilai Eungpinichpong (Ph. 09-9375510, email:wilaiwichai@rocketmail.com). If you have any queries or complaints about the way you have been treated or to discuss your rights as a research subject, you can contact the Secretary, University Human Research Ethics Committee, Victoria University of Technology, PO Box14428 MCMC, Melbourne, 8001 9Ph.+61-3-9688-4710.159 Chompon Rd, A.Muang, Chachoengsao 24000, Thailand

Tel: 66 1 5767907 Fax: 66 38 511143

Letter of Permission

Date

Dear Sir,

My name is Sarunya Lertputtarak, and I am a Doctoral degree student in a School of Education, Faculty of Human Development at Victoria University, Australia. As part of my research studies, I am interested in investigating factors related to research productivity in a public university in Thailand.

I would like to take this opportunity to ask permission to use The Noble University as a case study. The rationale to conduct The Noble University because I realize that The Noble University is a University of The East that has a policy to maintain and develop research productivity of academic staff.

The aim of the project is to provide information that will assist in the design, development and formulation of institutional research policies in the changing global situation, and in particular to highlight those factors that should be emphasized in order to further encourage academic lecturers to increase their research productivity. It is anticipated that this investigation will provide new perspectives on this issue because this research method employed will focus on qualitative understanding drawn from key informants in the area.

I really appreciate your understanding for permission and your contribution to this research project.

Yours Sincerely,

Sarunya Lertputtarak

☐ Permission

……..

(Associate Professor Dr.Jim Sillitoe) ☐ Not Permission

Principal Supervisor

……. ……..

(……) (……)

Dean, Faculty of Education President of The Noble University

Director, International Doctoral Degree Programs

Burapha University

Consent Form

Consent form for participating in research project into an investigation of factors related to research productivity in a public University in Thailand: A case study

Investigator:

Interviewee:

1. I agree to participate in this research project, the procedures and aims of which have been explained to me and are set out in writing on the pages that are attached to this document.
2. I authorize Sarunya Lertputtarak to include comments made by me in the project's data analysis and written report.
3. I am aware that I have the right to withdraw from participation in the study at any time, and that I may withdraw any unprocessed materials that I have provided.
4. I understand that the purpose of the project is to investigate the related factors that influence the development of research productivity of academic staff.
5. I have read the written information, which describes the project, and have received a copy of that information.
6. I am satisfied that the confidentiality of the information that I provide will be safeguarded.

Signature:…….Signature: ……..

(Interviewee) (Witness other than the interviewee)

Date: …….

Interview Questions

An Investigation of Factors Related to Research Productivity in a Public University in Thailand: A Case Study

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1. What are your roles toward research activities?
2. How is research work important to this University?
3. How is the research environment in your University?
4. What are the factors that influence lecturers to do less research?
5. What are the factors that influence lecturers to do more research?
6. How does workload impact research productivity?
7. How does the University support lecturers to improve research skills?
8. How does the graduated institution affect research productivity?
9. How do demographic factors affect research productivity?
10. What are the changes in research situations from the past to the future?
11. Where are the sources of research funding?
12. What should the University do to increase research productivity?

Case One
Research Centre

Interview Date: 25 May 2005
Time: 10.00am

What are your roles toward research activities? The research unit has been established for a year. In the past, the Vice-president of Academic Affairs was responsible for managing the research unit. My responsibilities are: 1. Setting up the working plan based on government and university policies 2. Assisting lecturers and increasing research productivity. 3. Eliminating any obstructive regulations that are not supportive or cause inconvenience when carrying out research. I worked as a science lecturer in a famous public university. After I retired, I was invited to work here in this position. I am interested in doing research about microbiology and virology.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของมหาวิทยาลัย** หน่วยงานวิจัยนี้เพิ่งจะตั้งขึ้นมาเมื่อหนึ่งปีที่ผ่านมา ก่อนหน้านี้เป็นหน้าที่ของฝ่ายวิชาการ โดยมีรองอธิการบดีฝ่ายวิชาการเป็นผู้ดูแล หน้าที่ที่ผมรับผิดชอบอยู่คือ 1. การกำหนดแผนงานตามนโยบายของรัฐบาลและมหาวิทยาลัย 2. การให้ความช่วยเหลือและพยายามที่จะเพิ่มผลิตผลงานวิจัยของคณาจารย์ 3. แก้ไขและลดอุปสรรคในการวิจัย เช่น การแก้ไขระเบียบที่ไม่เอื้ออำนวยต่อการวิจัย ผมเคยเป็นอาจารย์ที่มหาวิทยาลัยมหิดล หลังจากเกษียณผมได้รับเชิญจากอธิการบดีให้มาทำงานในตำแหน่งนี้ งานวิจัยที่ผมสนใจคือเรื่อง microbiology และ virology
How is research work important to this University? Research is important because it is central to the university's missions and activities. Research is important to all lecturers who want to retain in their status. Lecturers should do research in order to develop their teaching ability. Lecturers acquire new knowledge when carrying out doing research. Moreover, the knowledge that derives from doing research has high value for communities and private enterprises. We call this "Jak hing su hak". (It means to bring knowledge from research that has never been published to assist other people in communities.) Then, our nation can gain more benefits for the country's development. There are three main research groups. First, an individual or a group that does creative research. Second, the research group that aims to bring benefits to production process and strategic policy. Third, the research group that aims to develop and improve ordinary works. In order to build a research culture, the University should: 1. Build a supportive research environment and provide academic knowledge exchange. 2. Implement intersecting fields of study, increase cooperation and share benefits. 3. Students and lecturers should work together to exchange knowledge. The aims of the university research policy: 1. Being a Research University that emphasizes on the production of new	**การวิจัยมีความสำคัญต่อมหาวิทยาลัยนี้อย่างไร** การวิจัยสำคัญมากเพราะเกี่ยวข้องกับพันธกิจและภารกิจของมหาวิทยาลัย การที่อาจารย์จะดำรงตำแหน่งในสถาบันจะต้องวิจัยเพื่อพัฒนาการสอนเพราะการสอนต้องอาศัยความรู้ที่ได้จากการวิจัย นอกจากนี้ถ้าผลวิจัยมีประโยชน์ สามารถนำไปถ่ายทอดสู่ชุมชนหรือภาคเอกชน ดังคำกล่าวที่ว่า "จากหิ้งสู่ห้าง" ก็จะเป็นประโยชน์อย่างมหาศาลต่อการพัฒนาประเทศ การวิจัยแบ่งออกเป็น 3 ประเภทคือ กลุ่มความคิดสร้างสรรค์รายบุคคลหรือกลุ่ม กลุ่มที่ใช้ประโยชน์จากการวิจัยในภาคการผลิตหรือใช้ประโยชน์ในเชิงนโนบาย และกลุ่มที่ใช้วิจัยเพื่อพัฒนางานประจำ นอกจากนี้ยังมีในเรื่องของการสร้างวัฒนธรรมในการวิจัย คือ 1. สร้างบรรยากาศที่ส่งเสริมการวิจัยและแลกเปลี่ยนทางวิชาการ 2. ส่งเสริมการทำวิจัยข้ามศาสตร์ข้ามสถาบันเพื่อส่งเสริมความร่วมมือและใช้ประโยชน์ร่วมกัน 3. นักศึกษาและอาจารย์เป็นผู้ร่วมเรียนรู้ไม่ใช่ให้อาจารย์ถ่ายทอดความรู้ข้างเดียว เป้าหมายการวิจัยของมหาวิทยาลัย ประกอบด้วย 1. การพัฒนามหาวิทยาลัยสู่การเป็นมหาวิทยาลัยวิจัย มุ่งเน้น

knowledge and integrated research. 2. Linking research activities with the University's mission. 3. Providing enough resources for carrying out research, publication and licensing. 4. Setting up University's research policies based on national research policies.	การวิจัยเพื่อสร้างองค์ความรู้และวิจัยเชิงบูรณาการ 2. เชื่อมโยงการวิจัยให้ครอบคลุมทุกพันธกิจ 3. จัดสรรทรัพยากรสนับสนุนการวิจัยและเผยแพร่ผลงานวิจัยตลอดจนการจดสิทธิบัตรให้มีมากขึ้น 4. กำหนดแผนการวิจัยของมหาวิทยาลัยให้สอดคล้องกับนโยบายของชาติ
How is the research environment in your University? Research environments have two different groups: 1. Lecturers who have taught in this University since this institution was a teaching college, who generally have low competency to carry out research and they are not interested in doing the research. 2. New lecturers that generally have research skills especially lecturers who graduated from abroad. They always seek research funding and the possibility to do research. In the past, this university carried out little research, and the research environment was unmotivated. Since then, the government has supported and encouraged lecturers to increase research performance. At the same time, this University has set up research policies such as using research productivity as criteria for promotion. However, lecturers now have a lack of research assistants, placements and research funding. This University plans to increase amount of funding as well as providing loans for purchasing equipment and assisting lecturers to write proposals in order to obtain external sources for funds. Currently lecturers realize the importance that research has on improving their teaching effectiveness.	**บรรยากาศการวิจัยของมหาวิทยาลัยเป็นอย่างไร** บรรยากาศในการวิจัยมี 2 ลักษณะ คือ 1. อาจารย์เก่าที่อยู่มาตั้งแต่ที่มหาวิทยาลัยเป็นวิทยาลัยการศึกษา ก็คือพวกอาจารย์กลุ่มแรกที่ไม่ค่อยถนัดทำงานวิจัย และไม่ค่อยสนใจ 2. อาจารย์กลุ่มใหม่ที่เข้ามาในช่วงหลังๆ จะมีประสบการณ์วิจัยจากต่างประเทศหรือภายนอก อาจารย์กลุ่มนี้จะเริ่มมองหาทุนวิจัยและลู่ทางในการทำวิจัย ในอดีตมหาวิทยาลัยไม่ค่อยมีงานวิจัย ดังนั้นบรรยากาศการวิจัยจึงมีน้อย ช่วงหลังรัฐบาลพยายามสนับสนุนและส่งเสริมให้ทำวิจัยมากขึ้น ซึ่งมหาวิทยาลัยเองก็กำหนดนโยบายขึ้นมา เช่น การนำผลงานวิจัยมาพิจารณาให้ตำแหน่ง แต่ก็ยังติดขัดเรื่องผู้ช่วยทำวิจัยอยู่ รวมทั้งเรื่องสถานที่และเงินทุน มหาวิทยาลัยพยายามพัฒนาเรื่องเงิน เราไปติดต่อขอทุนมาให้ รวมทั้งการให้กู้เงินในการซื้อเครื่องครุภัณฑ์และการช่วยเหลืออาจารย์ในการเขียนขอทุนจากภายนอก อาจารย์เริ่มตระหนักถึงวิจัยในการพัฒนาการสอน
What are the factors that influence lecturers to do less research? 1. Lecturers have low research experience 2. The university has restricted research funding because lecturers are not eager to seek external sources of funds. Hence, whilst each faculty is provided with research funding, the University's research budgets contributed mainly to new lecturers. 3. Lack of research assistance and laboratory facilities. Other large institutions have sufficient salary for research assistants as they receive huge amount of funding from the government. They also have salary for both researcher and researchers' assistants.	**สาเหตุที่คณาจารย์ทำวิจัยน้อยคืออะไร** 1. อาจารย์มีประสบการณ์น้อย 2. เงินสนับสนุนของมหาวิทยาลัยมีจำกัด เพราะอาจารย์ไม่ขวนขวายขอทุนจากภายนอก แต่คณะเองก็พยายามหาเงินมาตั้งกองทุนวิจัย ซึ่งเงินทุนของมหาวิทยาลัยจะกันไว้ให้อาจารย์ใหม่ 3. ผู้ช่วยทำงานวิจัยในห้อง Labหรือห้องวิจัยยังขาดแคลน ถ้าในสถาบันใหญ่ๆ เขาจะมีเงินมาจ้างผู้ช่วยวิจัย ซึ่งก็ได้รับทุนจากงบประมาณแผ่นดิน เขาจะมีส่วนของเงินเดือนผู้วิจัยและผู้ร่วมวิจัยให้
What are the factors that influence lecturers to do more research? 1. Research productivity is a criterion for	**สาเหตุที่คณาจารย์ทำวิจัยกันมากคืออะไร** 1. ผลงานที่ออกมาสามารถนำไปขอตำแหน่งวิชาการได้

promotion. 2. Researcher receives salary that can be an incentive. 3. Knowledge derives from research and can be applicable to teaching classes with students 4. Highly productive faculty members' activities are an indirectly motivation to encourage other lecturers to do research.	2. เงินตอบแทนนักวิจัยในรูปของเงินเดือนจะเป็นแรงจูงใจ 3. ผลงานวิจัยสามารถนำไปใช้ในการสอน 4. เมื่อมีอาจารย์คนหนึ่งทำก็จะไปกระตุ้นให้อาจารย์คนอื่นทำตาม เป็นการถูกชักจูงทางอ้อม
How does workload impact research productivity? I don't think that workload impacts on research productivity, if those persons carefully examine their work activities. For instance, if you don't have enough time, you should find a research assistant because doing research alone is an uneasy task due to the fact that the lecturers have to teach students as well as to conduct research. Sometime lecturers may ask their students to be research assistants. The students do their thesis, while lecturers can prepare papers for publication. Moreover, lecturers can form teams for research, and then they have more money to buy equipment and raw materials as well as have more chance to increase research publication as each person can produce their own research topic.	**ภาระงานมีผลกระทบต่อการวิจัยอย่างไร** ไม่มีผลกระทบถ้าคนๆนั้นรู้จักพิจารณาให้ถูกต้อง เช่น ถ้าคุณไม่มีเวลาก็พยายามหาผู้ช่วยวิจัยเพราะทำคนเดียวมันยากไหนจะต้องทำวิจัยและต้องสอน งานวิจัยบางอย่างให้นักศึกษาช่วยทำ ซึ่งเขาก็จะได้ทำงานเป็นวิทยานิพนธ์ อาจารย์ก็มี paper ตีพิมพ์ นอกจากนี้ถ้าอาจารย์จับกลุ่มทำวิจัยทำวิจัยเป็นชุดโครงการก็จะมีเงินมาซื้อครุภัณฑ์และวัตถุดิบที่จะมาใช้ในงานวิจัยร่วมกัน และยังสามารถมีผลงานตีพิมพ์มากขึ้น เพราะแต่ละคนก็จะมีหัวข้อมาช่วยกันตีพิมพ์
How does the University support lecturers to improve research skills? We provide research seminars every year in the form of a workshop. For example, seminars about writing research proposals, and how to find information. The lecturers may have problems in preparing papers for publication; we must also assist them finding mentors. Presently our lecturers are receiving more external research funding than in past years.	**มหาวิทยาลัยให้อบรมเพิ่มพูนทักษะการวิจัยให้แก่คณาจารย์อย่างไร** เราจัดอบรมทุกปีเป็น workshop เช่น การเขียนโครงการวิจัยและการหาข้อมูล หรือถ้าติดขัดเรื่องการตีพิมพ์ จะปรึกษาใครได้บ้าง จะเห็นว่าอาจารย์ได้รับทุนจากภายนอกเพิ่มขึ้นเรื่อยๆ
How does the graduated institution affect research productivity? The graduated institution has affected research productivity because lecturers have been absorbing research environments since they first started studying. They are acquainted with the research environment and after they come back to work, they are enthusiastic and continue researching.	**สถาบันที่คณาจารย์จบการศึกษามีผลต่อการวิจัยอย่างไร** มีส่วน เพราะอาจารย์ได้เห็นบรรยากาศงานวิจัยจากสถาบันที่เรียนจบ จึงเกิดความเคยชินเมื่อกลับมาทำงานจึงต้องการทำวิจัย
How do demographic factors affect research productivity? Gender has a small effect on research productivity. According to my own view, female lecturers generally have more enthusiasm to do research than the males. Lecturers who have to do housework normally have no time to do research because they have to pick up their children from school, and if they have a young child, they have extra responsibilities. But I do not agree that it is always true. I am married and have two children, and I still conduct research. It depends	**ปัจจัยด้านประชากรศาสตร์มีผลอย่างไรต่อการวิจัย** เพศคงไม่มีผลนัก จากที่สังเกตเพศหญิงจะมีความกระตือรือร้นมากกว่าเพศชาย อาจารย์ที่มีภาระครอบครัวมากจะไม่มีเวลา อาจารย์ที่มีครอบครัวมีภาระต้องคอยรับส่งลูก หรือผู้หญิงที่มีลูกเล็ก ก็ต้องดูและลูก แต่ก็ไม่แน่นอน ผมแต่งงานมีลูก 2 คน ผมก็ยังทำวิจัย มันขึ้นอยู่กับคนมากกว่า

on each person. The age of a researcher has a slight effect on their research productivity.	อายุมีส่วนนิดหน่อย
What are the changes in research situations from the past to the future? In the past, most research topics were determined by each lecturer's expertise. But now, lecturers do research based on government policies by having to have the national research committees' appraisal of there proposal. The university sets up research policies based on government policy. Therefore, if the research topic matches with policy requirements, then lecturers can receive funds.	**ทิศทางการวิจัยจากอดีตถึงในอนาคตมีการเปลี่ยนแปลงอย่างไร** เมื่อก่อนอาจารย์ทำวิจัยตามความถนัด แต่ปัจจุบัน รัฐบาลเน้นให้ทำวิจัยตามนโยบายแห่งชาติที่มีคณะกรรมการดูแล เราก็พยายามตั้งนโยบายสนองต่อนโยบายแห่งชาติ ถ้าอาจารย์เขียนโครงการได้ตรงตามนโยบายแห่งชาติก็จะได้เงิน
Where are the sources of research funding? Research funding derives from the Thai Higher Education Commission and the governor of each province. Research funding comes from the government, and is passed to the local administrative team (CEO Integrated Administrative Project) thus emphasizing regional cluster research rather than individual work.	**แหล่งทุนในการวิจัยได้มาจากที่ไหน** จากสำนักคณะกรรมการการอุดมศึกษาและจากโครงการผู้ว่าราชการจังหวัดแบบบูรณาการ หรือ CEO โดยเน้นการวิจัยตามยุทธศาสตร์ชาติ ระดับภาค กลุ่มจังหวัด และจังหวัด มากกว่างานวิจัยเดี่ยว
What should the University do to increase research productivity? 1. Assist lecturers in gaining more research experience. 2. The university should have more linkage with private organizations. We now get funding from the Thai Higher Education Commission. This is around five millions baht and is to establish the University Linkage Center to assist small business enterprises. This is the starting point to utilize our research knowledge. Moreover, this university also cooperates with the Ministry of Science and Technology to establish a Science Park in this eastern region increase the opportunity to sell our licenses. 3. Set up central database by asking lecturers to report their research productivity at the end of each year. 4. The university doesn't have publication funding, but we assist lecturers by providing an English journal. Unfortunately, lecturers are not interested in publishing their papers in this university journal preferring to publish their works in their faculty's journals that may be because of English difficulties. Although we inform them that we have English experts to help them, they are still not interested. 5. Find the ways to increase more researchers, research funding and effective fund-allocation. 6. Provide motivated research environment 7. Provide more flexible research regulations 8. Provide a standard of continuous research projects for researchers who have tenure status	**ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในส่วนใดบ้างเพื่อให้คณาจารย์มีผลงานวิจัยมากขึ้น** 1. ช่วยให้อาจารย์มีประสบการณ์มากขึ้น 2. มหาวิทยาลัยต้องเชื่อมต่อกับภาคเอกชน ตอนนี้เราได้เงินจากสำนักคณะกรรมการการอุดมศึกษาซึ่งให้เงินมา 5,000,000 เพื่อสร้างหน่วยบ่มเพาะ University Linkage Center เราก็พยายามให้การอบรม SME รายย่อย นี่คือจุดเริ่มต้นที่จะเอางานวิจัยมาใช้ประโยชน์ นอกจากนี้ มหาวิทยาลัยยังร่วมกับกระทรวงวิทยาศาสตร์และเทคโนโลยี ในการก่อตั้ง Science Park ในภาคตะวันออกอันเป็นโอกาสในการขายลิขสิทธิ์งานวิจัย 3. เราพยายามรวบรวมงานวิจัยใส่ลงใน database โดยให้อาจารย์รายงานมายัง Research Unit ทุกสิ้นปี 4. มหาวิทยาลัยไม่มีค่าตีพิมพ์ให้ เราพยายามช่วยเหลือในการทำ Journal ภาษาอังกฤษ แต่อาจารย์สนใจนำงานวิจัยไปตีพิมพ์ในวารสารของคณะมากกว่า อาจเป็นเพราะอาจารย์ไม่ถนัดเขียนภาษาอังกฤษ แต่เราก็บอกเขาว่าเรามีคนช่วย ทว่าก็ยังได้รับความสนใจน้อย 5. หาวิธีในการสร้างนักวิจัย หาทุนวิจัย และจัดสรรทุนวิจัยที่มีประสิทธิภาพกว่านี้ 6. สร้างบรรยากาศสนับสนุนการวิจัย 7. ปรับหลักเกณฑ์ในการวิจัยให้เกิดความคล่องตัว 8. กำหนดมาตรการให้มีการวิจัยต่อเนื่อง สำหรับนักวิจัยที่มีตำแหน่งวิชาการโดยลดขั้นตอนในการขอทุนวิจัย และช่วงเวลา

by reducing application steps and letting them have more opportunities in doing research during the semester break. 9. Provide enough supported resources and publication. 10. Increase the research funding for post-graduate programs.	ปิดภาคเรียนก็ให้อาจารย์มีโอกาสในการวิจัย 9. จัดหาทรัพยากรสนับสนุนและเผยแพร่ 10. เพิ่มทุนวิจัยในระดับบัณฑิตศึกษา

Case Two
Research Centre

Interview Date: 10 June 2005
Time: 10.00am

Could you please give me some details about your role towards the University's research activities? I am a facilitator. My main duties are to encourage lecturers in conducting more research and publication. I try to find information about research funding and encourage lecturers to write research proposals. Moreover, if any policy has obstructed research productivity, I revise and change it. For instance, a complicated financial regulation. I have worked in the position of research management for three years. I am interested in doing research about health sciences. I do 1-2 research projects a year because I work in a position that recognizes the importance of research. Although I have high workload, I continue doing research and searching for grant. This is dependant on personal self-motivation. As I am an Associate Professor, I must do research and have publication for at least one project a year. I create a research topic in order to have research paper for publication, while I have to do teaching tasks as well. I notice that students appear to appreciate teachers who introduce research that they have actually conducted into the lecture more than the teachers who are only discussing the work of others.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของมหาวิทยาลัย** พี่ทำหน้าที่เป็น Facilitator ในการกระตุ้นให้อาจารย์ทำงานวิจัย และตีพิมพ์เยอะ ๆ พี่พยายามหาข้อมูลในเรื่องของทุนวิจัย ส่งเสริมให้มีการเขียนโครงการวิจัย ถ้ามีกฎระเบียบที่ไม่เอื้ออำนวยก็ต้อง Revise ใหม่ เช่น ระเบียบทางการเงิน พี่อยู่ในตำแหน่งนี้มา 3 ปีกว่าและสนใจทำวิจัยเกี่ยวกับวิทยาศาสตร์สุขภาพ ใน1ปีพี่ทำวิจัยประมาณ1- 2 เรื่อง เพราะทำงานอยู่ในฝ่ายที่เห็นความสำคัญของการวิจัยและต้องทำงานวิจัย จึงพยายามที่จะทำวิจัยและหาทุนวิจัยอยู่ตลอดเวลา ถึงแม้มีงานมากแต่ก็จะต้องทำวิจัย ซึ่งตรงนี้ก็ขึ้นอยู่บุคคลที่มีแรงผลักดัน โดยส่วนตัวอยู่ในตำแหน่งรองศาสตราจารย์คือต้องทำงานวิจัยและตีพิมพ์อย่างน้อยปีละ 1 เรื่อง ต้องหาเรื่องมาทำวิจัย มิฉะนั้นตีพิมพ์ไม่ได้ และยังต้องสอนหนังสือ ซึ่งถ้าจะอ้างแต่งานวิจัยของอื่นโดยตัวเองไม่ทำงานวิจัยนั้นมันฟังไม่ขึ้น นิสิตก็มองว่าเมื่อไหร่อาจารย์จะทำวิจัยของตัวเองเสียที
How is the research work important to this University? 1. Due to the Ministry of Education's and the Thai Higher Education Commission's policy, research is an important task. Those institutions inform us that university performs educational services, and research must be treated as a main duty. 2. We realize that research is an important task. Lecturers are a source of knowledge and assist the community, to strengthen national development and teach students.	**การวิจัยมีความสำคัญต่อมหาวิทยาลัยอย่างไร** 1. วิจัยเป็นภาระหนักที่ที่กำหนดมาโดยนโยบายของกระทรวงศึกษาธิการและสำนักงานอุดมศึกษาที่มหาวิทยาลัยสังกัด เขาบอกว่าเราเป็นสถาบันการศึกษาดังนั้นวิจัยเป็นหน้าที่หลัก 2. เราเห็นว่าวิจัยมีความสำคัญ อาจารย์เป็นที่พึ่งพาของสังคมในการพัฒนาความรู้เพื่อไปรับใช้ประเทศชาติและสอนนิสิต
How is the research environment in this University? The research environment is not so active and is ambiguous because the university treats all lecturers the same. The university does not categorise lecturers into highly qualified or under qualified staff. For instance, Professor and Associate Professor have the same treatment as new lecturers. It is different from other foreign institutions. In other countries, universities treat experienced lecturers different from a new one. Experienced lecturers, who have expertise in doing research, generally perform less teaching and research is their main task. But in this university, the lecturers have	**บรรยากาศการวิจัยของมหาวิทยาลัยเป็นอย่างไร** บรรยากาศในการสนับสนุนการวิจัยยังไม่ค่อยดีนัก ยังไม่มีความชัดเจน คือ treat อาจารย์เหมือนกันหมดไม่ว่าอาจารย์คนนั้นจะเก่งในการวิจัยหรือไม่ เช่น เป็นศาสตราจารย์ หรือรองศาสตราจารย์ซึ่งมีความสำคัญมากกว่าเมื่อเทียบกับอาจารย์ที่จบปริญญาโทมาใหม่ๆ สำหรับที่นี่อาจารย์ผู้ใหญ่ก็ได้รับการปฏิบัติแบบเดียวกัน ไม่เหมือนกับในต่างประเทศที่จะปฏิบัติกับอาจารย์เก่ง ๆ อีกแบบหนึ่งว่า O.K คุณเก่งวิจัย คุณก็สอนน้อยลงให้ความสำคัญกับวิจัยมากขึ้น แต่สำหรับที่นี่คุณเหมือนกันหมดคือ

to teach, while research is a personal responsibility to which that lecturers must donate their free time. This is an unsolved problem. But we can understand on the other hand that the university plans to treat all lecturers the same. Lecturers have to teach, research is a personal activity that researchers must schedule into their own time.	ต้องสอนเหมือนกัน วิจัยเป็นเรื่องส่วนตัว นี่คือปัญหาที่ยังไม่มีความชัดเจนในเรื่องเป้าหมายของการวิจัยและเป้าหมายในการสนับสนุนอาจารย์ หรืออาจจะชัดเจนก็ได้ว่าทุกคนต้องสอนเหมือนกันหมด วิจัยเป็นเรื่องส่วนตัวที่คุณจะต้องหาเวลาเอาเอง
What are the factors that influence lecturers to do more research? 1. Self-motivation. Lecturers should understand what they will gain from doing research and the fact that their work units will also receive some advantages. Researcher should first recognize their advantages rather than examining what society gains, which is the next step. An outstanding benefit for a researcher is to receive tenure status that in turn increases their salary, promotion and improves their reputation. Hence, lecturers are willing to do research, although research is a difficult task. 2. Both the University and faculties must participate in implementing research productivity. We have a research committee in which the Dean of each faculty is a member.	**ปัจจัยที่ส่งเสริมการทำวิจัยของคณาจารย์คืออะไร** 1. แรงจูงใจ คือตัวเราต้องเป็นแรงผลักดัน เราต้องรู้ว่าทำวิจัยแล้วเราจะได้อะไร ซึ่งหน่วยงานก็ได้ด้วย เป็นIncentiveในการวิจัย มันเป็นธรรมชาติที่จะต้องรู้ว่า ประโยชน์อะไรที่ผู้ทำวิจัยจะได้รับ ไม่ใช่พิจารณาถึงผลประโยชน์ต่อประชาชนหรือสังคมซึ่งเป็นเรื่องรองไป สิ่งที่แสดงถึงผลประโยชน์โดยตรงที่ผู้วิจัยจะได้รับ คือ การได้ตำแหน่งวิชาการ อันนำมาซึ่งเงินตอบแทน การ Promotion และชื่อเสียง ดังนั้นถึงแม้ว่าการทำวิจัยจะลำบาก แต่ก็ยังทำวิจัย 2. มหาวิทยาลัยและคณะต้องมีบทบาทในการผลักดัน เรามีคณะกรรมการส่งเสริมการวิจัยที่มีคณบดีของแต่ละคณะเป็นส่วนรวม
What are the factors that influence lecturers to do less research? The difficulty to receive research funding is an obstruction. We do not have many lecturers who have ability and expertise to write proposals.	**ปัจจัยที่ทำให้คณาจารย์ไม่ค่อยทำวิจัยคืออะไร** จะเป็นเรื่องของความยากในการหาทุน คนที่มีสมรรถนะและความสามารถในการวิจัยยังน้อย
How does the research policy affect research productivity? Obviously, both University and faculties' research policies aim to encourage lecturers to do research. Unfortunately, the practice is a mismatch to those policies. If lecturers want to do research, they have to struggle to manage their time and find research funding. The university wants lecturer to do research, but the University has never provided them time or grants.	**นโยบายการวิจัยของมหาวิทยาลัยมีส่วนสนับสนุนการทำวิจัยอย่างไร** นโยบายของมหาวิทยาลัยและของแต่ละคณะก็ต้องการให้คณาจารย์ทำวิจัย แต่การปฏิบัติไม่สอดคล้องกัน เพราะถ้าคุณต้องการทำวิจัย คุณต้องหาทางดิ้นรนเองในแง่ของการหาเวลาและทุน มหาวิทยาลัยต้องการให้คณาจารย์ทำวิจัย แต่ไม่ได้แสดงให้เห็นเลยว่ามีการให้เวลาและให้ทุน
Where are the sources of research funding? The simplest way to obtain research funding is from the earmarked five percent of faculty's incomes. There is a huge fund. The second source of funding is from outsiders, such as from national organizations. The opportunity to obtain national research funding depends on the reputation of the lecturer because of high competition.	**แหล่งทุนวิจัยได้มาจากที่ใด** แหล่งทุนวิจัยหลักที่ได้มาง่ายที่สุด คือจากงบประมาณรายได้ของคณะตามนโยบายของมหาวิทยาลัยที่ระบุให้แต่ละคณะต้องจัดสรรเงินอย่างน้อย 5% เพื่อจัดทำงบวิจัย ถ้าถามว่าเยอะไหม ก็เยอะนะ แหล่งทุนที่สอง คือแหล่งทุนจากภายนอกที่ได้จากงบประมาณแผ่นดิน แต่ต้องอาศัยนักวิจัยที่มีชื่อเสียงจึงจะได้ทุนนั้นมา และมีการแข่งขันกันสูง
Where are the sources of information? This University has database that links to the Ministry of Higher Education's database system in	**แหล่งข้อมูลเพื่อการวิจัยได้มาจากแหล่งใด** มหาวิทยาลัยมีฐานข้อมูลที่สามารถค้นหา Literature ในการทำ

which lecturers can find literature reviews especially for education, humanities and social Sciences. They can print out a full paper, while medical science and health science can get only abstracts. Therefore, Faculty of Nursing has purchased their own database by spending more than one hundred thousand baht a year in order to obtain full papers.	วิจัย โดยจะร่วมกับฐานข้อมูลของทบวงที่เป็นฐานข้อมูลที่ใช้ประโยชน์ได้ดีทางด้านศึกษาศาสตร์ มนุษย์ศาสตร์และสังคมศาสตร์เพราะจะได้ Full Paper แต่สำหรับด้านการแพทย์และวิทยาศาสตร์สุขภาพจะได้เพียงบทคัดย่อ ซึ่งถือว่ายังไม่ค่อยดีนัก ดังนั้นคณะพยาบาลศาสตร์จึงต้องทุ่มเงินซื้อฐานข้อมูลเองใช้งบประมาณหลายแสนบาทต่อปี เพื่อจะได้ Full Paper
How does this University support lecturers to do publication? The university has a policy that encourages lecturers to publicize their research articles by permitting each faculty and to providing funds for research publications. Nevertheless, the performance may be against the policy because I have no real idea about how much money each faculty provides. Some faculties informed me that they have no money, which means the process has ended.	**มหาวิทยาลัยสนับสนุนการตีพิมพ์ผลงานวิจัยอย่างไร** มหาวิทยาลัยมีประกาศเป็นนโยบายให้อาจารย์ตีพิมพ์ผลงาน มีระเบียบออกมาให้คณะสามารถจัดสรรงบประมาณเพื่อช่วยเหลือในการตีพิมพ์ ซึ่งอยู่ในรูปแบบของค่าใช้จ่าย แต่ในทางปฏิบัติ ก็ไม่รู้ว่าแต่ละคณะจะมีเงินแค่ไหน อย่างบางคณะบอกว่าไม่มีเงินให้ก็จบแล้ว
Why do some faculties carry out more research than others? Generally, the faculties in which the lecturers who have high teaching workloads produce less research productivity. The lecturers have no time to write their projects as well and have no funding. In my opinion, funding is not the main problem. There are plenty of grants but we have no time and some lecturers prefer to teach rather than to conduct research.	**การที่แต่ละคณะมีปริมาณงานวิจัยมากน้อยต่างกันน่าจะมีสาเหตุมาจากอะไร** ในคณะที่มีงานวิจัยน้อยอาจารย์จะมีงานสอนมากอาจารย์บอกว่าไม่มีเวลาคิดโครงการวิจัย บางคนก็บอกว่าไม่มีทุนให้ทำวิจัย แต่จริงๆ แล้วแหล่งทุนก็พอมี แต่เพราะสอนมาก มีความเคยชินที่จะสอนหนังสือมากกว่า
How does the University support lecturers in improving research skills? This university always provides research training and conferences. For instance, the seminars about writing research proposal, and seminars to inform about government research direction that are always being modified.	**มหาวิทยาลัยมีการอบรมเพิ่มทักษะการวิจัยให้คณาจารย์อย่างไร** มหาวิทยาลัยมีการอบรมหรือประชุมในการจัดทำข้อเสนอโครงการวิจัย การทำ Proposal การจัดประชุมเกี่ยวกับทิศทางการวิจัยของรัฐบาลที่จะมีการเปลี่ยนแปลงอยู่เรื่อยๆ
What are the changes in research situations from the past to the future? Lecturers are interested in doing more research and publication. However, the growth rate is less than expected. I expect that in the future, the research direction will not change much. Researchers in any country are the same as they focus on science and technology in order to develop and enhance quality of life.	**ทิศทางการวิจัยมีการเปลี่ยนแปลงอย่างไรจากอดีตถึงอนาคต** อาจารย์มีการทำวิจัยมากขึ้น มีการตีพิมพ์มากขึ้น แต่ก็ยังน้อยเมื่อเทียบกับสิ่งที่ต้องการให้เป็น สำหรับในอนาคตคิดว่าจะไม่มีการเปลี่ยนแปลงไปจากนี้ เพราะวิจัยประเทศไหน ๆ ก็เป็นแบบนี้คือเน้นวิทยาศาสตร์เทคโนโลยีในการพัฒนาคุณภาพชีวิตคน
As the University emphasis on science rather than social science, what are the impacts on research productivity? The university policy is based on national policies. Social science has less importance than science. Nevertheless, when offering research funding, I think, the amount is almost equal for both bodies. But science gets slightly more funding. After examining government strategic plan, social science	**การที่นโยบายการวิจัยเน้นด้านวิทยาศาสตร์มากกว่าสังคมศาสตร์มีผลอย่างไรต่อผลิตผลงานวิจัยของคณาจารย์** เป็นไปตามนโยบายของชาติที่มหาวิทยาลัยต้องปฏิบัติตาม ซึ่งทำให้การวิจัยด้านมนุษย์ศาสตร์และสังคมศาสตร์นั้นมีสัดส่วนน้อยลงตามลำดับ แต่จริงๆ แล้วเวลาให้ทุนก็มิได้ด้อยกว่ากัน เพียงแต่วิทยาศาสตร์ได้เงินมากกว่า แรก ๆ เราก็รู้สึกว่าทางสังคมศาสตร์มัน

projects obtain huge amounts of funding as well; for instance, some projects receive more than 100 million baht for each grant. With the nature of humanities and social sciences it is difficult to show the clear benefits of the project to the institutions that offer research funding, while science projects are more reasonably concrete. Humanities and social science projects are relative abstract. It quite difficult to convince the funding providers to see the importance of abstract projects and how the project will bring them monetary benefits. Thus social science projects face difficulty in obtaining research funding.	ได้น้อยกว่า แต่พอมาดูกลยุทธ์ของรัฐบาล ทางสังคมศาสตร์ก็ได้เงินไม่น้อยนะถ้าไปขอทุน เช่น บางโครงการก็ได้เป็น 100 กว่าล้าน ธรรมชาติของมนุษย์ศาสตร์และสังคมศาสตร์นั้นยากที่ให้คนที่ให้ทุนเห็นชัดเจน แต่ด้านวิทยาศาสตร์จะเห็นเป็นรูปธรรมมากกว่า สำหรับด้านมนุษย์ศาสตร์และสังคมศาสตร์ จะเป็นนามธรรมทำให้เจ้าของทุนไม่เห็นความสำคัญและความเป็นไปได้ในการนำความรู้มาใช้ประโยชน์ ทางเศรษฐทรัพย์ ดังนั้นจึงเป็นจุดที่มนุษย์ศาสตร์และสังคมศาสตร์ได้ทุนยากกว่า
How do demographic factors affect research productivity? Demographic factors can both be supportive and obstructive factors as married lecturers prefer to spend their time with their family. But sometimes families can support each other and be dependent on one another also. Some married Professors still do more research, whereas single lecturers have no productivity. It is up to each person to manage their time as effectively as possible. Gender does not affect research productivity, but age affects research productivity as the older and nearly retired lecturers seldom do research, while new lecturers still have plenty of time to do research.	**ปัจจัยด้านประชากรศาสตร์ มีผลต่อการวิจัยอย่างไร** ปัจจัยด้านประชากรศาสตร์ ก็แล้วแต่นะ เป็นไปได้ทั้งส่วนที่เสริมและอุปสรรคเพราะคนที่แต่งงานแล้วบางคนต้องใช้เวลากับครอบครัว หรือการที่ครอบครัวมีส่วนสนับสนุนหรือไม่ ก็ขึ้นอยู่กับแต่ละบุคคล ศาสตราจารย์บางคนที่มีครอบครัวมีลูกแล้วก็ยังทำวิจัยมาก เมื่อเทียบกับอาจารย์โสดบางคนกลับไม่มีผลงานวิจัยเลย จึงขึ้นอยู่กลับแต่ละคนจะManage สำหรับเพศคิดว่าไม่มีผล แต่อายุมีผล เช่น อาจารย์ที่มีอายุมากและใกล้เกษียณก็จะไม่ทำงานวิจัยแล้ว สำหรับอาจารย์ใหม่ยังมีเวลาทำวิจัยอีกมาก
How do health factors affect research productivity? I agree that health directly affects research productivity because people doing research, must donate their time to searching information, to read and to work on the project.	**ปัจจัยด้านสุขภาพมีผลต่อการวิจัยหรือไม่ อย่างไร** ใช่แน่นอน การทำวิจัยจะต้องทุ่มเทในการค้นคว้าอ่านมากทำมาก
As you are a lecturer in Faculty of Nursing, please inform me about the research environment in your faculty. Lecturers in the Faculty of Nursing realize the importance of research because of the professional commitment. There are plenty of research outcomes. Lecturers understand that they must continue studying doctoral degree. There are now 50:50 of lecturers in Faculty of Nursing who have gained doctoral degrees. We motivate and encourage all lecturers to have doctoral degrees. Lecturers also encourage each other to do research. Highly productive lecturers are the role models and they show the large amounts of money that they derive from each project and demonstrate that they also gain higher tenure status. Then, the less productive lecturers motivate themselves to have research projects too.	**ในฐานะที่ท่านเป็นอาจารย์ประจำคณะพยาบาลศาสตร์ กรุณากล่าวถึงบรรยากาศการวิจัยในคณะว่าเป็นอย่างไร** การวิจัยของคณะพยาบาลศาสตร์ อาจารย์ทุกคนให้ความสำคัญต่อการวิจัยเพราะแนวโน้มของวิชาชีพเป็นเช่นนั้นจึงมีงานวิจัยมาก อาจารย์ส่วนใหญ่ก็รู้ตัวว่าต้องเรียน ปริญญาเอก ตอนนี้ก็50 : 50 แล้ว เราพยายามผลักดันให้อาจารย์เรียนปริญญาเอกให้หมด อาจารย์เองก็มีส่วนผลักดันซึ่งกันและกันในการทำวิจัย อาจารย์ที่ทำวิจัยเยอะจะเป็นแบบอย่างในการได้เงินตอบแทนจากโครงการวิจัยซึ่งเยอะมากและได้ภาระงาน ได้ตำแหน่งวิชาการด้วย ดังนั้นอาจารย์ที่ไม่มีโครงการวิจัยก็พยายามทำตาม

What should the University do to increase research productivity?	**มหาวิทยาลัยควรปรับปรุงในส่วนใดบ้างเพื่อให้มีงานวิจัยมากขึ้น**
1. The university should follow the foreign universities' criteria by having clear job responsibilities and not treating all lecturers the same. New lecturers may have to teach more, while experienced teachers should have more time to do research, because at this present time, all lecturers struggle with their time management. 2. Provide more research funding because at the present time research funding is from the faculty's incomes alone. University should find research funding from external sources. However, some lecturers still do not carry out research, even though the University provides greater funding. I think that our lecturers are not ready to do research. There are plenty of interesting projects. The University should offer appropriate amounts of tasks. 3. University should educate lecturers in gaining sufficient knowledge for supporting the obtaining research funding. 4. Our lecturers request more formal educational development. In foreign countries, the lecturers who carry out research must have doctoral degrees. The institution has high expectations from them, but in this University, we do not have many lecturers who posses doctoral degrees. This is a weak point at this university. The university should motivate lecturers in gaining doctoral degrees. Lecturers should not do teaching tasks without continue studying further degree. It is the lecturers' responsibility to conduct research. The doctoral graduates generally have the ability to do research work, but they still need to learn more, whereas, the master degree programs have no emphasis on performing research or building up researchers. Skills development is based on fundamental preparation, and continues to develop further knowledge.	1. ควรเปลี่ยนแปลงให้เหมือนในต่างประเทศ คือ ต้องกำหนดภาระงานให้ชัดเจน ไม่ใช่ Treat ทุกคนเหมือนกัน กล่าวคืออาจารย์ใหม่ๆ อาจให้สอนมากหน่อย แต่อาจารย์ที่มีประสบการณ์วิจัยก็ให้ทำวิจัยมากขึ้น ไม่ใช่แบบที่เป็นอยู่ในปัจจุบันคือต้องหาทางดิ้นรนกันเอง 2. ควรจะต้องแสวงหาทุนวิจัยมาให้อาจารย์มากขึ้น มิใช่อาศัยแต่งบของคณะอย่างเดียว ควรหาทุนจากภายนอกมาป้อนให้อาจารย์คนนั้นคนนี้ แต่อาจารย์ของเราบางทีมีทุนแต่ก็ไม่ทำวิจัย คนของเรายังไม่พร้อม Project ดีๆ มีมากดังนั้นจึงควรทำภาระงานให้เอื้อต่อการวิจัย 3. ควรพัฒนาอาจารย์ไปพร้อมๆกันเพื่อรองรับทุนวิจัยที่ได้มา 4. อาจารย์ของเรามีการพัฒนาด้าน Formal education ในต่างประเทศอาจารย์ที่ทำวิจัยต้องจบปริญญาเอก เขาจะคาดหวังงานวิจัยจากพวกนี้ ในสถาบันนี้ปัจจุบันอาจารย์ที่จบปริญญาเอกยังมีน้อยเมื่อเทียบกับปริญญาโท ตรงนี้จึงเป็นจุดบกพร่องที่ชัดเจน คณะต่าง ๆ ควรพยายามที่จะผลักดันให้อาจารย์จบปริญญาเอกกันทุกคน อาจารย์ที่เข้ามาทำงานต้องมีเป้าหมายที่จะจบปริญญาเอก จะเข้ามาเพื่อเป็นอาจารย์อย่างเดียวไม่ได้ ไม่เหมาะสม เพราะหน้าที่ของอาจารย์คือการทำงานวิจัยและคนที่จบปริญญาเอกจึงสามารถทำวิจัยได้อย่าง O.Kแต่ก็ต้องมาเรียนรู้อีกเยอะ สำหรับหลักสูตรปริญญาโทไม่ค่อยมีการทำวิจัยหรือเน้นการสร้างนักวิจัย การพัฒนาทักษะต้องมีการ prepare พื้นฐานแล้วจึงค่อยมาเสริม

Case Three
Graduate School

Interview date : 9 May 2005
Time: 9.00am

Could you please give me your background and some details of your responsibilities and research experience? I am an Associate Professor working in this department since year 2001. I am also working in Sport Science Association of Thailand. I graduated from American universities with bachelor's, master's, and doctoral degrees. The bachelor degree is in Physical Education, the master's degree is in Physical Education majoring in Exercise Physiology, and a doctoral degree in Exercise Physiology. I have worked in the field of physiology for all my life. I have completed 7 research projects. However, I have had limited time for the research as I had to teach, work in an administrative position while conducting my research. My teaching courses are in the field of exercise physiology, sport nutrition and sport safety. I enjoy doing research topics because it's stimulating. My research projects didn't need a lot of money so I didn't require any grants. I shared my research abroad as well. My research interest was in human physiology, such as body fat of secondary school basketball players.	**กรุณาเล่าถึงประสบการณ์ต่าง ๆ ที่เกี่ยวข้องกับการทำงานและการวิจัยของท่าน** ตอนนี้ผมเป็นรองศาสตราจารย์และเป็นคณบดีบัณฑิตวิทยาลัยมาตั้งแต่ปี 2544 นอกจากนี้ผมยังเป็นรองประธานสมาคมกีฬาแห่งประเทศไทย ผมจบการศึกษาปริญญาตรี-โท-เอกจากอเมริกา คือ ปริญญาตรี สาขาพลศึกษา ปริญญาโท สาขาพลศึกษา ด้านสรีรวิทยา และปริญญาเอก ด้านสรีรวิทยา ผมอยู่ในสายสรีรวิทยา ประสบการณ์จากที่ได้มาตลอดชีวิต ผมเคยทำวิจัยอยู่ 7 เรื่อง ผมต้องจัดสรรเวลาเพราะต้องทำงานอื่นๆ ด้วย ผมต้องสอนหนังสือ ทำงานบริหาร และทำวิจัย วิชาที่ผมสอนเป็นวิชาในสายสรีรวิทยา การออกกำลังกาย โภชนาการการกีฬา ความปลอดภัยทางกีฬา เป็นต้น ผมชอบทำงานวิจัยเพราะความอยากรู้และสนุกกับงาน ผมไม่ได้ apply ทุนจากที่ใด ผมได้เผยแพร่งานวิจัยในระดับต่างประเทศด้วย งานวิจัยผมไม่ได้ลงทุนอะไรมากโดย ศึกษาเกี่ยวกับเรื่องกายภาพของคน เช่น เรื่องเนื้อเยื่อไขมันในร่างกายนักบาสเกตบอลระดับมัธยมศึกษา
What are the roles of Graduate School? Graduate school is the university representative in coordinating and taking care of graduate studies. They ensure that the administration adheres to the rules and regulations at the national, ministry, university council, and uaculty levels to confirm that all degrees granted are recognized nationally and internationally. Graduate School is not an administrative unit, it's an academic unit.	**ภาระหน้าที่ของบัณฑิตวิทยาลัยคืออะไร** บัณฑิตวิทยาลัยเป็นผู้แทนของมหาวิทยาลัยในการประสานความร่วมมือ กำกับดูแลให้การศึกษาระดับบัณฑิตศึกษาให้อยู่ภายใต้กฎเกณฑ์ที่กำหนดไว้ในระดับประเทศ ระดับทบวง สภามหาวิทยาลัย จนถึงคณบดีของมหาวิทยาลัย เพื่อให้มั่นใจว่าปริญญาบัตรทุกใบได้มาตรฐานกลาง ก่อให้เกิดการยอมรับของสังคมในระดับประเทศหรือนานาชาติ แต่บัณฑิตวิทยาลัยเป็น Administrative Unit ไม่ใช่ Academic Unit
How is research work important to Graduate School? In 1977, when we opened post-graduated programs, the university started to emphasize research projects. The post-graduate program affected lecturers' research works because they had to guide post-graduate students with their thesis. The importance of research is the knowledge that lecturers will transfer to their students and the students' own search for knowledge. Graduate School supports all academic units. Lecturers who want to register themselves to teach at graduate level have to have qualifications in accordance to	**งานวิจัยสำคัญต่อบัณฑิตวิทยาลัยอย่างไร** มหาวิทยาลัยเริ่มต้นเน้นการทำวิจัย ตั้งแต่ปี พ.ศ. 2520 คือตั้งแต่เริ่มเปิดสอนระดับบัณฑิตศึกษา อันมีผลผูกพันไปกับงานวิจัยของอาจารย์ในการสอนระดับบัณฑิตศึกษา งานวิจัยเกี่ยวข้องกับนิสิตระดับบัณฑิตศึกษาเป็น Master thesis ในระดับปริญญาโท และ doctoral thesisในระดับปริญญาเอก อันเกี่ยวโยงไปถึงความรู้ที่อาจารย์ที่จะให้กับนิสิตและการไขว่คว้าหาความรู้ของผู้เรียน บัณฑิตศึกษาจะให้การสนับสนุนหน่วยงานทางวิชาการ ซึ่งอาจารย์ที่อยู่ใน Academic Unit จะมาขึ้นทะเบียนเป็นอาจารย์สอนใน

national standard. They can be course coordinators, lecturers, and on the thesis committee	ระดับบัณฑิตศึกษานั้นจะต้องมีคุณสมบัติตามเกณฑ์มาตรฐานของประเทศ ประกอบด้วย อาจารย์ผู้รับผิดชอบหลักสูตร อาจารย์ผู้สอน อาจารย์ผู้สอบวิทยานิพนธ์หรือเป็นประธานวิทยานิพนธ์
Our faculty staff have limited research productivity. The number of their works published or invitations to lecture at an international level is low, in comparison with Chulalongkorn University, Mahidol University or Kasetsart University.	อาจารย์ระดับบัณฑิตศึกษามีการทำวิจัยไม่มาก เมื่อดูภาพรวมของมหาวิทยาลัยอาจารย์มีผลิตผลการวิจัยที่มีการตีพิมพ์ระดับนานาชาติหรือได้รับเชิญไปบรรยายระดับนานาชาติต่ำเมื่อเปรียบเทียบกับมหาวิทยาลัยอย่างจุฬาลงกรณ์มหาวิทยาลัย มหาวิทยาลัยมหิดล หรือ มหาวิทยาลัยเกษตรศาสตร์
How does Graduate School provide research fund for lecturers? The Graduate School hasn't had any research fund for lecturers. However, we have grants for students, 40-50 grants per year. Staff could generally request support fund from their own faculties.	**การให้ทุนวิจัยของบัณฑิตวิทยาลัยเป็นอย่างไร** บัณฑิตวิทยาลัยไม่มีทุนให้อาจารย์ แต่เรามีทุนให้นิสิต โดยการจัดสรรงบประมาณปีละ40–50ทุน แต่อาจารย์เขาจะได้ทุนจากต้นสังกัด
Do levels of education affect lecturers' research productivity? If yes, how? Normally, there is more expectation for research outcomes for lecturers with doctoral degrees. On the other hand, the lecturers who have master's degree generally have lower pressure in their research productivity. Moreover, academic ranks also affect research achievement because the research outcomes have strongly impact on staff's performance appraisal.	**ระดับการศึกษามีผลต่อผลิตผลงานวิจัยของคณาจารย์ไม่อย่างไร** อาจารย์ที่จบปริญญาเอกจะมีความคาดหวังในงานวิจัย ซึ่งคนที่จบปริญญาโทจะมีแรงกดดันน้อยกว่าในการทำวิจัย และการมีตำแหน่งตรงวิชาการก็จะเกี่ยวข้องกับการวิจัยเพราะจะมีผลต่อการประเมินผลงาน
How does the age of staff affect research productivity? Fifty-year-old staff members or older who has never done any research will lack confidence to do one at that age. Age could be an obstacle of conducting a research since it's the side effect of the lack of research experience.	**อายุของคณาจารย์มีผลต่อการผลิตผลงานวิจัยอย่างไร** เมื่อไม่ได้ทำวิจัยแต่ต้น ถ้าอายุ 50ปีแล้วแต่ไม่ค่อยได้ทำวิจัยเลยแล้วจะมาทำวิจัยจะเป็นอุปสรรคพอสมควร เพราะอาจขาดความมั่นใจ ดังนั้นอายุอาจเป็นผลต่อเนื่องมาจากประสบการณ์งานวิจัย
What are the changes of research policy of Graduate School from past to present? Three years ago, no department had any research policy. Therefore, when requested, there was nothing official to be provided. Currently, Graduate School has asked all faculties to create their research policies and focus. These will be distributed to the public. They will guide teachers and students to put their projects on the right track. They will also assist private organizations which are interested in supporting research works consider if our focus supports their business. Moreover, there are more grants available at present. In the past, there was no policy to save 10 percents of the faculty's income as a research support budget. Besides these, the university provides more resources in terms of funds and library database facility.	**การเปลี่ยนแปลงของทิศทางการวิจัยของมหาวิทยาลัยจากอดีตจนถึงปัจจุบันเป็นอย่างไร** เมื่อประมาณ 3 ปีที่ผ่านมาสาขาวิชาต่างๆ ไม่ได้กำหนดทิศทางการวิจัยไว้เลย ดังนั้นเมื่อมีคนมาถามก็ไม่มีการรวมไว้อย่างเป็นทางการ ดังนั้นทางบัณฑิตวิทยาลัยจึงได้ให้คณะต่าง ๆ กำหนดทิศทางงานวิจัยของแต่ละสาขาและทำเอกสารเผยแพร่ ดังนั้นมันจะดีต่ออาจารย์และนิสิต เพื่อจะได้รู้ว่าวิจัยที่เขาทำนั้นเข้ากับทิศทางไหม หรือเวลาที่มีหน่วยงานเอกชนสนใจให้การสนับสนุนการวิจัย เขาก็จะได้พิจารณาได้ว่า ทิศทางงานวิจัยของเราสามารถตอบสนองเขาได้หรือไม่ นอกจากนี้งานวิจัยในยุคหลังๆ จะมีทุนค่อนข้างเยอะ แต่ก่อนไม่มีการกำหนดว่าคณะต่างๆ ต้องกันเงินรายได้ไว้ 10 % เพื่อเป็นงบสนับสนุนทุนวิจัย มหาวิทยาลัยมีทรัพยากรสนับสนุนมากขึ้น เช่น

	เรื่องค่าใช้จ่ายและการสนับสนุนข้อมูลให้ห้องสมุดก็มีมากขึ้น
What should University do in order to increase research productivity? 1. Rewards, such as promotion, recognition, and money, should be given to staff. There should be a difference in terms of rewards between staff with research productivity and those without in order to encourage research motivation. 2. Punishment is not a good idea. 3. There should be a kind of leave for research allowing teachers to take one semester off completely free from workloads. 4. There should be study or medical leave for staff. 5. There should professional development budget for supporting staff to attend meetings or seminars in order to improve their knowledge.	**มหาวิทยาลัยควรปรับปรุงในส่วนใดเพื่อให้คณาจารย์มีผลงานวิจัยมากขึ้น** 1. ให้ Rewards ในแง่ของ Recognition, promotion, Monetary Rewards โดยให้คนที่มีผลงานวิจัยได้รับ Rewards ต่างจากที่เขาไม่ได้ทำงานวิจัย เพื่อเป็นการกระตุ้นให้ตื่นตัว 2. Punishment ไม่ใช่วิธีที่ดี 3. Leave for Research การทำวิจัยสามารถ take off ไปได้ 1 เทอมโดยไม่ต้องสอนและทำงานอื่นๆ 4. กำหนดให้มี Study Leave หรือ Medical Leave 5. ให้เงินสนับสนุนเพื่อการไปประชุมหรือสัมมนา เพื่อเพิ่มพูนความรู้

Case Four
Faculty of Education

Date: 12 May 2005
Time: 5.00pm

Could you please give me some details about your research experience? I started doing research when I completed my master's degree. At the beginning, it was group work at Chiengmai University around 1975-1976. Chiengmai University plays an important role in the upper northern community. Various organizations expect us to help them. I did a few research projects with my colleagues. Then, I went to further my degree in the US for 6 years. When I came back, the National Electronics Computer Centre offered a research grant in computer and electronics. I was teaching CI (Computerized Instruction) at that time. One of my students submitted his proposal for the grant under the topic, "CI for Kindergarten Readiness." He received 170,000 baht in 1989 which was quite a lot at that time. I had fun with the project. We went to defend our research which I think we did better than other groups. Newspapers published our work. We were very famous at that time. I took research courses at my master's degree level, and I learnt Statistics for my doctoral degree. From that background, I had some ideas about qualitative and quantitative research. I understood the strengths and weaknesses of each type of research. When I came back, I came to teach here. I've been teaching research courses and supervising theses for more than 10 years. That's how I acquired my research experience.	**กรุณาเล่าถึงประสบการณ์การทำวิจัยของท่าน** ผมเริ่มทำวิจัยตั้งแต่เรียนจบปริญญาโท แรกๆ ก็เป็นการทำร่วมกันที่มหาวิทยาลัยเชียงใหม่ เมื่อประมาณปี2518 – 2519 มหาวิทยาลัยเชียงใหม่จะเป็นสถาบันที่มีบทบาทมากในภาคเหนือตอนบน องค์กรต่างๆจะมองว่า เราจะช่วยอะไรพวกเขาได้บ้าง ผมทำวิจัยร่วมกับผู้อื่นมา 2 – 3 ครั้ง จากนั้นก็ไปเรียนต่ออเมริกา 6 ปี พอเรียนจบกลับมา National Electronics Computer หรือศูนย์อิเลคทรอนิคส์และคอมพิวเตอร์ ได้ให้ทุนวิจัยด้านคอมพิวเตอร์และอิเลคโทรนิคส์ ตอนนั้นผมสอน CI มีลูกศิษย์เขียน proposal ขอทุนไป ในเรื่อง " CI เตรียมความพร้อมสำหรับเด็กอนุบาล" ได้ทุนมา 170,000 ในพ.ศ. 2532 ซึ่งตอนนั้นเงินจำนวนนี้ถือว่ามากทีเดียว จากนั้นผมก็ว่ามันสนุกดี แล้วเราไป defence ซึ่งผมคิดว่าเราทำได้ดีกว่ากลุ่มอื่น หนังสือพิมพ์ก็เอามาลง มีชื่อเสียงมากในตอนนั้น ผมเรียนปริญญาโทซึ่งมีวิชาวิจัยและเรียนสถิติตอนเรียนปริญญาเอก จากการที่ได้เรียนวิชาที่เกี่ยวกับวิจัยและสถิติ ผมจึงมีแนวทางด้าน qualitative และ qualitative จึงได้ concept มาว่า qualitative และ qualitative มีจุดอ่อนจุดแข็งอย่างไร พอกลับมาก็มาสอนที่นี่ ผมสอนวิชาวิจัยและคุมวิทยานิพนธ์มาเป็นเวลามากกว่า 10 ปี ทำให้มีประสบการณ์ในการวิจัย
Does your current curriculum emphasize research? The curriculum of the Faculty of Education does not strongly focus on research. There are 12 credits for research out of 36 in the master's degree programs, 24 credits for course work. The doctoral program puts more emphasis on research than the master's degree. For example, within 48 credits of some doctoral programs, only 12 credits are for coursework subjects, the other 36 credits are for research. However, they might put even more weight on research in other programs. It may be more or less the same or more than 12 credits. For instance, the Educational Technology doctoral curriculum requires 12 course work credits out of 36. 24 credits are for research.	**หลักสูตรในปัจจุบันเน้นวิจัยหรือไม่** หลักสูตรคณะศึกษาศาสตร์ไม่ถึงกับเน้นวิจัยมาก หลักสูตรปริญญาโท 36 หน่วยกิตจะมีการวิจัย 12 หน่วยกิต เรียน course work 24 หน่วยกิต หลักสูตรปริญญาเอกจะเน้นวิจัยมากกว่าปริญญาโท ยกตัวอย่างเช่นหลักสูตรปริญญาเอก บางสาขา 48 หน่วยกิตจะสอน 12 หน่วยกิตที่เหลือ 36 หน่วยกิตเป็นวิจัย แต่ในบางสาขาก็จะให้เรียนมากขึ้น คืออาจพอๆกันหรือมากกว่า 12 หน่วยกิต ยกตัวอย่าง เช่น ของคณะมีหลักสูตรปริญญาเอกที่บังคับเรียน 12 หน่วยกิตจาก 36 หน่วยกิต เช่น หลักสูตรเทคโนโลยีการศึกษาจะมีวิจัย 24 หน่วยกิต
Is it necessary for faculty staff to have research competency? Parts of the faculty staff should read research work and bring what they have read for discussion. Whether they have to be good at conducting research projects, I don't think it's necessary. However, they have to read a lot of research. They	**อาจารย์ผู้สอนจำเป็นต้องชำนาญวิจัยหรือไม่** อาจารย์ส่วนหนึ่งต้องอ่านงานวิจัยและนำสิ่งที่ได้จากการวิจัยมาพูดกัน แต่จะต้องชำนาญวิจัยหรือไม่ ผมคิดว่าอาจจะไม่จำเป็น เขาจะต้องอ่านงานวิจัยเยอะ แต่ก็ควรจะต้องทำวิจัยบ้าง ผมคิดว่าผู้สอนไม่จำเป็นต้องเก่งงานวิจัย แต่เขาต้องรู้เรื่องงานวิจัย แล้ว

should do some research as well. I don't think lecturers need to be competent in conducting research, but they have to know about the research work of others. They should be able to decide if a specific work is reliable. When reading a research piece, one has to know whether that work is trustworthy. There are times that people discussed some research results without considering if those results were validly gained. They believed everything presented. I have to see if the work was on the right track. If it was, was it done with accurate procedures? If everything is correct, we'll use its results. There are many times that we use research work without even looking at who did it, how they did it, and if they did it correctly or not; whatever is exhibited will be utilized. This is dangerous.	ตัดสินได้ว่างานวิจัยนั้นน่าเชื่อถือหรือไม่ เพราะการอ่านวิจัยจริงๆ แล้วเราควรจะต้องรู้ว่างานวิจัยนั้นมันเชื่อถือได้หรือไม่ เพราะบางทีคนที่พูดถึงงานวิจัยไม่ได้สนใจว่าเขาทำถูกต้องไหมก็เชื่อหมดเลย แต่ผมต้องดูว่างานวิจัยที่เขาทำมันผิดทิศทางหรือไม่ ถ้ามันไม่ผิดทิศทาง แล้วมันถูกต้องตามกระบวนการหรือไม่ ถ้าถูกต้องจึงนำมาใช้แต่หลายๆ ครั้งที่เราใช้งานวิจัย คนใช้ไม่ได้ดูด้วยซ้ำไปว่าใครเป็นคนทำ ทำอย่างไร ถูกต้องหรือไม่ ผลออกมาอย่างไรก็นำไปใช้เลย ซึ่งตรงนี้อันตราย
What are staff's attitudes towards research? In the past, our staff had high teaching loads. We offer both undergraduate and graduate programs. For undergraduates, we have normal day courses and special night and weekend courses. Anyone who teaches the special courses will not have time. Therefore, the weakness of our staff is that we hardly work on research because we spend time on teaching. We have reserved millions of baht to fund research, but we still do not do much. However, the situation is getting better because we made it a condition for lecturers with academic achievements who become assistant professors and associate professors that they have to do research work and write academic articles. This made many of them start their research projects. We're also stimulating the working environment. Most old teachers are competent at research since they oversee thesis completion. They know how to do it but they don't do it. On the other hand, there aren't many new teachers who have research backgrounds. However, they have done research to complete their master's or doctoral degrees. We have stimulated our staff in two ways. We require that our experienced staff with research achievements have to have more research work in order to be promoted to a higher position. We encourage new staff by offering research grants to anyone who requests it. We will only cut it if it's too high, or we'll give some recommendations.	**คณาจารย์มีทัศนคติอย่างไรต่อการวิจัยอย่างไร** ที่ผ่านมาอาจารย์ยังสอนมาก คณะศึกษาศาสตร์สอนปริญญาตรี-โท–เอก และในระดับปริญญาตรีก็จะมีทั้งภาคปกติและภาคพิเศษ เพราะฉะนั้นเมื่อสอนภาคพิเศษ ก็จะมีปัญหาว่าเวลาไม่ค่อยมี ดังนั้นจุดอ่อนของคณะคืออาจารย์ไม่ค่อยทำงานวิจัยเพราะไปใช้เวลาในการสอน ตอนหลังเราก็กันเงินไว้เป็นล้านสำหรับให้ทุนวิจัย แต่ปรากฏว่าเราไม่ค่อยทำกัน แต่ตอนหลังก็ดีขึ้นเพราะอาจารย์ที่มีผลงานทางวิชาการ ผู้ช่วยศาสตราจารย์และรองศาสตราจารย์จะต้องเป็นเงื่อนไขว่าจะต้องทำงานวิจัยหรือเขียนบทความ ตรงนี้จะทำให้หลายคนเริ่มทำงานวิจัยและเขาเองก็จะใช้วิธีกระตุ้นด้วย โดยอาจารย์เก่าส่วนใหญ่มีความรู้ด้านการวิจัยเพราะเขาคุมวิทยานิพนธ์ เขามีความรู้แต่เขาไม่ค่อยได้ทำ ส่วนอาจารย์ใหม่ที่มีประสบการณ์ด้านวิจัยยังมีไม่มากนัก แค่เคยทำวิจัยตอนเรียนปริญญาโท หรือปริญญาเอก คณะศึกษาศาสตร์จะกระตุ้นใน 2 ส่วน คือ อาจารย์เก่าที่มีผลงานวิจัย เราจะกระตุ้นว่าคุณต้องทำวิจัยนะ ไม่งั้นคุณจะไม่มีโอกาสขอผลงานในระดับที่สูงขึ้นไป ในขณะที่อาจารย์ใหม่เราจะกระตุ้นให้ทำงานวิจัย เรามีทุนให้ถ้าใครขอมาเราก็ให้หมด แต่จะติว่าเงินขอมากไปหรือ ตรงนี้ไม่ค่อยดี ควรปรับปรุง
How is the research environment in your faculty? 1. If anyone produces research work and that piece of work was quoted as a reference, there will be a reminder to all staff members that this name has been referenced in others' works. 2. Research products are used as part of staff performance appraisals. Teachers with high research productivity will be recognized. Staff with outstanding research achievements is even better. Those with rewards from the Thai	**บรรยากาศการวิจัยของคณะเป็นอย่างไร** 1. ถ้ามีคนได้ทำงานวิจัยแล้วมีผลงานออกมาอ้างอิง จะเป็นการกระตุ้นให้เห็นว่าชื่อคนนี้ถูกอ้างถึง 2. เวลาเราประเมินอาจารย์ ผลงานวิจัยจะถูกนำมาใช้ในการประเมิน อาจารย์ที่ทำวิจัยมากก็จะได้รับการยอมรับ คนที่มีผลงานวิจัยดีเด่นยิ่งดี บางคนได้รับรางวัลจากสำนักงานกองทุนสนับสนุนการวิจัย (สกว.) ก็จะเป็นที่กล่าวขวัญทำให้คน

Research Fund Regional Office will become the talk of the town. This encourages people to do more research. There has not been any member from the Faculty of Education that has received this reward. **3.** There is the New Researcher Project for supporting newly graduated doctors to do their research. We also have other funds for the old faces.	อยากทำวิจัยมากขึ้น แต่คณะศึกษาศาสตร์ ไม่มีใครเคยได้รับรางวัล 3. เรามีทุนโครงการนักวิจัยหน้าใหม่ที่กระตุ้นให้คนจบปริญญาเอกใหม่ๆ อยากทำงานวิจัยและเรามีทุนอื่นๆ สำหรับคนเก่า
What are the faculty's forms of research? Research is research, but academic work includes writing articles, performing research, and writing textbooks. There are two formats of research work at the Faculty of Education. The first format is the formal one. There is the proposal and the request for funding. The source of supporting fund is clearly specified. When completed, there's an official full report, just like the process of doing a thesis. This format is widely used by our staff. There's a proposal specifying the methodology, source of data, and systematic data collection. The second format is the non-proposal type which is employed by foreign lecturers. It's not a full research report. There are only 3-5 pages, similar to what is ready to be printed in a journal. This type of research is popular, especially in foreign countries. It is called a documentary research. There's no data source and no source of funding because there is no expenses. We did not do this type of research. We think it's too easy and not reliable enough. So, we fix the format that you have to have the proposal with clear procedures that can be examined. The official report needs to be rewritten to make a 5-10 page release for publication.	**รูปแบบงานวิจัยของคณะเป็นอย่างไร** งานวิจัยก็คืองานวิจัย แต่ถ้าเป็นงานวิชาการก็จะมีทั้งบทความและวิจัยรวมทั้งการเขียนตำรา วิจัยของคณะแบ่งเป็น 2 ลักษณะ คือ วิจัยที่เป็นทางการมีการเขียน Proposal มีการขอทุน มีแหล่งที่มาของทุนชัดเจนและเมื่อทำแล้วก็จะมีการรายงานออกมาเป็นรายงานฉบับสมบูรณ์ คล้ายกระบวนการทำวิทยานิพนธ์ คณะศึกษาศาสตร์จะทำวิจัยแบบนี้มาก คือ มี Proposal มีการบอกอย่างชัดเจนถึงวิธีการ แหล่งข้อมูล มีการรวบรวมข้อมูลอย่างเป็นระบบ อีกลักษณะหนึ่ง คือ การที่อาจารย์ชาวต่างประเทศทำวิจัยแบบไม่มีการเขียน Proposal แต่เป็นการเก็บข้อมูลแล้วรายงานผลออกมา แต่ไม่เป็นรายงานเต็มรูปแบบมีเพียง 3 – 5 หน้าคล้ายกับตัวที่จะนำลง Journal ซึ่งก็มีเยอะนะโดยเฉพาะในต่างประเทศ เป็นวิจัยแบบ document ไม่มีแหล่งที่มาของข้อมูล ไม่มีแหล่งเงินทุน เพราะใช้ไม่เงินมาก ซึ่งเราไม่ได้ทำเพราะเราคิดว่ามันยกเมฆง่ายไป ดังนั้นเราจะ fix ในเรื่องรูปแบบ คือคุณต้องมี Proposal มีกระบวนการที่ชัดเจนและตรวจสอบได้ จากนั้นจึงนำมาเขียนใหม่เป็น 5 หน้าหรือ 10 หน้า เพื่อนำไปตีพิมพ์
What are the kinds of research topics done? Most research works go by subject departments. There are nine departments in the Faculty of Education. Each department is divided into sub-departments. For example, the Educational Administration Department provides programs for bachelor's, master's, and doctoral degrees. Researchers will perform the research in their field of studies. However, topics are varied, such as e-learning and teaching and learning processes. For myself, I designed teaching and learning program, IT, administrative system development, and the study of learning achievements using English as a medium.	**ลักษณะหัวข้อเรื่องที่วิจัยเกี่ยวข้องกับอะไรบ้าง** วิจัยส่วนใหญ่จะเป็นไปตามสาขา คณะศึกษาศาสตร์ จะมี 9 ภาควิชาในแต่ละภาควิชาก็จะแบ่งเป็นสาขาย่อยๆ เช่น ภาควิชาบริหารการศึกษา จะสอนปริญญาตรี-โท- เอก ซึ่งคนทำวิจัยก็จะวิจัยตามสาขาของตน แต่หัวข้อหลากหลาย เช่น ศึกษาเรื่อง E – learning หรือกระบวนการเรียนการสอน อย่างผมทำเรื่อง การออกแบบการเรียนการสอน IT การพัฒนาระบบบริหารจัดการการศึกษาผลการเรียนโดยใช้ภาษาอังกฤษเป็นสื่อ เป็นต้น
What are the sources of research funding? Our budget comes from 3 sources: 1. Government budget. I received two government grants 5-6 years ago. 2. Faculty budget. We reserve 5-10 percent of our income every year for research. We saved 10 percent last year but we didn't finish it. So, we saved only 5 percent this year, 1,000,000 baht approximately. Still could not finish it. 3. Other income from outside sources, such as	**แหล่งที่มาของทุนวิจัยคือจากไหน** งบประมาณจะได้มาจาก 3 ทางคือ 1. งบประมาณแผ่นดิน ผมได้มา 2 เรื่อง เมื่อ 5 – 6 ปีที่แล้ว 2. งบรายได้ของคณะ เรากันไว้ 5 – 10 % ทุกปี ปีที่ผ่านมาเรากันไว้ 10 % แต่ใช้ไม่หมด ปีนี้เลยกันไว้แค่ 5 % คือ ประมาณ 1,000,000 บาท แต่ก็ยังใช้ไม่หมด 3. รายได้อื่นๆ จากภายนอก เช่น มีเอกชนมาจ้างให้ทำวิจัย

from private organizations who employed us to do research for them.	
What are the research facilities in your faculty? We have computers in every department purchased through faculty income. We have four computer centers with 160 machines for staff available for them at any time. We have software programs, such as SPSS, available. As for training, we will invite experienced researchers to share their experience with us.	**คณะมีอุปกรณ์และเครื่องมือสนับสนุนการวิจัยอย่างไร** คณะเรามีเครื่องคอมพิวเตอร์ทุกภาควิชา เอามาจากเงินรายได้ของคณะ อาจารย์จะมีศูนย์คอมพิวเตอร์ของคณะจำนวน 4 ห้อง รวม 160 เครื่องที่พร้อมให้ใช้อาจารย์ทุกเมื่อ รวมทั้งมีเครื่องมือ software เช่น SPSS สำหรับการฝึกอบรม ก็จะเชิญคนที่มีประสบการณ์การวิจัยมาเล่าสู่กันฟัง
Where are the sources of information? 1. Central Library 2. Faculty's Learning Resource Centre 3. Internet. We have various links, but they have hardly been utilized because, at present, staff knows where they can find data or financial sources.	**แหล่งข้อมูลการวิจัยได้มาจากแหล่งใด** 1. สำนักหอสมุด 2. ศูนย์ทรัพยากรการเรียนรู้ของคณะ 3. Internet เรามี Link ต่างๆ แต่ไม่ค่อยได้ใช้ เพราะปัจจุบันนี้อาจารย์เขาก็รู้กันแล้วว่าจะหาแหล่งข้อมูล หรือ แหล่งเงินทุนได้จากที่ไหน
Does your faculty emphasize qualitative or quantitative research? The Faculty of Education emphasized quantitative research, especially the Department of Educational Technology. Later, we realized that quantitative research was less useful in practice. In the past, around 30-40 years ago, we sent our staff to study at Srinakarinwirot Prasanmitr University and Chulalongkorn University with support from Indiana University, USA. We learned how to conduct this type of research there. After a while, Indiana University recognized that it was difficult to control variables in quantitative research. For example, the subjects were carefully selected in a random way, but it was impossible to control their emotions, health, stress, etc. So, only quantitative research cannot answer many questions. Therefore, qualitative research is used more.	**คณะศึกษาศาสตร์เน้นการวิจัยเชิงปริมาณหรือเชิงคุณภาพ** คณะศึกษาศาสตร์เน้นวิจัยเชิงปริมาณโดยเฉพาะด้านเทคโนโลยีมีการศึกษา แต่ตอนหลังคิดว่าการวิจัยเชิงปริมาณนำไปใช้อะไรไม่ค่อยได้ คณะศึกษาศาสตร์ในสมัยก่อนจะส่งคนไปเรียนที่มหาวิทยาลัยศรีนครินทรวิโรฒน์ประสานมิตรและจุฬาลงกรณ์มหาวิทยาลัยที่เมื่อ 30 – 40 ปีซึ่งได้รับการสนับสนุนจาก Indiana University ที่ USA. จึงได้ไปเรียนแนวคิดแบบนี้มาที่เน้นเชิงปริมาณ แต่ตอนหลัง Indiana University เองก็เห็นว่าวิจัยเชิงปริมาณควบคุมตัวแปรไม่ค่อยได้ ถึงแม้ว่าการเอาคนมา Random อย่างดี แต่เราไม่สามารถควบคุมอารมณ์ สุขภาพ ความเครียด ต่างๆ ได้ ดังนั้น การวิจัยเชิงปริมาณอย่างเดียวจึงไม่สามารถตอบคำถามหลายๆ เรื่อง จึงมีการใช้การวิจัยเชิงคุณภาพมากขึ้น
How does your faculty support lecturers to improve research skills? We provide training at intervals. There are also academic discussions, but not often. The most frequent activity is that of leading a thesis. Experienced teachers were invited to be on a defence panel of thesis proposals. They shared ideas in order to learn. It's not real training; it's joint learning. We have trained both experienced and new teachers. We do classroom research here at the Faculty of Education. Our faculty is responsible for new teacher training. We train them in teaching management and evaluation. In the future, we may include research as part of the training.	**คณะสนับสนุนการอบรมเพื่อเพิ่มทักษาการวิจัยอย่างไร** ทางคณะจัดอบรมเป็นช่วงๆ มีการเสวนาทางวิชาการแต่ไม่บ่อย สิ่งที่ทำมากกว่าคือการให้อาจารย์เป็นผู้คุมวิทยานิพนธ์ อาจารย์เก่าก็จะเชิญมา defence เค้าโครง จะได้มาแลกเปลี่ยนกันว่าอาจารย์แต่ละคนคิดอะไร เพื่อจะได้เกิดเรียนรู้ร่วมกัน ถึงแม้ว่าจะไม่ใช่การฝึกอบรมโดยตรง แต่เป็นการเรียนรู้ร่วมกัน ส่วนการอบรมมีให้ทั้งอาจารย์เก่าและอาจารย์ใหม่ คณะศึกษาศาสตร์มีการวิจัยในชั้นเรียน คณะศึกษาศาสตร์มีหน้าที่อบรมอาจารย์ใหม่ในการจัดการเรียนการสอนและการประเมินการสอน ซึ่งต่อไปเราอาจจะจัดการวิจัยร่วมเข้าไปด้วย
How does the nature of science and social sciences affect research? Research of the Faculty of Education requires a 10-	**ธรรมชาติของ Science และ Social Sciences มีผลต่อการวิจัยอย่างไร**

20 page proposal. Research in science is a continuing part of what has been done. We can't say it was right because education is a quite flexible science. So, we can't do bits and pieces of research in order to answer a question. Our research must be precise with a clear topic and specific tools. Frequently, there is a question over whether the questionnaire is reliable, and how it's created. Or sometimes we feel that somebody must have done this topic, so why bother doing it again? Another cause is the lack of research funding. I think these are the reasons that people don't do research. Compared with science subjects, it's clear what the research results will be used for. Their research reports do not have to be long. The work gets published and is accepted by all.	วิจัยของคณะศึกษาศาสตร์เป็นการเขียน proposal 10 – 20 หน้า แต่ทางวิทยาศาสตร์เป็นวิจัยที่เป็นการต่อยอดจากของเดิม คณะศึกษาศาสตร์เป็นศาสตร์ที่ค่อนข้างยืดหยุ่น ดังนั้นการวิจัยไม่สามารถบอกได้ว่าทำนิดๆ หน่อยๆ แล้วมันได้องค์ความรู้ใหม่ คือของเรามันต้องชัดเจน หัวข้อต้องชัดเจน และเครื่องมือที่ใช้ต้องชัดเจน มักมีคำถามว่าแบบสอบถามน่าเชื่อถือหรือไม่และสร้างแบบสอบถามมาอย่างไร บางทีก็รู้สึกว่า มีคนทำแล้วเราจะไปทำซ้ำอีกทำไม อีกสาเหตุคือขาดทุนวิจัย ผมว่านี่เป็นเหตุผลทั้งหมดที่ทำให้คนวิจัยน้อย ถ้าเทียบกับทางด้านวิทยาศาสตร์จะเห็นชัดว่าทางวิทยาศาสตร์สามารถบอกได้ชัดเจนว่าจะเอาไปใช้อะไร รายงานการวิจัยวิทยาศาสตร์ไม่ต้องเขียนมาก ผลออกมาก็เอาไปตีพิมพ์ทุกคนยอมรับ
Does family obligation affect research work? No, it has nothing related to research.	**ภาระครอบครัวมีผลต่อการวิจัยอย่างไร** ไม่เกี่ยวข้องกับงานวิจัย
How does age affect research productivity? The old and those nearly retired rarely do research. Those without academic ranks will not do any at all.	**อายุมีผลต่อการวิจัยอย่างไร** คนที่อายุมากและใกล้จะเกษียณไม่ค่อยทำวิจัย ยิ่งถ้าไม่มีตำแหน่งวิชาการจะไม่ทำวิจัยเลย
How does your faculty support lecturers in publishing their research work? We have our own journals, both in Thai and English. Moreover, each department has its own research journal. The Faculty of Education keeps 100,000 baht per year to publish research work. We plan to print more of the work of graduate students. There are many people who queue up for their works to be published in our journals. We ask for a 2,500 baht publication fee from non-faculty staff, 1,500 baht for peer review and the rest for the journals for them. It's free for our own faculty members.	**คณะมีการสนับสนุนการตีพิมพ์อย่างไร** เรามีวารสารของเราเองทั้งภาษาไทยและภาษาอังกฤษ แต่ละภาควิชาก็มีวารสารการวิจัยของตน คณะศึกษาศาสตร์กันเงินไว้ 100,000 ต่อปีในการตีพิมพ์ผลงาน เรามองไปถึงงานวิจัยของนิสิตปริญญาโทและปริญญาเอกที่ต้องเอามาตีพิมพ์มากขึ้น วารสารของคณะคนเข้าคิวรอตีพิมพ์ ถ้าเป็นคนนอกจะเก็บเงิน 2,500 บาท คือค่าอ่าน 1,500 บาทและค่าหนังสือเพราะต้องจ่ายให้ Peer Review ถ้าเป็นอาจารย์ในคณะศึกษาศาสตร์ลง Free
What are the changes in the research situation from the past to the present? In the past we did not have an internal supportive budget. We do at present. What we currently do is: 1. Pair up experienced teachers with new teachers or teachers without research experience. 2. Build a big umbrella and have many teachers come together under it to do research. 3. Have a screening committee for giving research grants since there are hundreds of thousands of research budgets left each year. We will increase the number of research projects and reduce teaching loads of staff in the future.	**ทิศทางการวิจัยมีการเปลี่ยนแปลงอย่างไรจากอดีตถึงอนาคต** ในอดีตไม่มีเงินสนับสนุนเงินภายใน แต่ปัจจุบัน เรามีเงิน ซึ่งสิ่งที่เราทำอยู่ปัจจุบันนี้คือ 1. ต้องพยายามให้อาจารย์ใหม่หรืออาจารย์ที่ไม่มีประสบการณ์ด้านการวิจัยจับคู่ให้กับคนที่มีประสบการณ์ 2. สร้างร่มใหญ่ให้อาจารย์เข้ามาวิจัยร่วมกัน 3. มีกรรมการวิจัยของคณะพิจารณาให้ทุน แต่ในแต่ละปีมีเงินเหลือหลายแสนบาท ส่วนในอนาคต จะเพิ่มประมาณวิจัยมากขึ้นและลดการสอน course work
Does the University's research policy that puts more emphasis on science rather than social sciences impact on the Faculty of Education?	**การที่มหาวิทยาลัยมีนโยบายเน้นด้านวิทยาศาสตร์มากกว่าสังคมศาสตร์ คณะศึกษาศาสตร์มีผลกระทบอย่างไร**

Both government and university policies emphasize that graduates in science should be produced at the same rate as those in social sciences. This university was created to serve the eastern seaboard industries in science and technology. However, there's a difficulty in that this institution has been derived from an educational college. Our strength is education. In the past, our faculties of science and engineering were not as good as those of Chulalongkorn or Mahidol University. When we focused on sciences, it meant we did not strengthen what we were good at. Now, none are good. There are not adequate human resources in the Faculty of Science. Most of them were transferred from the Faculty of Education though. The faculty administrator's vision is not good enough in proactive strategies. There are two big faculties in this University that are self-funding: the Faculty of Education and Humanities and Social Sciences. They did not get as much support from the University as the Faculty of Medical Science, Faculty of Science, and Faculty of Engineering. However, the supported faculties could not utilize the resources provided since their personnel were not adequately qualified.	นโยบายทั้งมหาวิทยาลัยและรัฐบาลต้องการสร้างบัณฑิตทางวิทยาศาสตร์ให้มากเท่าๆ กับทางสังคมศาสตร์ และ มหาวิทยาลัยนี้ตั้งขึ้นมาเพื่อรองรับอุตสาหกรรมภาคตะวันออกเกี่ยวกับด้านวิทยาศาสตร์และเทคโนโลยี แต่มีข้อขัดข้องที่ว่า สถาบันนี้เกิดจากวิทยาลัยการศึกษา จุดแข็งคือศึกษาศาสตร์ แต่พอจะให้วิทยาศาสตร์เก่ง วิศวกรรมศาสตร์เก่งนั้น ที่ผ่านมาวิทยาศาสตร์ไม่แข็งเท่าจุฬาลงกรณ์มหาวิทยาลัย หรือ มหาวิทยาลัยมหิดล จึงกลายเป็นว่าสิ่งที่เป็นจุดแข็งกลับไม่สนับสนุน ทำไปทำมา เลยไม่ได้ดีสักอย่าง เพราะทางคณะวิทยาศาสตร์ไม่มีทรัพยากรบุคคลเพียงพอ คนของคณะวิทยาศาสตร์ก็มาจากคณะศึกษาศาสตร์ วิสัยทัศน์ผู้บริหารก็ไม่ค่อยเก่งในเรื่องที่จะผลักดัน มหาวิทยาลัยนี้จะมีคณะใหญ่ๆ อยู่ 2 คณะคือศึกษาศาสตร์และมนุษยศาสตร์และสังคมศาสตร์ที่จัดว่าไม่เป็นสาขาขาดแคลน จึงไม่ค่อยได้รับการสนับสนุนเหมือนอย่างทาง แพทย์ วิทยาศาสตร์ วิศวกรรม แต่คณะที่ได้รับการสนับสนุนก็ไม่สามารถใช้ทรัพยากรได้เพราะบุคลากรของเขาไม่เข้มแข็งพอ
Is it possible for this University to become a research University? It's possible if we want to. The Faculty of Education has increased the number of its research projects but reduced teaching hours. Our University earns its income from teaching. The majority of incomes are from the Faculty of Education and Faculty of Humanities and Social Sciences. However, the Faculty of Science is currently emphasizing teaching as well because teaching brings money to the faculty. It is also the government's policy that the budget will be provided according to the number of students. Therefore, the more teaching, the more income. This does not support research in universities.	**การมุ่งสู่การเป็นมหาวิทยาลัยวิจัยสามารถเป็นไปได้หรือไม่** ถ้าต้องการก็ทำได้ คณะศึกษาศาสตร์ก็ทำวิจัยมากขึ้น แต่ต้องลดการสอน มหาวิทยาลัยของเรามีรายได้จากการสอนของคณะศึกษาศาสตร์และคณะมนุษย์ศาสตร์และสังคมศาสตร์ แต่ปัจจุบันคณะวิทยาศาสตร์ก็มาเน้นการสอนมากเหมือนกัน เพราะการสอนสร้างเงินรายได้ ซึ่งรัฐบาลก็บอกว่าเงินรายได้ที่จะให้มหาวิทยาลัยจะขึ้นอยู่กับจำนวนผู้เรียน ดังนั้นยิ่งสอนมากก็จะได้เงินมาก ตรงนี้เลยไม่เป็นการสนับสนุนวิจัย
What should the University do to increase research productivity? It is not necessary to reduce teaching loads. What we should do is: 1. Search for strategies to make lecturers realize how important research is. 2. Make them understand what they will gain from working on a research project. This is because doing research does not bring the same rate of income as teaching. Some lecturers earn 40,000 baht per month from teaching. Researchers cannot earn extra money at the same rate as lecturers, or even earn 5,000 baht per month. Will the teachers get the same amount of income if they stop teaching and work on only research? What can we do in order to make their income the same as when	**สิ่งที่มหาวิทยาลัยควรปรับปรุงเพื่อให้คณาจารย์มีผลงานวิจัยเพิ่มขึ้นมีอะไรบ้าง** ไม่เกี่ยวกับการลดภาระการสอน แต่ควรจะ 1. หาวิธีให้อาจารย์เห็นความจำเป็นของงานวิจัย 2. ให้คณาจารย์เห็นว่าทำวิจัยแล้วได้อะไร เพราะการทำวิจัยมีรายได้ไม่เท่ากับการสอน คณาจารย์บางคนมีรายได้จากการสอน 40,000 ต่อเดือน ดังนั้นให้คนทำวิจัยมีเงินเพิ่มเท่ากับที่สอนไม่ได้ แค่ 5,000 ก็ยังไม่ได้เลย ถ้าจะให้อาจารย์หยุดสอนแล้วให้ทำวิจัยจะได้เงินเท่ากับการสอนหรือไม่ และจะทำอย่างไรเพื่อให้รายได้เท่ากับการสอน มหาวิทยาลัยได้รายได้เป็นร้อยล้านจากการสอน ซึ่งเป็นไปไม่ได้ที่จะหาจากการวิจัย

they teach? The University receives hundreds of millions of baht from providing teaching which is impossible to get from research. Lecturers of undergraduate programs earn 3,000-4,000 baht per subject per month. Those of graduate programs get 10,000. So, teaching three to four subjects will bring them 30,000-40,000 baht a month. Teaching and researching could be done together. Teaching also makes teachers learn. It is difficult to have teachers do only research.	อาจารย์สอนปริญญาตรี มีรายได้ต่อรายวิชา 3,000 – 4,000 ต่อเดือน อาจารย์สอนปริญญาโท มีรายได้ต่อรายวิชา 10,000 ต่อเดือน ดังนั้นถ้าสอน 3 – 4 รายวิชาจะได้ถึง 30,000 – 40,000 ต่อเดือน แต่ถ้าสอนและทำวิจัยด้วย ก็สามารถทำได้ ซึ่งการสอนก็ทำให้อาจารย์ได้ความรู้ แต่จะให้ทำวิจัยอย่างเดียวนั้นยาก

Case Five
Faculty of Nursing

Interview Date:6 June 2005
Time: 10.00am

Could you please give me some details of your works on research activities in your faculty? 1. Circulate various amounts of research funding efficiently through the faculty. 2. Provide research facilities such as equipment, and research assistants. This faculty has a research centre. 3. This faculty has a research clinic to assist lecturers who confront research problems. 4. Provide research seminars. For instance, asking lecturers who come back from abroad to present their thesis to their colleagues relating the progress of their works and the significance of their projects.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของคณะ** 1. จัดหางบประมาณให้อาจารย์อย่างเหมาะสม 2. จัดหา Facilities สำหรับการวิจัย พวกเครื่องใช้ อุปกรณ์ ผู้ช่วยนักวิจัย ซึ่งคณะจะมีศูนย์วิจัย 3. คณะมีคลินิกวิจัย ให้คำปรึกษากับอาจารย์ที่มีปัญหาการวิจัย 4. จัดเสวนาวิจัย เช่น การให้อาจารย์ที่กำลังศึกษาอยู่ที่ต่างประเทศและกลับมาประเทศไทยมานำเสนอผลงานให้ผู้ร่วมงานฟังว่างานวิจัยของเขาดำเนินงานไปถึงขั้นไหนแล้ว และมีความสำคัญอย่างไร
Could you please give me some details of your research experience? I am interested in doing research about Aids, issues relating to the elderly, and strategies for health promotion. I received my doctoral degree in nursing, majoring in studies to do with the elderly.	**กรุณาเล่าถึงประสบการณ์ในการวิจัยของท่าน** พี่ชอบทำเรื่อง Aids เรื่องผู้สูงอายุและHealth Promotion พี่จบปริญญาเอก สาขาพยาบาลศาสตร์ ด้านผู้สูงอายุ
How do you develop your research skills? I improve my research skills by attending training courses and by doing research in the topics that I like. The training courses that I participated in during 1990 related to the training of how to do institutional research and integrated research, as well as how to be the administrative researcher. I did my first research project in 1990 and have continued for 15 years, I have completed 12 research topics that were done in this time, except for the three years when I studied for a doctoral degree.	**โดยส่วนตัวของท่าน ท่านมีการพัฒนาทักษะการวิจัยอย่างไร** มีการอบรมอยู่เรื่อย ๆ บางทีทำวิจัยตามความสนใจ เช่นการอบรมเรื่องวิจัยสถาบันหรือการบรูณาการว่าทำอย่างไร รวมทั้งการเป็นนักบริหารงานวิจัยในปี 2533 ในปี 2534 ก็ทำวิจัยเรื่องแรก ตอนนี้มีวิจัย 12 เรื่องใน 15 ปี ยกเว้นช่วงเวลาที่ไปเรียนปริญญาเอก 3 ปี
How is research important to your faculty? Research is an important task for my faculty. We plan to create and to develop new knowledge for enhancing professional growth in nursing as well as serving patients or other people.	**การวิจัยมีความสำคัญต่อคณะพยาบาลศาสตร์อย่างไร** วิจัยเป็นพันธกิจหลักในการที่เราจะสร้างและพัฒนาองค์ความรู้ในการพัฒนาวิชาชีพพยาบาลและดูแลสุขภาพคนไข้ หรือผู้มาใช้บริการทั้งหลาย

How is the research environment in your faculty? Our faculty does a lot of research projects because we realize the importance of research. We provide a motivated research environment by offering research funding that derives about 10 percent of our faculty's incomes. This amount is around 2 million baht. We also have our own research centre and a database for data recording and data analysis. We permit lecturers to have more time for conducting research. We allow our lecturers to do research anytime that they want. We provide research equipment and facilities for about 80 percent of our lecturers. Lecturers obtain research funding from government, faculty and department sources.	**บรรยากาศการวิจัยของคณะเป็นอย่างไร** คณะของเราทำวิจัยเยอะเพราะว่าเราเห็นความสำคัญ เราก็เลยพยายามสร้างบรรยากาศวิจัยโดยให้ทุนสนับสนุนวิจัยประมาณ 10% ของงบรายได้คือประมาณ 2 ล้านบาท และคณะมีศูนย์วิจัยในการลงข้อมูล วิเคราะห์ข้อมูล ทำฐานข้อมูลในการค้นคว้า นอกจากนี้ยังช่วยอำนวยความสะดวก ในเรื่องของเวลา อาจารย์จะไปทำวิจัยเวลาไหนเราก็อนุญาต นอกจากนี้ยังอำนวยความสะดวกในเรื่องเครื่องมือการวิจัย ซึ่ง 80% ของอาจารย์ในคณะจะมีวิจัยที่ได้ทุนจากทั้งงบประมาณแผ่นดิน งบรายได้ของคณะและงบประมาณระหว่างภาควิชา
What are the factors that influence lecturers to do research? 1. We try to create a suitable research environment. We offer more budgets and also assist them when they want to apply for external sources of funding. We assist them by making it more convenient, providing the format of essential documents, and having counsellors to help them eliminate problems when they write research proposals. 2. Our lecturers are generally eager to do research because we have so many lecturers who have graduated with doctoral qualifications.	**สาเหตุที่อาจารย์ทำวิจัยมากคืออะไร** 1. คณะของเราจะสร้างบรรยากาศการวิจัย คณะให้ทุนมาก และเราก็ช่วยด้วยเช่นเมื่ออาจารย์ไปขอทุน เราก็ช่วยอำนวยความสะดวกในเรื่อง Format ต่างๆ เรามีที่ปรึกษาให้ ในการเขียน proposal จะเขียนได้หรือไม่ มีปัญหาอะไรก็ช่วยกัน 2. อาจารย์มีความกระตือรือร้น เพราะอาจารย์เรามีปริญญาเอกเป็นสิ่งกระตุ้น
What are the factors that affect lecturers in doing less research? We have two types of lecturers who do less research. First is the new lecturer who has just graduated and second is the very old lecturer who has less enthusiasm and a high teaching workload. Research is hampered because sometimes they have to work overtime.	**สาเหตุที่อาจารย์ทำวิจัยน้อยเกิดจากอะไร** คณะนี้จะมีอาจารย์อยู่ 2 ประเภทที่ทำวิจัยน้อย คือ อาจารย์ที่ใหม่มากๆ กับอาจารย์ที่เก่ามากๆ ฟื้นไม่ไหวและมีภาระงานสอนมาก รวมทั้งต้องเข้าเวรด้วย
What are the different forms of research? The forms of research depend on the field of teaching that the lecturers are involved with, and generally aim to utilize research to develop quality of life issues. We attempt to utilize local intelligent knowledge for national development.	**รูปแบบของการวิจัยเป็นอย่างไร** รูปแบบของการวิจัยจะอยู่ใน Theme ของแต่ละบุคคล โดยเน้นการนำวิจัยมาพัฒนาคุณภาพชีวิตของผู้มาใช้บริการและการใช้ภูมิปัญญาท้องถิ่น ซึ่งเป็นการวิจัยเพื่อตอบสนองความต้องการของประเทศ

Where are the sources of research funding? We receive research funding from both Thai and overseas institutions. For instance, our Dean received money from Canada to do research about mothers and sons.	**ทุนวิจัยได้มาจากแหล่งใดบ้าง** ทุนวิจัยจะมีทั้งในประเทศและต่างประเทศ ในต่างประเทศเราเคยทำเรื่องแม่และเด็ก โดยท่านคณบดีได้ทุนมาจากประเทศแคนนาดา
How do the demographic factors impact on research productivity? Demographic factors have no affect on research productivity because this faculty has only 2 males. It depends on self-motivation. Lecturers do research with their teams.	**ปัจจัยด้านประชากรศาสตร์มีผลต่อการวิจัยอย่างไร** คิดว่าปัจจัยด้านประชากรศาสตร์ไม่มีผลต่อการวิจัย คณะนี้มีผู้ชายเพียง 2 คน เรื่องเพศจึงไม่มีผล แต่ขึ้นอยู่กับแรงจูงใจมากกว่า คือถ้ามีคนทำก็จะทำตามโดยหาอาจารย์ที่อยู่ในทีมเดียวกัน
How does rank impact on research productivity? Tenure status and rank have a strong affect on research productivity. The Faculty of Nursing has a slightly rate of promotion of lecturers through the academic ranks. Normally, the Assistant Professor or Associate Professor must do the research. Although money can be a motivation technique. Our lecturers generally don't ask for researcher's salary. Rather ask only that they have enough budget for conducting the research.	**ตำแหน่งวิชาการมีผลต่อการวิจัยอย่างไร** ตำแหน่งวิชาการมีผลผลักดันดีมาก แต่คณะนี้อาจช้าไปหน่อยในเรื่องนี้ อาจารย์ที่มีตำแหน่งเป็นผู้ช่วยศาสตราจารย์หรือรองศาสตราจารย์ต้องทำวิจัย เงินอาจเป็นแรงจูงใจอย่างหนึ่ง แต่อาจารย์ของคณะไม่เคยร้องขอเรื่องเงินเดือนนักวิจัย แค่ขอมีเงินใช้ในโครงการก็เพียงพอแล้ว
How does workload impact on research productivity? Academic workloads have slightly affected research productivity. Whilst our faculty has high research productivity, we still have many projects in process left on hands. We have to solve these problems and find ways in which the research unit can assist researchers to complete them.	**ภาระงานมีผลต่อการวิจัยอย่างไร** ภาระงานมีผลบ้างต่อการวิจัย คณะมีงานวิจัยมาก แต่ก็มีงานวิจัยค้างอยู่มากเช่นกัน เราต้องมาคุยกันว่าเราจะแก้ไขปัญหาอย่างไรและศูนย์วิจัยจะช่วยอะไรได้บ้าง
How does family duty affect research productivity? I don't think research productivity is obstructed by family duties because the majority of our lecturers are single and live near this University.	**ภาระครอบครัวมีผลต่อการวิจัยอย่างไร** คิดว่าไม่มีผลและไม่เป็นปัญหา เพราะอาจารย์ของคณะเป็นโสดเยอะและพักอยู่ใกล้ๆ กับมหาวิทยาลัย
How does the nature of sciences and social sciences affect research productivity? I don't think that there is any difference between science and social science research projects. However, science may get greater advantages because the data is more concrete and researchers can work in the form of a case study. For social sciences, the processes are similar same but the data is in the abstract form.	**ธรรมชาติของวิทยาศาสตร์และสังคมศาสตร์มีผลต่อการวิจัยอย่างไร** สำหรับการวิจัยด้านวิทยาศาสตร์และสังคมศาสตร์นั้น ผู้ให้สัมภาษณ์คิดว่าไม่แตกต่างกัน ด้านวิทยาศาสตร์อาจได้เปรียบเพราะเป็นข้อมูลเชิงประจักษ์สามารถทำเป็น case study ได้ แต่ทางสังคมศาสตร์ก็สามารถทำได้เหมือนกัน แต่สังคมศาสตร์เป็น abstract มากกว่า
How does your faculty support lecturers in publishing their research work? This faculty has a research journal in which we invite external experts to carry out a review in order to set up equal standards to the international journals. We also have publication funding for publishing in international journals.	**คณะให้การสนับสนุนการตีพิมพ์อย่างไร** คณะมีวารสารของคณะที่มี Peer Review จากภายนอกตามมาตรฐานของวารสารระดับประเทศ คณะมีเงินสนับสนุนให้อาจารย์ตีพิมพ์ในระดับต่างประเทศ
How does your faculty support lecturers in improving research skills? This faculty provides several training topics. For example, if any lecturer has problems with statistics, we invite experts to teach them. We also provide academic trips. Moreover, we invite international	**คณะให้การสนับสนุนการพัฒนาทักษะของคณาจารย์ในการทำวิจัยอย่างไร** คณะให้การอบรมเรื่องต่างๆ เช่น อาจารย์ท่านใดมีปัญหาเรื่องสถิติก็จะหาอาจารย์ที่มีการชำนาญมาบรรยายให้ฟัง รวมทั้งการจัดไปดู

professors to talk about the concepts of research that inform the work they have carried out, and we also invite them to be our counsellors. This faculty provides funding for research conference as well. To join oral presentations, the researcher gets 70,000 baht, but becoming only the poster gets 50,000 baht. We provide 500,000 baht a year.	งาน นอกจากนี้เวลามี Professor มาจากต่างประเทศ ก็จะเชิญมาพูดในเรื่อง concept งานวิจัยที่เขาจะทำและงานวิจัยที่ทำแล้ว รวมทั้งให้คำปรึกษาต่าง ๆ นอกจากนี้ทางคณะมีทุนให้อาจารย์ไป Conference คือ ถ้าไป Oral Presentation ได้เงิน 70,000 บาท ถ้าไปเป็น Poster ได้ 50,000 บาท ซึ่งคณะมีงบประมาณในส่วนนี้ 500,000 บาทต่อปี
What will the changes be in research situation from the past to the future? Our faculty has slightly increased the number of research outcomes and the varieties of investigations that depend on the field of teaching. In the future, we will put more emphasis on research which is based on national requirements, especially the area of integrated research. Furthermore, we will put more focus on research for local requirements by using local sources of knowledge, for instance, giving birth by natural method and using Thai herbs.	**ทิศทางการวิจัยมีการเปลี่ยนแปลงอย่างไรจากอดีตถึงอนาคต** คณะมีงานวิจัยเพิ่มขึ้นเรื่อยๆ และหลากหลาย ขึ้นอยู่กับแต่ละภาควิชา ซึ่งในอนาคตเราจะเน้นงานวิจัยที่ตอบสนองต่อความต้องการของประเทศ โดยจะเป็นงานวิจัยเชิงบรูณาการ รวมทั้งพยายามสร้างวิจัยเพื่อตอบสนองความต้องการของท้องถิ่นและการใช้ภูมิปัญญาท้องถิ่น เช่น การคลอดธรรมชาติและเรื่องของการใช้สมุนไพร
How does the University policy support lecturers in your faculty to do research? In fact, this university hasn't provided direct support to the Faculty of Nursing. It only sets the policy that we have to follow. In is our administrative supervisors that give us opportunity and time to do research.	**นโยบายที่สนับสนุนด้านวิทยาศาสตร์มีส่วนสนับสนุนการวิจัยของคณะอย่างไร** ที่จริงมหาวิทยาลัยก็มิได้สนับสนุนคณะพยาบาลศาสตร์โดยตรง แต่มันก็เป็นนโยบายก็ทำไปตามช่องทาง ส่วนผู้บริหารก็ให้กำลังใจในการทำวิจัยและให้เวลาในการวิจัย
What should the University do to increase research productivity? The university should provide more research funding as other overseas universities do. In addition, if the university has any linkage with other institutions, the University should inform us. For obtaining research funding in Thailand, we wish the government would provide better and easier methods.	**ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในส่วนใดบ้างเพื่อให้มีงานวิจัยมากขึ้น** มหาวิทยาลัยควรหาแหล่งทุนมาให้มากขึ้นเหมือนในต่างประเทศ ถ้ามหาวิทยาลัยมี Contact กับหน่วยงานใดก็ควรบอกมาทางคณะจะได้เห็นช่องทางได้ง่ายขึ้น สำหรับในประเทศอาจช่วยในการจัดสรรทุนด้วยวิธีที่ง่ายขึ้น

Case Six
Faculty of Fine and Applied Arts

Interview Date: 4 August 2005
Time: 10.00am

Could you please give me your background and some details of your responsibilities and research experience? I have worked in the position that is responsible for managing research affairs for 2 years. I have worked in this University for 9 years since I received my master degree. I received both bachelor and master degree in painting from a public University in the north and a public University in Bangkok. I have obtained research skills by learning from the other persons' works and then applying related knowledge into my projects. I did the first research in year 2002. I am now writing a book. I am interested in doing creative research in which I avoid overusing theory. I prefer the form of research that is easy to read and to understand by refraining from using superior academic language. I notice that to write uncomplicated research, the writer should add some pictures and explanations. The research topics that I am interested in are about handmade products and painting works. My research projects are concerning the local requirements and how they use local raw materials. I produce research productivity for promotional concern.	**กรุณาเล่าประสบการณ์การทำงานและประสบการณ์ในการวิจัยของท่าน** พี่อยู่ในตำแหน่งนี้มา 2 ปี ทำงานอยู่ในมหาวิทยาลัยนี้มา 9 ปีตั้งแต่จบปริญญาโท พี่จบปริญญาตรีจากมหาวิทยาลัย .....สาขาภาพพิมพ์ จบปริญญาโท จาก มหาวิทยาลัย .....สาขาภาพพิมพ์เช่นกัน เริ่มงานวิจัยโดยศึกษาจากงานของผู้อื่น โดยเฉพาะการเรียนรู้เรื่องหลักเกณฑ์ต่าง ๆ แล้วนำมาปรับปรุงให้เข้ากับสถาบัน พี่ทำวิจัยเรื่องแรกในปี 2545 ตอนนี้ก็กำลังทำเอกสารการสอนอยู่ พี่สนใจงานวิจัยด้านการสร้างสรรค์ที่ไม่ใช้ทฤษฎีมากเกินไป คือเน้นการเขียนอย่างไรให้อ่านง่าย ถ้าใช้ทฤษฎีอย่างเดียวเข้าใจยาก คนจะพยายามเขียนให้เป็นภาษาทางการ ทำให้อ่านเข้าใจได้ยาก ทางที่ดีควรมีภาพและคำอธิบายประกอบ หัวข้อวิจัยที่สนใจเกี่ยวกับงานหัตถกรรม งานฝีมือ และภาพพิมพ์ งานวิจัยต้องสัมพันธ์กับความต้องการของท้องถิ่นว่าจะสร้างงานสร้างผลิตภัณฑ์จากวัสดุท้องถิ่นอะไรได้บ้างก็นำมาประยุกต์ใช้ และพี่วางแผนที่จะใช้งานวิจัยขอผลงานวิชาการ
How is research work important to your faculty? The research productivity of this faculty has developed slightly. We have 26 lecturers. The lecturers, who do research, are persons who love to explore updated data and to learn theories. This faculty puts emphasis on doing research for skill development. There are not many lecturers who are willing to do research and recognize the importance of research. There are only senior lecturers who recognize the value of theory. They focus on doing research rather than teaching. Research in this faculty includes producing creative works. Since 2001, we have applied research work into printing document. We realize that the creative works derive from research. We write documents together with producing creative masterpiece works. We offer research funding for lecturers who can apply document works into the operation. We need huge amounts of money. We call this kind of research "Creative Work for Research". We try to convince lecturers to do research. They should not fear the work. New lecturers sometimes misunderstand and think that research must be a huge project and they are frightened. We encourage	**การวิจัยมีความสำคัญต่อคณะศิลปกรรมศาสตร์อย่างไร** ตั้งแต่อดีต การวิจัยของคณะศิลปกรรมศาสตร์มีการเติบโตอย่างช้าๆ เรามีบุคลากรสายอาจารย์ 26 คน อาจารย์ที่ทำวิจัยจะเป็นคนที่ทำวิจัยด้วยใจรักในการค้นคว้าหาข้อมูลและสนใจที่จะเรียนรู้เกี่ยวกับทฤษฎีต่างๆ แต่สำหรับคณะศิลปกรรมศาสตร์ เราจะเน้นการฝึกด้านทักษะและภาคปฏิบัติการดังนั้นคนที่จะทำวิจัยและเห็นคุณค่าการทำวิจัยจึงมีน้อย ก็จะมีพวกอาจารย์หลักๆ) อาจารย์ผู้ใหญ่ (ที่เห็นคุณค่าทางทฤษฎีของการวิจัย ซึ่งเขาก็จะเน้นงานด้านปฏิบัติการน้อยลง ไปเน้นการสร้างงานวิจัยแทน สำหรับคณะศิลปกรรมศาสตร์งานวิจัยมีความหมายรวมไปถึงการ create งานต่าง ๆ เริ่มจากปี พศ .2544 เรามีงานวิจัยที่สามารถนำมาสร้างเป็นงานเอกสารอธิบายให้คนรู้ได้ เราเริ่มตระหนักว่างานสร้างสรรค์เกิดจากการวิจัย ดังนั้นจึงต้องมีผลงานมาประกอบกัน เราตั้งงบประมาณให้อาจารย์นำผลงานด้านเอกสารมาประกอบงานด้านปฏิบัติการ ซึ่งต้องใช้ทุนมาก เราก็ต้องตั้งทุนวิจัยของคณะขึ้นมาว่า ต้องมีเอกสารประกอบงานด้านศิลปะ เรา

them by providing small amount of research funding of around 30,000 baht per project in order to allow new lecturers to practice doing research. Good research should be explained and supported with theory and then can be applied into lessons. For instance, I did research about natural fiber for producing paper. I studied about plants' tissue. The Dean of this faculty studied about metal print by comparing quality of many types of metal. Generally research topics based on the subjects that we teach.	เรียกว่า " การสร้างสรรค์ เพื่อประกอบการวิจัย" เราต้องสร้างให้บุคลากรคุ้นเคยกับการวิจัย อย่าไปกลัวมัน คนรุ่นใหม่มักมองว่างานวิจัยต้องเป็น project ใหญ่ ก็จะรู้สึกขยาดกัน เราก็เลยตั้งทุนวิจัยเล็ก ๆ ขึ้นมาทุนละประมาณ 30,000 บาท ให้เขาลองทำงานวิจัย ถ้างานนั้นออกมาดีสามารถอธิบายได้ ซึ่งต้องมีทฤษฎีมาประกอบเอาไปใช้ในการสอนได้ เช่น พี่ทำวิจัยเกี่ยวกับ เส้นใยธรรมชาติในการสร้างกระดาษ เพื่อการสร้างสรรค์งานศิลปะ โดยการศึกษาเรื่องเนื้อเยื่อต่างๆ หรือ ท่านคณะบดีศึกษาเรื่องภาพพิมพ์โลหะ ก็ดูว่าวัสดุขึ้นใดที่มีประสิทธิภาพจากหลายๆ ชนิด หัวข้อวิจัยก็จะเกี่ยวข้องกับวิชาที่สอน
What are attitude of lecturers toward doing research? Nowadays new lecturers have positive attitude toward doing research. In the past, they viewed the research as a large scale project. We give them chance by showing them examples of research projects. However, after they finish the projects, they must present them in an exhibition. Lecturers are beginning to undertake simple projects. However they do not understand the process of bigger project. We inform them that in order to do very large projects, they must learn basic skills and continue developing step by step.	**คณาจารย์มีทัศนคติอย่างไรต่อการวิจัย** ปัจจุบันนี้ดีขึ้น อาจารย์ รุ่นใหม่ๆ เมื่อก่อนเขามองว่าวิจัยต้องเป็นโครงการใหญ่เราจึงพยายามเปิดทางให้เขา แสดงให้เขาเห็นตัวอย่าง แต่ถ้าทำวิจัยแล้ว จะต้องมีการแสดงนิทรรศการ อาจารย์ก็จะเริ่มจากการทำวิจัยทั่วไป แต่เขาก็ยังไม่เข้าใจระบบงานวิจัยใหญ่ เราก็พยายามให้ข้อมูลเขาว่า การทำวิจัยนั้นเพื่อให้มีการเรียนรู้หลักการทำวิจัยในเบื้องต้นเป็นพื้นฐาน พอได้ลงมือทำก็จะค่อย ๆ เรียนรู้ไปเอง
How is the research environment in your faculty? The supervisors encourage and support us in doing research. But it depends on each person and whether they have the commitment or not. We cannot force them. Research outcomes must be applied to our real life and bring innovative knowledge. Lecturers are now acquainted with doing research and accept that research is not difficult task.	**บรรยากาศในการวิจัยของคณะเป็นอย่างไร** ผู้บังคับบัญชาจะส่งเสริมให้ทำวิจัย แต่ก็ต้องขึ้นอยู่กับคนรักด้วย ถ้าเขาไม่ใช่คนที่ชอบลุยออกไป เราก็ไปบังคับเขาไม่ได้ การจะทำวิจัยนั้นมีข้อแม้อยู่ว่าต้องนำไปใช้ได้จริง เกิดความรู้ใหม่ ตอนนี้อาจารย์ก็เริ่มคุ้นเคยและมองว่าวิจัยเป็นงานที่ง่ายขึ้น
What are the factors that influence lecturers to do more or less research? Lecturers in this faculty conduct small research projects for personal development and promotion. They do research and documental paper to support their academic accomplishments. The university gives marks for researchers. Nevertheless, this faculty is a small unit. Lecturers have high teaching workloads. They have less time to do research, but they do try. However, they do not understand and have insufficient research knowledge. Moreover, English is an obstacle. Our lecturers have English language problem. Generally they have problems when writing abstract because the translator sometime does not understand art language. When we ask translator to translate our tasks, we need to recheck the work, and we need experts to help us.	**สาเหตุที่อาจารย์ทำวิจัยกันมากหรือน้อยเกิดจากอะไร** คณะศิลปกรรมศาสตร์เป็นการวิจัยเล็ก เพื่อการพัฒนาตัวเอง มีการนำวิจัยมาปรับตำแหน่ง ในปัจจุบันถ้าอาจารย์ต้องการปรับตำแหน่งวิชาการ ก็สามารถใช้งานสร้างสรรค์ได้ แต่ต้องเขียนเอกสารประกอบ เพื่อความสำเร็จทางวิชาการ มหาวิทยาลัยให้ค่ากำหนดกับคนที่ทำงานวิจัย จึงให้ point ตรงวิจัยมาก แต่คณะศิลปกรรมศาสตร์เป็นคณะที่เล็ก อาจารย์มีภาระงานสอนมาก มีเวลาทำวิจัยน้อย แต่เขาก็พยายาม ประกอบกับ ความไม่เข้าใจและความรู้ของอาจารย์ยัง ไม่ดีพอ ภาษาก็เป็นอุปสรรคอย่างหนึ่ง อาจารย์คณะ ศิลปกรรมศาสตร์ มักมีปัญหาด้านภาษา แต่มักมีปัญหาในการเขียนบทคัดย่อ เพราะถ้าเราเขียนแล้ว ภาษาด้านศิลปะ กับคนที่รับแปลภาษา มักมีความใจไม่ตรงกัน บางทีเวลาไปจ้างเขาแปล ก็ต้องมาปรับใหม่ คือเราต้องมีผู้ช่วยเหลือ

How does your faculty support lecturers in improving research skills? We have research seminars. For instance, lecturers who do research must present the outcomes of their projects to audiences.	**คณะมีการจัดอบรมเพิ่มพูนทักษะด้านการวิจัยให้แก่คณาจารย์อย่างไร** มีการสัมมนาการวิจัย เช่น อาจารย์ที่ทำวิจัยแล้ว ก็ไม่ใช่จบเลย ต้องมาแสดงให้เห็นว่าเกิดความรู้อะไร เราก็เชิญคนนอกมาฟังด้วย
What are the sources of funding? Two senior lecturers received research funding from the Thai Research Fund Regional Office. One did research about regional culture and another one created masterpiece about metal printing. They bring knowledge and techniques that gain from doing research to create art works.	**แหล่งทุนวิจัยของคณะได้มาจากที่ใด** อาจารย์ระดับใหญ่ ๆ ก็ไปขอทุนสำนักงานกองทุนสนับสนุนงานวิจัย หรือ สกว .มีประมาณ 2 คน เช่น ท่านศึกษาเกี่ยวกับศิลปวัฒนธรรมท้องถิ่น และการสร้างผลงานระดับ Masterpiece ในเรื่องแม่พิมพ์โลหะ ก็นำความรู้ที่ได้มาสร้างงานศิลปะ โดยใช้เทคนิคที่ค้นคว้ามาได้
How do the university and faculty research policies affect research productivity? We have a policy that offers research funding to our lecturers every year. We give them an opening. We offer research funding for two types of research, and consists of two creative researches and two general researches. We also have funding for writing academic works. Lecturers have the chance to learn theories. And we try to have publication by providing faculty journals that are distributed twice each year. Moreover, we have policies that to invite outsiders to be peer reviewers and to set quality standards. Those readers become our research committee. We recommend lecturers to submit us hard copy without binding, and then we let the experts check it first.	**นโยบายด้านการวิจัยของคณะและของมหาวิทยาลัยมีผลอย่างไรต่อการวิจัยของคณาจารย์** คณะมีนโยบายให้ทุนทุกปี เราเปิดกว้างเอาไว้ ประกอบด้วยการวิจัยแบบสร้างสรรค์ 2 ทุน การวิจัยทั่วไป 2 ทุน เรามีการแปลงทุน คืออาจารย์อาจไม่ต้องทำวิจัยก็ได้ แต่ขอให้คุ้นเคยกับเอกสารวิชาการ ดังนั้น เราจึงแบ่งทุนวิจัยไปสำหรับการทำเอกสารการสอน ให้อาจารย์ที่ทำจะมีโอกาสคุ้นเคยกับเรื่องทฤษฎี แต่อีกอย่างก็คือ จะทำอย่างไรให้มีงานสร้างสรรค์ออกมาให้มีการเผยแพร่ โดยการทำวารสารวิชาการของคณะ ปีละ 2 ฉบับ เราก็ใช้บทคัดย่อของงานวิจัยมาลงตีพิมพ์ นอกจากนี้ยังมีนโยบายการนำ Reader หรือ ผู้ตรวจรูปแบบมาตั้งเกณฑ์ ให้งานวิจัยมีคุณภาพ โดยให้ผู้ตรวจมาช่วยดู เราตั้ง Reader เป็นคณะกรรมการ เราบอกอาจารย์ว่า ยังไม่ต้องเข้าเล่มงานวิจัย เราจะให้ Reader ช่วยตรวจให้ก่อน
Where are the sources of information? Data is derived from many sources. This faculty engages in research about arts and culture. Researchers generally do field studies. For example, a lecturer did research about the architecture pattern in Chantaburi province. We focus on doing research in the eastern region. We did a field study by collecting data with villagers, taking pictures and finding literature.	**แหล่งข้อมูลการวิจัยได้มาจากที่ไหน** แหล่งข้อมูลมีหลายส่วน เพราะวิจัยของคณะศิลปกรรมศาสตร์ เป็นเชิงศิลปะและวัฒนธรรม อาจารย์ที่ทำวิจัยก็จะออกภาคสนามไปเลย เช่น การศึกษาลวดลายสถาปัตยกรรมในเขต จ.จันทบุรี ทางคณะเป็นการศึกษาในภาคตะวันออก เพื่อให้คนนำไปศึกษาต่อได้ ผู้วิจัยจะออกภาคสนามไปเก็บข้อมูลกับชาวบ้าน ไปถ่ายรูป หนังสืออ้างอิงก็ไปค้นคว้าเอกสารประกอบ
Does your faculty provide monetary incentives to lecturers? Although money is one of motivation techniques that encourages lecturers to do research, our lecturers normally ask for a limited amount of money, for buying equipment and raw materials only. Sometime we have students as research assistants, but not often. I know that some faculties provide salary for researchers. Every year we provide 10 percent of the faculty incomes for research. But we cannot use all of it. We then	**คณะมีค่าตอบแทนให้นักวิจัยหรือไม่** ค่าตอบแทนมีส่วนให้อาจารย์อยากทำงานวิจัย แต่คณะ ศิลปกรรมศาสตร์ นั้นทำวิจัยโดยขอทุนแบบสมตัว ไม่ตั้งไว้มากเกินไป แต่จริงๆ แล้ว เม็ดเงินก็เป็นตัวดึงดูดให้ผู้วิจัยมาทำงาน เงินที่ได้ก็ต้องไปใช้กับการซื้อวัสดุอุปกรณ์ที่จะนำมาใช้ประกอบ บางทีก็มีนิสิตมาช่วยงาน แต่ คณะ ศิลปกรรมศาสตร์ มีการใช้ผู้ช่วยวิจัยน้อยซึ่งบางคณะจะมีค่าตอบแทนตรงนี้ ในแต่ละปีจะมีการแปลงงานวิจัยจากที่ตั้งไว้ 10 % เราใช้ไม่หมด เราก็แปลงไปให้การใช้ทุนการ

transform that money to the fund for writing academic works.	เขียนเอกสารตำราคำสอนต่าง ๆ
What will the changes be in research situation from the past to the future? I have worked in this position for two years. I notice that the change has happened slowly. In the past lecturers submitted their research proposals directly to the university or the Thai Research Fund Regional Office. We now have a quality assurance system that insists the lecturers report back to the faculty if they receive any funding and if we have outside people visit, we can show them our records. We have files about research productivity that report about the source of funding, amount of funding, and the name of the researcher. For instance, in the year 2004 if lecturers wrote a book, they received 10,000 baht. We offered this funding for one person last year. Our lecturers receive research funding both from inside and outside of the faculty. We received external funding of 100,000 baht, but if we compare this with other faculties, this amount is not much. However, last year we had huge research funding from the government to develop regional products. It is estimated that we grant 3-4 research projects a year.	**ทิศทางการวิจัยของคณะมีการเปลี่ยนแปลงอย่างไรจากอดีตจนถึงอนาคต** พี่ทำงานในตำแหน่งนี้มา 2 ปี การเปลี่ยนแปลงเกิดขึ้นอย่างช้า ๆ เรื่อย ๆ คือ เมื่อก่อนระบบการขอทุน อาจารย์จะขอตรงไปที่มหาวิทยาลัย หรือ สกว. แต่พอมีระบบงานประกันคุณภาพเข้ามาก็ดีขึ้น เราจะไปตามเก็บกับอาจารย์ให้เขาแจ้งกับคณะ เมื่อมีคนมาสอบถามก็จะมีเอกสารชี้แจง เรามีการทำแฟ้มงานเกี่ยวกับว่าทุนได้มาจากไหน เท่าไหร่ ใครทำเรื่องอะไร เช่นในปี พศ. 2547 ถ้าอาจารย์เขียนตำราจะได้ทุน 10,000 บาท ปีที่ผ่านมาได้ 1 คน นักวิจัยก็จะมีทุนทั้งของคณะและทุนจากภายนอก ทุนจากภายนอกก็เคยได้มาประมาณ 100,000 บาท แต่เมื่อเทียบกับคณะอื่นก็ยังน้อยกว่า แต่เมื่อปีที่ผ่านมามีทุนให้รอค่อนข้างสูง เพราะเป็นทุนรัฐบาลในการพัฒนา OTOP การให้ทุนมี ประมาณปีละ 3 – 4 เรื่อง
How do demographic factors affect research productivity? Demographic factors have affect on research productivity. This faculty has five female employees and new lecturers who are still young. They do not dare carry out research, because they think that research is a difficult task and need time to search for information. On the other hand, senior lecturers have more experience and the skills to search for information. We recommend new lecturers to do continuous projects, but the first project should be a basic research exercise.	**ปัจจัยด้านประชากรศาสตร์มีผลอย่างไรต่อการวิจัย** ปัจจัยด้านประชากรศาสตร์มีผลต่อการวิจัย เพราะผู้หญิงจะมีธรรมชาติของผู้หญิง ทางคณะ ศิลปกรรมศาสตร์ มีอาจารย์ที่เป็นผู้หญิง 5 - 6 คน และอาจารย์ผู้ใหญ่ก็จะมีการค้นคว้ากันมามาก เขาจะนิ่งกว่า เขาจะมีภูมิในการวิเคราะห์ค้นคว้า ส่วนอาจารย์ใหม่ ๆ อาจไม่กล้าและมองวิจัยเป็นอะไรที่ยาก ต้องใช้เวลาในการค้นคว้า เราก็แนะนำให้เราทำวิจัยเป็น วิจัยต่อเนื่อง ในProject แรกคุณอาจทำแค่การวิเคราะห์พื้นฐาน
How does family duty affect research productivity? Sometimes family duties affect research productivity because lecturers have to spend their time taking care of their families. But some lecturers can manage their time. We may need to stop working on administrative jobs because it takes time, we have less time to concentrate on research works.	**ภาระครอบครัวมีผลอย่างไรต่อการวิจัย** ภาระครอบครัวเป็นอุปสรรคบ้างเพราะต้องใช้เวลาแต่อาจารย์บางท่านก็จัดสรรเวลาได้ แต่เราก็ต้องพักงานด้านบริหาร เพราะเวลาที่จะต้อง concentrate ในงานวิจัยถูกแบ่งไป จะนำไปใช้ในงานเขียนค่อนข้างยาก งานบริหารใช้เวลาไปมาก
How does the level of education affect research productivity? I think the level of education does not affect research productivity. People generally understand that lecturers who have a higher education should do better work. But it depends on each person's commitment and interest.	**ระดับการศึกษามีผลอย่างไรต่อการวิจัย** ไม่น่าจะเกี่ยว เราจะมองว่าอาจารย์ที่มีวุฒิสูงนั้นจะมีงานวิจัยดีกว่า แต่จริง ๆ มันอยู่ที่ความเข้าใจและความสนใจที่จะเก็บเกี่ยวมากกว่า
How does work location affect research productivity? Workplace location affects research productivity. I sometime have to attend two meetings a day; I have	**สถานที่ตั้งหน่วยงานมีผลอย่างไรต่อการวิจัย** สถานที่ตั้งหน่วยงานมีผลต่อการวิจัย บางครั้งประชุมวันละ 2 ครั้งก็

no time to do anything else. Moreover, the subject that I teach demands that I contact students in person. It is workshop subject and I have to schedule my time. Our faculty implements classroom research but lecturers don't understand how to do classroom research. Generally lecturers do research but they feel not sure that their projects are called classroom research.	หมดเวลา วิชาที่สอนก็เป็น WORKSHOP ที่ต้องอยู่กับนิสิตตัวต่อตัว ก็ต้องมีการวางแผนเรื่องเวลา คณะมีการวิจัยในชั้นเรียน แต่เขาก็ยังไม่เข้าใจว่างานที่เขาทำจะต้องเป็นอย่างไร ปกติก็ทำนะ มีการพัฒนาในแต่ละวิชาอยู่แล้ว อาจารย์บางท่านก็ทำแล้ว แต่ไม่แน่ใจว่าใช่หรือไม่
How do the nature of science and social sciences affect research productivity? Science subjects are often carried out by laboratory research. But research is new task for my faculty. We work together with the nearby community. We need more time to collect data and do field study than science projects. Moreover, public accept data and skills that derive from science more than social science. Social sciences usually are ignored and have fewer reference books because of limited funding.	**ธรรมชาติของการวิจัยด้านวิทยาศาสตร์ และ สังคมศาสตร์ มีผลอย่างไรต่อการวิจัย** มีผลเพราะ ด้าน Science วิชามันมีการทดลองมาก แต่สำหรับคณะนี้การวิจัยที่เป็นสิ่งใหม่ เป็นรูปแบบการทำวิจัยร่วมกับชุมชน ต้องใช้เวลาในการเก็บข้อมูลมากกว่า และมีการออกภาคสนามต้องใช้เวลามาก ข้อมูลและทักษะ รวมทั้งการยอมรับจากสังคมจะให้ Social Sciences น้อยกว่าและถูกละเลย เอกสารตำราต่าง ๆ ก็จะมีน้อย เพราะงบประมาณมีน้อยกว่า

Case Seven
Faculty of Public Health

Interview Date: 16 May 2005
Time: 2.00pm

Could you please give me some details of your roles toward research activities in your faculty? As I have worked in this position for some time, and my responsibilities are to implement a research plan and to set up research strategies based on the university's and faculty's strategic policy. Our faculty has a high level of support; while, our staff is in the stage of development. We have a mentoring system that encourages us to learn together. Besides this, we have a consulting team who are academic experts in this specific field. We are lucky that these experts spend their valuable time with us.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของคณะ** จากการที่ดำรงตำแหน่งนี้ จึงเป็นผู้ดูแลเรื่องแผนงาน กำหนดยุทธศาสตร์การวิจัย โดยพิจารณาจากยุทธศาสตร์ของมหาวิทยาลัยและยุทธศาสตร์ของคณะแล้วจึงกำหนดแผนงานวิจัย เรามีเงินวิจัยสนับสนุนมาก แต่ผู้วิจัยยังอยู่ในขั้นตอนที่กำลังพัฒนา เรามีระบบพี่เลี้ยงให้เกิดการเรียนรู้ร่วมกันที่จะ create งาน นอกจากนี้เรายังมีระบบที่ปรึกษา ซึ่งเป็นอาจารย์ในวงวิชาการในสายนั้นๆ ซึ่งเราค่อนข้างโชคดีที่ที่ปรึกษาให้เวลาเรามาก
Could you please give me some details of your work and research experience? I started doing research when I studied in the nursing college, but there was not much research funding. I carried out research seriously when I studied for my master and doctoral degree. I have done many research projects in which I am a team leader and an assistant. Moreover, I am the research consultant in the Ministry of Education's projects. I am interested in conducting research about human behaviour, health promotion and benchmarking. I did the doctoral thesis about benchmarking and also obtained research funding from Thai Research Fund Regional Office in the same topic.	**กรุณาเล่าถึงประสบการณ์การทำงานและการวิจัยของท่าน** ประสบการณ์งานวิจัยเริ่มจากสมัยเรียนอยู่วิทยาลัยพยาบาลก็ทำวิจัยแต่ไม่ค่อยมีทุน ได้เริ่มทำมากๆ เมื่อเรียนปริญญาโทและปริญญาเอก ปัจจุบันทำวิจัยหลายเรื่องโดยเป็นทั้งหัวหน้าโครงการเองและไปช่วยงานด้วย นอกจากนี้ยังได้ไปเป็นที่ปรึกษางานวิจัยของกระทรวงที่มาเลือกคณะสาธารณสุขศาสตร์เป็นที่ปรึกษา งานวิจัยที่สนใจเป็นงานวิจัยเกี่ยวกับ พฤติกรรมศาสตร์ Health Promotion และ Benchmarking ซึ่งตอนเรียนปริญญาเอกก็ทำวิจัยเรื่อง Benchmarking และตอนที่ได้ทุนจากสำนักงานกองทุนสนับสนุนการวิจัยก็ทำเรื่องนี้
How is research important to your faculty? The research plan of my faculty is a part of the national research policy. We have both integrated and individual research based on the national research policy, and also some research projects that aim to solve the problems in eastern regions.	**การวิจัยมีความสำคัญต่อคณะสาธารณสุขศาสตร์อย่างไร** แผนการวิจัยของคณะสาธารณสุขศาสตร์เป็นส่วนหนึ่งของแผนการวิจัยของประเทศ แผนการวิจัยจะมีทั้งในรูปแบบของชุดโครงการและโครงการเดี่ยว แผนงานวิจัยจะดูแนวโน้มของแผนวิจัยแห่งชาติและงานวิจัยที่เกี่ยวข้องกับปัญหาในพื้นที่ของภาคตะวันออก
What is the attitude of lecturers and how is the research environment in your faculty? The lecturers are interested in conducting research. However, half of our lecturers are studying. Lecturers carry out research by working with other departments; for instance, the Faculty of Nursing, Faculty of Engineering, the Health Care Center, and the College of Sport Science. Furthermore, the Public Health Center and the Primary Care Unit uses research productivity as an index to measure performance and our faculty's employees are also their consultants. We are now trying to increase research productivity	**ทัศนคติของคณาจารย์และบรรยากาศการวิจัยของคณะเป็นอย่างไร** อาจารย์สนใจทำวิจัยกันมาก แต่ก็ยังมีอาจารย์บางส่วนที่ยังเรียนอยู่บ้างก็ประมาณครึ่งหนึ่งของอาจารย์ทั้งหมด คนที่ทำวิจัยก็จะทำร่วมกับหน่วยงานภายนอก เช่นร่วมกับคณะพยาบาล คณะวิศวกรรมศาสตร์ ศูนย์สุขภาพและศูนย์วิทยาศาสตร์การกีฬา นอกจากนี้ทางสถานีอนามัยจังหวัดและศูนย์สุขภาพชุมชนมีเกณฑ์มาตรฐานที่ใช้งานวิจัยเป็นส่วนหนึ่งของดัชนีชี้วัด โดยเขาจะมาปรึกษางานกับเราด้วย ตอนนี้คณะสาธารณสุข จะพยายามให้มีงานวิจัยมากขึ้น

What are the sources of research funding? Research funding is derived from two main sources. The first source of funding is from our faculty to support new researchers. We have plenty of budgets from which individual projects receive 60,000 baht per project. The rest is from external source, such as The Thai Research Fund Regional Office, Thai Health Promotion Foundation, World Health Organization, and The Federation of Thai Industries.	**งบประมาณการวิจัยได้มาจากที่ไหน** แหล่งเงินทุนได้มาจาก 2 ส่วน คือจากเงินรายได้ของคณะเพื่อสนับสนุนนักวิจัยรุ่นใหม่ คณะมีเงินวิจัยมีค่อนข้างมากโดยโครงการเดี่ยวจะให้ทุนที่ประมาณ 60,000 บาท แหล่งเงินทุนอีกแห่งคือจากหน่วยงายภายนอก เช่น สำนักงานกองทุนสนับสนุนการวิจัย สำนักงานกองทุนส่งเสริมสุขภาพ องค์การอนามัยโลก และสภาอุตสาหกรรม
What are the research topics that lecturers are interested in? Research topics go by subjects; for instance, factory health promotion or environmental health.	**คณาจารย์ในคณะสนใจทำวิจัยในหัวข้ออะไร** สำหรับหัวเรื่องในการวิจัยก็เป็นไปตามสาขาวิชาชีพ เช่น การสร้างเสริมสุขภาพในโรงงานหรือในโรงพยาบาล รวมทั้งอนามัยสิ่งแวดล้อม
How does your faculty support lecturers to improve research skills? We teach research subjects and we assist The Ministry of Public Health in implementing research productivity in the eastern region by working together with the health promotion community in Rayong province. Moreover, we take part in some research projects in many provinces, such as Chachoengsao, Chonburi, Chantaburi and Sakeaw. Furthermore, The Health System Research Institution is now established in my faculty, and invites The Dean of our faculty to be a consultant. We are now in the process of building database linkage with Mahidol University and for this we receive money from Thai Research Fund Regional Office. When this project is finished, the database will bring benefits to my faculty and other public health organizations.	**คณะให้การอบรมเพิ่มพูนทักษะเกี่ยวกับการวิจัยแก่คณาจารย์อย่างไร** เรามีวิชาวิจัยของคณะและตอนนี้กระทรวงสาธารณสุขให้อาจารย์ช่วยดูงานวิจัยในภาคตะวันออกให้กับชมรมสร้างเสริมสุขภาพ จ. ระยอง นอกจากนี้เราก็ไปช่วยงานวิจัยตามที่เขาเชิญมา เช่น ฉะเชิงเทรา ชลบุรี จันทบุรี และสระแก้ว นอกจากนี้สถาบันวิจัยระบบสาธารณสุข ยังให้คณะเราเป็นที่ตั้งของสถาบันให้คณบดีเป็นที่ปรึกษาของสถาบันด้วย เราจะเชื่อมโยงเครือข่ายข้อมูลกับมหาวิทยาลัยมหิดล ซึ่งได้ทุนจากสำนักงานกองทุนสนับสนุนการวิจัย โดยจะนำเอาฐานข้อมูลของคณะเชื่อมต่อกับฐานข้อมูลของมหาวิทยาลัยมหิดล ซึ่งกำลังอยู่ในกระบวนการดังนั้นถ้าฐานข้อมูลออกมาจะเป็นประโยชน์ต่อสถาบันและหน่วยงานที่เกี่ยวข้องกับสาธารณสุข
What are the factors that influence lecturers to do research? 1. The vision of faculty's administrators has supported research activities. 2. Updated research news and information from the University's research unit is continually distributed to us both from The Vice Presidents and sometimes directly from the President. From these sources, information can be gathered in addition to the intranet system. 3. We have a high level of research funding. We offer research funding to applicants based on the University criteria. We have our own research committees. When we grant, we give researchers 50 percent of the funding first and when they submit their works, we pay the rest. We have never given the whole amount of funding before the work is complete. The researcher's salary is paid under the university's financial regulation system. Nevertheless, the researchers who gain external source of funding from The Health Systems Research Institute, can receive more money. Some lecturers now have unfinished	**ปัจจัยที่เกื้อหนุนการวิจัยของคณะคืออะไร** 1. วิสัยทัศน์ของผู้นำที่สนับสนุนการวิจัยมาโดยตลอด 2. ข่าวสารด้านการวิจัยที่มีมาอย่างต่อเนื่อง มหาวิทยาลัยจะส่งเรื่องมาที่คณะตลอด บางครั้งผ่านมาทางรองอธิการบดี บางครั้งท่านอธิการบดีก็เป็นผู้ส่งเรื่องมาโดยตรง ทางคณะได้รับรู้ข่าวสารงานวิจัยมาก และคณะจะได้รับรู้ข่าวสารทาง Intranet ด้วย 3. คณะมีทุนมากมาย การให้ทุนใช้ระเบียบของมหาวิทยาลัย โดยมีกรรมการคณะเป็นผู้พิจารณา เราจะให้ทุน 50% ก่อน พอส่งงานจะส่วนที่เหลือเราไม่ได้ให้ทีเดียวเป็นก้อน ส่วนค่าตอบแทนก็จะอยู่ในระเบียบซึ่งเป็นค่าตอบแทนผู้ทำการวิจัย แต่ถ้าทำวิจัยให้กับสถาบันวิจัยระบบสาธารณสุขจะได้เยอะกว่า ตอนนี้อาจารย์บางท่านก็ยังมีงานวิจัยเก่าค้างอยู่ 4. ธรรมชาติของคณะสาธารณสุขศาสตร์ที่เอื้อต่อการทำวิจัย เรามีนักศึกษาปริญญาโทและเราวางแผนไว้ถึงการเปิดสอน

research tasks. 4. The nature of Faculty of Public Health is a supportive research environment. We have master degree students and we plan to open a doctoral degree program. Therefore, our thirty lecturers must have productivity that motivates them to do research. 5. We put our effort into producing research outcomes because this university aims to be a research based university. Luckily this faculty has plenty of research funding. Actually lecturer has four main commitments: teaching, researching, performing academic service and maintaining Thai culture. Although our lecturers have high workloads, they can manage their time. The lecturers teach students during weekdays and conduct their research on the weekend. We have time to do research within our working area as we have many post-graduate students who work in the eastern region. They could become research assistants giving us more time and convenience to carry out our research.	ปริญญาเอก ดังนั้น อาจารย์ในคณะมีประมาณ 30 กว่าคน อาจารย์ต้องทำผลงาน เพื่อผลักดันให้เกิดการวิจัย 5. เราให้น้ำหนักการวิจัยตามนโยบายของมหาวิทยาลัยที่ต้องการเป็นมหาวิทยาลัยวิจัย เราโชคดีที่มีทุนมากเพราะที่จริงแล้วอาจารย์ต้องมีภาระงานใน 4 บริบทคือ สอน วิจัย บริการวิชาการ และทำนุบำรุงศิลปวัฒนธรรม ถึงแม้ว่าอาจารย์จะมีภาระงานมากแต่อาจารย์ต้องบริหารเวลาอาจารย์ที่ต้องทำวิจัย อาจใช้เวลาในช่วงวันหยุด เพราะเรามีสอนในวันธรรมดาและเสาร์ – อาทิตย์ เราก็มีเวลาทำวิจัยในพื้นที่ ประกอบกับคณะสาธารณสุขศาสตร์มีลูกศิษย์ที่จบปริญญาโทที่ทำงานในภาคตะวันออกมาเป็นผู้ช่วยวิจัยด้วย ทำให้ทำวิจัยได้ง่ายขึ้น
What are the factors that influence lecturers to do less research? We don't think that our weaknesses are serious problems, but are things that we can develop. Our administrator tries to eliminate those weaknesses. Our lecturers have never worried that they get less money from doing research. On the other hand, they understand that research is an important element of teaching activities. Research is part of their demonstrated productivity that can be recorded for special promotion. Hence, the obstructive factors can include fatigue as some lecturers have to take care of their children. Moreover our lecturers are studying for their doctoral degrees. Some of them are in the process of searching for institutions and furthering their degree. Therefore, there are only graduated lecturers doing research at this time.	**ปัจจัยที่เป็นจุดอ่อนหรืออุปสรรคต่อการวิจัยของคณะคืออะไร** เราไม่ได้มองว่าจุดอ่อนคือปัญหา แต่จะเป็นสิ่งที่เราสามารถพัฒนาได้ ผู้บริหารของคณะพยายามจะอุดจุดอ่อน และคนในคณะก็ไม่ได้มองว่าการทำวิจัยได้เงินน้อย อาจารย์จะมองว่าวิจัยเป็นส่วนหนึ่งของการสอน ดังนั้นจึงต้องนำวิจัยมาคิดเป็นภาระงานให้อาจารย์ด้วยเพื่อนำมาพิจารณาประเมินให้ขั้นพิเศษ ดังนั้น อุปสรรคอาจเกิดจากความเหนื่อยเพราะอาจารย์บางท่านมีลูกอ่อน และขณะนี้อาจารย์ในคณะยังเรียนปริญญาเอกครึ่งหนึ่ง อาจารย์บางส่วนก็อยู่ในระหว่างการวางแผนศึกษาต่อทำให้เขายุ่งอยู่กับการหาที่เรียน ดังนั้นคนที่เหลืออยู่คือคนที่กำลังจะไปเรียนแต่ที่จบแล้วเขาก็ทำวิจัยกันนะ
How does the faculty support lecturers in publishing their research work? Our lecturers generally publish their research works in journals within Thailand especially in the specific journals that related to their field of study or the journals of the institution that they graduated. We solve this problem of local publication only by inviting overseas professors to assist us in order to raise opportunity for publishing in the international journals. However, we are at the starting period. If our lecturers who have been studying away come back, we hope we will have more publications. If lecturers want to produce international publication, we have payment criteria. For a lecturer who wants to attend an overseas presentation conference, we give 20,000 baht per head. In the future, if lecturers are more interested in publishing international journals,	**คณะมีการสนับสนุนการตีพิมพ์อย่างไร** อาจารย์คณะสาธารณสุขศาสตร์ ตีพิมพ์ผลงานในวารสารในประเทศไทยกันมากโดยเฉพาะ Journal ที่เป็นสายอาชีพหรือวารสารวิจัยของสถาบันที่จบการศึกษามา ตอนนี้เราแก้ไขโดยการเชิญ Professor จากต่างประเทศมาช่วยเป็นที่ปรึกษาให้อาจารย์สามารถตีพิมพ์ผลงานใน Journal ต่างประเทศ แต่ตอนนี้เราแค่พึ่งเริ่ม ถ้าคนของเราจบมามากกว่านี้ประมาณครึ่งหนึ่ง เราก็สามารถตีพิมพ์ได้มากกว่านี้ การตีพิมพ์คณะจะพยายามให้ทุนสนับสนุนการตีพิมพ์ในวารสารต่างประเทศ คณะจะต้องพิจารณาในการจ่ายเงิน ในการไปนำเสนอวิจัยในต่างประเทศเราให้คนละ 20,000 บาท แต่ในอนาคตถ้าอาจารย์

we will reexamine a payment plan.	ทำวิจัยแล้วตีพิมพ์ต่างประเทศมากขึ้น คณะต้องมาทำแผนรองรับว่าจะให้ค่าตอบแทนอย่างไร

How does tenure status affect research productivity? Our faculty has 2 Professors, one Associate Professor and three Associate Professor on the waiting list, we also have many Assistant Professors. Therefore, tenure status influences research productivity. A new wave of our lecturers is the young generation whose age is around 30 years old and is studying for their doctoral degrees. We form research teams that aim to develop groups of new generation lecturers. We have trained our students in the hope that it will create the next generation of lecturers. We also have grants for master degree students to continue studying their doctoral degrees.	**ตำแหน่งวิชาการมีผลต่อการผลิตผลงานวิจัยอย่างไร** คณะสาธารณสุขศาสตร์ มีศาสตราจารย์ 2 คน รองศาสตราจารย์ 1 คน และที่รอขอตำแหน่งรองศาสตราจารย์อีก 3 คน และผู้ช่วยศาสตราจารย์ที่รอขออยู่อีกหลายคน ดังนั้นตำแหน่งวิชาการมีส่วนผลักดันให้เกิดการวิจัย ซึ่งพลังส่วนหนึ่งคือความเป็นคนรุ่นใหม่อายุประมาณ 30 กว่าๆ กำลังเรียนปริญญาเอกด้วย อาจารย์จะจับทีมกันเพื่อพัฒนาคนรุ่นนี้ในการทำวิจัย รวมทั้งการอบรมให้ลูกศิษย์ให้เกิดพลังเพื่อสร้างคนรุ่นต่อไป คณะของเรามีทุนให้ลูกศิษย์เรียนปริญญาเอกด้วย
How does the family member affect research productivity? The majority of our lecturers are single. However, the married lecturers are still active in doing research. The Dean of this faculty is now 60 years old, she still teaches research subject. I don't think that to take care of family member impact on research productivity. Actually our lecturers have a high research workload, so they must manage their time well. Hence a real impact on research productivity can be made by an individual that requests development and research funding. Finally a faculty's policy to teach master degree programs can also affect productivity.	**ภาระครอบครัวมีผลต่อการผลิตผลงานวิจัยอย่างไร** คณะสาธารณสุขศาสตร์มีแต่อาจารย์ส่วนใหญ่ที่เป็นโสด แต่บางคนที่แต่งงานแล้วก็ยัง Active เรื่องการทำวิจัยอยู่ คณบดีซึ่งอายุ 60 กว่าแล้ว ก็ยังไปสอนวิจัยในพื้นที่ อันนี้คิดว่าไม่มีผลกระทบ ที่จริงแล้วอาจารย์ในคณะมีงานวิจัยล้นมือจึงต้องมีการบริหารเวลาดีๆ ดังนั้นสิ่งที่มีผลต่อการวิจัย น่าจะเป็นตัวบุคคล ซึ่งเป็นส่วนหนึ่งที่ต้องการการพัฒนา นอกจากนี้คือทุนวิจัยและ นโยบายของคณะในการเปิดสอนปริญญาโท
How does the level of education affect research productivity? Obviously the active research lecturers have doctoral degrees. Whereas the master degree graduated lecturers are now busy with applying for doctoral degree courses, and some of them are currently studying doctoral degree. We expect that in the next 4 to 5 years, our faculty will have all doctoral graduated lecturers.	**ระดับการศึกษามีผลต่อการผลิตผลงานวิจัยอย่างไร** คนที่ Active ในการทำวิจัยของคณะจะเป็นอาจารย์ที่จบปริญญาเอกแล้ว เพราะอาจารย์ที่จบปริญญาโท กำลังยุ่งอยู่กับการสมัครเรียนต่อปริญญาเอกหรือกำลังเรียนปริญญาเอกอยู่ คาดว่าในอีก 4 – 5 ปีข้างหน้า คณะจะมีแต่อาจารย์ที่จบปริญญาเอก
What are the changes in research situation from the past to the present? Research activities from our faculty are much more developed than before. We did individual projects in the past, but we now form groups of research teams. We have network linking with other faculties and organizations. We plan to do research work that in turn produces new policies created from the research itself. In the past we didn't recognize that research productivity should include the implementation of policies. We did small projects for developing our university; whereas now we conduct a higher level of research for supporting provinces in the eastern region.	**คณะมีการเปลี่ยนแปลงของนโยบายและทิศทางการวิจัยจากอดีตถึงปัจจุบันอย่างไร** การวิจัยจากอดีตถึงปัจจุบันนั้นดีขึ้นกว่าแต่ก่อน เมื่อก่อนทำเป็นโครงการเดียว ตอนนี้เราทำเป็นชุดโครงการ เรามี Network กับคณะอื่นๆ และหน่วยงานอื่นๆ เราพยายามทำตามวิจัยที่มี impact ต่อการ move policy ด้วย เมื่อก่อนงานวิจัยของเราไม่ค่อยคำนึงว่าวิจัยควรมีส่วนผลักดันให้เกิด policy เราทำวิจัยเล็กๆ ระดับมหาวิทยาลัย แต่ตอนนี้เราทำในระดับจังหวัด และระดับภาค

What are the trends of research productivities in the future? Research must be an element of educational assurance policy. We will put more emphasis on conducting research that improves the quality of teaching and learning, classroom research and course evaluation. Our research uses survey methods. We put significant stress on research that is used for regional levels. Nevertheless, if lecturers want to do a specific research field, we still offer research grants but they may receive a lower amount of money. We focus on action research and operation research, but some of them still select survey methods. However, we allow them to proceed with this method as it gives research experience.	**แนวโน้มงานวิจัยของคณะในอนาคตจะเป็นอย่างไร** วิจัยต้องปรับเข้าไปในแผนประกันคุณภาพการศึกษา เราคิดว่าต้องเพิ่มวิจัยที่จะปรับปรุงคุณภาพการเรียนการสอน วิจัยในชั้นเรียน และวิจัยประเมินผลหลักสูตร การวิจัยของคณะเป็นวิจัยแนวสำรวจ เราเน้นการวิจัยระดับภาค แต่ถ้าอยากทำเฉพาะจุดเราก็ให้ทุนแต่อาจจะน้อยลง เราเน้น Action research และ Operation research แต่บางส่วนก็ยังใช้ Survey เราก็ยอมนะเขาจะได้มีประสบการณ์
What should the University do to increase research productivity? 1. The university should have linkage network among each faculty. Normally the research teams are the members' closest friends, but we plan to increase cooperation with other departments, such as the Quality of Work Life project that has joined with the Federation of Thai Industries. 2. A university database system should be in operation and easy to access. 3. The university should increase the amount of research conferences and carry out more advertising as whenever the university has a conference, there are only team members and friends who attend.	**มหาวิทยาลัยควรปรับปรุงในส่วนใดเพื่อให้คณาจารย์ผลิตผลงานวิจัยมากขึ้น** 1. ต้องให้มีเครือข่ายระหว่างกันในการทำวิจัยระหว่างคณะ อาจารย์ที่มีผลิตผลงานวิจัยมักชวนกันในกลุ่มคนสนิทโดยดึงสมาชิกเข้ามาร่วมแต่ตอนนี้เขาก็พยายาม Link ระหว่างภาควิชา เช่นที่เราทำในโครงการ Quality of Work Life ของสภาอุตสาหกรรม 2. ต้องการให้มหาวิทยาลัยทำฐานงานวิจัยให้เสร็จและสามารถเข้าถึงง่ายในการ Search ข้อมูล 3. มหาวิทยาลัยเปิดโอกาสให้แสดงผลงานวิชาการ แต่จัดขึ้นทีไรคนที่ไปฟังมักเป็นเพื่อนหรือคนสนิทไปเชียร์มากกว่า ควรส่งข่าวว่าจะมีการประชุมให้ทุกคณะทราบ

Case Eight
Faculty of Science

Interview Date: 16 May 2005
Time: 10.00am

Could you please give me some details of your roles toward research activities in your faculty? My responsibilities are to encourage lecturers to do research by motivating them to submitting research proposals, and I especially focus on the new lecturers who have just gained master or doctoral degrees. I try to give them research experience in order to increase their opportunity for getting large funding from the outside institutions.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของคณะ** พยายามชักจูงให้อาจารย์สนใจการทำวิจัย ให้เขานำโครงการวิจัยมาเสนอโดยเฉพาะอาจารย์ที่จบปริญญาโทหรือปริญญาเอกใหม่ๆ เพื่อให้มีประสบการณ์ไปขอเงินทุนที่มากขึ้นจากภายนอกด้วยการเขียน Proposal ที่ใหญ่ขึ้น
Could you please give me some details of your work and research experience? I have worked in this position for 2.5 years. I am a specialist in marine sciences and study crustaceans as well as assisting fishermen with increasing their productivity. Experienced lecturers usually know how to apply their knowledge to assist other people. I started doing research by applying for research funding. I worked as a researcher at Thailand Department of Fisheries for 8 years and have worked in this University for 9 years. During the first two years, I had to prepare for teaching. I had no time to do research. After that I started doing research. At that time, I received only 10,000-20,000 baht. It was a small amount. After that I had more research experience, I received 50,000- 80,000 baht and 200,000 baht from the Thai Research Regional Office and the National Science and Technology Development Agency by having those funds shared with lecturers in Kasetsart University and Mahidol University. I have improved myself step by step and also published my research to show other researchers about what I have done. After that they are likely to invite me to join their projects. Last year I did one research project but I haven't published it yet. I spend 50 percent of time working in the administrative position. I have to do many kinds of jobs. Sometime I am worried and cannot concentrate on my work. It wastes my time. I would like to spend my time doing research and have publication rather than work in an administrative position.	**กรุณาเล่าถึงประสบการการทำงานและการวิจัยของท่าน** ผมทำงานในตำแหน่งนี้มา 2 ปีครึ่ง ผมสนใจงานวิจัยด้านวาริศาสตร์ วิทยาศาสตร์ทางทะเล การเพาะเลี้ยงสัตว์น้ำชายฝั่ง พวกกุ้งกุลา กุ้งขาว ปูม้า ปูทะเล พวก crustacean และ physic-chemical เพื่อช่วยเหลือเกษตรกรให้มากขึ้น อาจารย์ที่มีประสบการณ์วิจัยมากจะรู้จัก Apply ผมเริ่มทำวิจัยจากการขอทุน ผมอยู่กรมประมงมา 8 ปีผมเป็นนักวิจัยโดยตรง ปัจจุบันผมอยู่มหาวิทยาลัยนี้มา 9 ปี พอเป็นอาจารย์มีภาระการสอนมากต้องเตรียมการสอน 2 ปีแรก ผมไม่ได้ทำวิจัยเลย หลังจากนั้นเริ่มทำวิจัย ครั้งแรก ๆ ได้ทุนมาเพียง 1 – 2 หมื่นเอง เงินมันน้อย จากนั้นก็ 50,000- 80,000 บาทและ 200,000 บาท ต่อมาก็ได้จากงบประมาณแผ่นดินจาก สำนักงานกองทุนสนับสนุนการวิจัย (Thai Research Regional Office) และสถาบันพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ (National Science and Technology Development Agency) โดยเป็นโครงการวิจัยร่วมกับมหาวิทยาลัยเกษตรศาสตร์และมหาวิทยาลัยมหิดล เราต้องปฏิบัติตนอย่างเป็นขั้นตอนและผลิตผลงานวิจัยสู่สาธารณชน เขาจะมองเห็นเองว่าคุณทำอะไร จะมี Network ในการชวนกันมาร่วมทำวิจัย ใน 1 ปีที่ผ่านมา ผมผลิตงานวิจัยออกมาแต่ยังไม่ได้ตีพิมพ์ ผมใช้เวลา 50 % ทำงานในตำแหน่งบริหาร ผมต้องทำงานหลายอย่างจึงมีความกังวลและเสียสมาธิในการทำวิจัย ผมเสียดายเวลา ผมอยากเอาเวลาที่ต้องมาเป็นผู้บริหารมาเขียน paper เพื่อตีพิมพ์
What are the attitudes of lecturers and the research environment in your faculty? More than half of the lecturers in this faculty are willing to do research especially the young generation who under 45 years old. On the other hand, the older lecturers who are nearly retired hardly participate in doing research at all.	**ท่านมีบทบาทอย่างไรต่อการวิจัยของคณะ** คณะวิทยาศาสตร์นั้นอาจารย์มากกว่า50 % มุ่งเน้นการทำวิจัยโดยเฉพาะพวก Young Generation ที่มีอายุไม่เกิน 45 ปี ในขณะที่อาจารย์รุ่นเก่าที่อยู่มานานมากๆ และใกล้เกษียณแล้ว การวิจัยจะอ่อนล้าไปบ้าง

What are the research topics that lecturers are interested in? Research activities focus on improving and supporting the development of eastern region. Although we have our own criteria, sometime it's difficult to follow those standards because this faculty has diversified departments. We cannot set a specific kind of research. Generally research in this faculty has two forms consisting of basic research and applied research, stressing the development of innovative teaching methods such as CAT, slide and model. Every year, we have research funding of around 23,000 baht to support our researchers. The research funding derives from 10 percent of faculty's incomes in which 6-7 percent is distributed to the lecturers, while 4 percent is for undergraduate and post-graduate students. In the year 2005, we had a research funding of around 1 million baht.	**รูปแบบการวิจัยของคณะเป็นอย่างไร** คณะวิทยาศาสตร์เป็นงานวิจัยส่งเสริมบทบาทของมหาวิทยาลัยในการพัฒนาภาคตะวันออก เรามี criteria แต่มันก็อาจไม่เป็นไปตามนั้น เพราะเรามีความหลากหลายของสาขาวิชาค่อนข้างมาก เราจะไปกำหนดตายตัวว่าต้องเป็นเรื่องนั้นเรื่องนี้ไม่ได้ การวิจัยของคณะแบ่งเป็น Basic Research และ Applied Research เพื่อการผลิตสื่อการเรียนการสอน เช่น CAT, Slide, และ Model ในแต่ละปีมีงบประมาณสนับสนุนการวิจัย 230,000 บาท ซึ่งได้มาจากเงินรายได้ของคณะที่จัดสรรไว้ 10 % โดยแบ่ง 6 – 7 % เป็นทุนวิจัยสำหรับอาจารย์ และ 3-4 % เป็นทุนวิจัยสำหรับนิสิตปริญญาตรีและปริญญาโท สำหรับปีนี้ เรามีงบประมาณถึง 1,000,000 บาท
Do lecturers prefer qualitative to quantitative research? Generally we do quantitative research because our projects are based on statistics. We have 12-15 research projects a year from our faculty research funding and 6-7 projects from the national funding. The 6-7 projects that I mentioned consist of sub-projects of around 3-4 topics.	**คณะเน้นการวิจัยเป็นเชิงปริมาณหรือเชิงคุณภาพ** การวิจัยของคณะจะเป็นวิจัยเชิงสถิติโดยมีการวิจัยปีละประมาณ 12 - 15 เรื่องจากทุนวิจัยของคณะ และที่อาจารย์ได้ทุนจากงบประมาณแผ่นดินหรือจาก สำนักงานกองทุนสนับสนุนการวิจัย อีก 6 – 7 โครงการที่เป็นโครงการใหญ่ ซึ่งจะประกอบด้วยโครงการย่อยอีก 3 – 4 โครงการ
How does your faculty support lecturers in publishing their productivity? Every year we have research outputs and articles published of more than 50 topics both in international journals (50%) and the rest 50% is presented at national conference, such as the Sciences and Technology conference or the academic conference that is held at Kasetsart University. Nevertheless, the academic conference at this university is not so attractive; the lecturers are not willing to participate because the conference is not widely well-known. But our University tries to encourage lecturers to join and to present their works such as at the Academic Fair last year. There were 20 research projects presented in this exhibition. The university received more cooperation than before. For instance, the conference about SMEs also had good cooperation from Physics and Food Sciences Departments.	**คณะมีการสนับสนุนการตีพิมพ์อย่างไร** ในแต่ละปีมีการตีพิมพ์ไม่ต่ำกว่า 50 เรื่อง ใน International Journal ประมาณ 50 % และอีก50 % คือการไปนำเสนอผลงานวิชาการในระดับชาติ เช่น ในงานประชุมวิชาการทางวิทยาศาสตร์และเทคโนโลยี หรืองานประชุมวิชาการที่มหาวิทยาลัยเกษตรศาสตร์ แต่สำหรับการประชุมวิชาการของสถาบันนี้กลับไม่ค่อยมีอาจารย์สนใจเพราะว่าเกรดยังต่ำลำดับความน่าเชื่อถือมีน้อยแต่ก็พยายามชักชวนให้อาจารย์มานำเสนอผลงาน ในปีที่ผ่านมาก็มีอาจารย์นำโครงการมาเข้าร่วมประมาณ 20 โครงการ ก็ถือว่าได้รับความร่วมมือดีมากหรืองานจัดแสดงของ SMEs ก็ได้ความร่วมมือจากภาควิชา Physics และ Food Sciences ดีมาก
What are the factors that affect low or high research productivity? 1. The lecturers are eager to do research through self motivation alone and the faculty also provides research funding for them. Research is an important duty for lecturers in this faculty for producing innovative knowledge for teaching students. Some lecturers do more, while some do less, but they all still do it. I have many research projects but sometime I cannot concentrate on my work. One important thing that my faculty tries to do is to give more	**สาเหตุที่คณาจารย์ทำวิจัยกันมากหรือน้อยคืออะไร** 1. มีการตื่นตัวโดยธรรมชาติด้วยตนเองและมีทุนให้ อาจารย์คณะวิทยาศาสตร์ต้องทำงานวิจัยเพื่อให้เกิดองค์ความรู้ในการสอนนิสิต แต่จะทำมากหรือทำน้อยอาจารย์ก็ทำ โดยส่วนตัวผมแล้วผมก็มีงานวิจัยมาก แต่บางทีก็ไม่มีสมาธิในการเขียน paper แต่สิ่งหนึ่งที่คณะพยายามทำก็คือ การสนับสนุนนิสิตระดับบัณฑิตศึกษา โดยผลักดันให้เขาเขียน paper ร่วมกับอาจารย์ผู้สอน และให้พวกเขาตีพิมพ์โดยใช้ชื่อนิสิตจะเป็นชื่อ

support to post-graduate students by pushing them to do research with their advisors and to let student's name show on the first rank followed by the lecturer's name. This is the same method that foreign universities use.	แรกและชื่อของอาจารย์จะเป็นเรื่องรองเช่นเดียวกับในต่างประเทศ
2. The lecturers' duties are teaching and carrying out research. This faculty aims to push research projects to be the best. On the other hand, our faculty has increased the number of students. This is a conflicting situation because we have more income but lecturers have higher teaching workloads, especially lecturers who are responsible for teaching the compulsory subjects. Those subjects include physics, chemistry, and mathematics, and both the students in this faculty and the other faculties must be taught these subjects including the students from the Faculty of Engineering. This is the reason why some lecturers have less research productivity. However, the lecturers do try to increase their research performance. For instance, the physics department has just received research funding from the Thai Research Fund Regional Office and the lecturers have to donate their free time for doing this research.	2. ภาระงานสอนของอาจารย์คณะวิทยาศาสตร์ คือ สอน ครึ่งหนึ่งและวิจัยครึ่งหนึ่ง คณะต้องการผลักดันให้วิจัยเป็นเลิศ ในขณะเดียวกันก็รับนิสิตใหม่เข้ามามากเพื่อเพิ่มรายได้ให้มากขึ้นโดยเฉพาะภาควิชาพื้นฐาน อาจารย์จึงมีภาระงานสอนมากขึ้น เช่น ฟิสิกส์ เคมี คณิตศาสตร์ อันเป็นวิชาพื้นฐานของคณะอื่นด้วย เช่น วิศวกรรมศาสตร์ ดังนั้นอาจารย์จึงมีวิจัยน้อยลง แต่อาจารย์ก็พยายามสร้างผลงานวิจัย เช่น สาขาวิชาฟิสิกส์ก็ได้ทุนจากสำนักงานกองทุนสนับสนุนการวิจัย ดังนั้นอาจารย์จึงต้องเสียสละเวลามาก
3. Our faculty also uses research productivity as the criteria to evaluate lecturer's performance for promotion. The lecturers who have tenure status must produce research outcomes. However, there is no formal regulation to force them.	3. คณะมีการใช้ผลงานวิจัยมาประเมินเพื่อเลื่อนขั้นอาจารย์ในการปรับตำแหน่งทางวิชาการ โดยอาจารย์ที่ได้ตำแหน่งทางวิชาการผลิตผลงานวิจัย แต่ก็ยังไม่มีนโยบายที่เข้มงวดออกมา
4. Our faculty encourages lecturers to do integrated research rather than individual projects. The researchers gain more advantages, if they do diversified projects. We have also set criteria for evaluating a researcher. For instance, he must finish previous projects, and the projects must be based on the governmental policy for developing the eastern area. We mainly focus on doing research in teams of which members are from different departments. Lecturers who graduated from the USA sometimes apply for international research funding with their advisors. For lecturers who graduated in the field and find it is difficult to form teams here, they join the teams of other institutions or participate in the international research teams.	4. ทางคณะจะไม่เน้นวิจัยที่ทำคนเดียว เราเน้นการ Integrate หรือการบูรณาการซึ่งจะทำเป็นชุดโครงการหรือเป็นทีมและถ้ายิ่งมีความหลากหลายเราก็จะพิจารณาเป็นพิเศษ คณะกำหนดลักษณะของผู้สมัครขอทุนไว้ว่า จะต้องไม่เป็นผู้ติดค้างงานวิจัย และต้องสอดคล้องกับนโยบายการพัฒนาภาคตะวันออก เราพยายามให้อาจารย์ในภาควิชาต่างๆ ทำวิจัยร่วมกันเพื่อให้เกิด output ที่ดีขึ้น อาจารย์ที่จบจากอเมริกาเขาก็ไปเขียนขอทุนในต่างประเทศร่วมกับ Advisor ยกเว้นบางคนที่เขาจบมาจากสาขาวิชาที่ไม่เกี่ยวข้องกับสาขาอื่น เช่น วิทยาศาสตร์การแพทย์โรคเอดส์ เขาก็ไปทำวิจัยร่วมกับมหาวิทยาลัยอื่นหรือต่างประเทศ

What are the sources of information for doing research? Our faculty doesn't have our own database, but the University does. Moreover lecturers also search data from the Internet, such as the website of The Thai Research Fund Regional Office, and the National Science and Technology Development Agency. There is plenty of research funding. Generally the lecturers know where they can apply for research funding. Therefore, the source of information is not a hindrance of doing research.	**แหล่งข้อมูลการวิจัยคือที่ไหน** สำหรับในเรื่องแหล่งข้อมูลคณะไม่ได้ทำเอง มหาวิทยาลัยเป็นคนทำ นอกจากนี้อาจารย์จะดูจาก Internet เช่น website ของสำนักงานกองทุนสนับสนุนการวิจัย สำนักงานพัฒนาวิทยาศาสตร์และเทคโนโลยีแห่งชาติ ซึ่งทุนวิจัยมีมากมาย อาจารย์เองก็ทราบกันดีว่าเขาจะเขียนขอทุนได้จากที่ไหน ดังนั้นข่าวสารจึงไม่ใช่อุปสรรคในการทำวิจัย
How does your faculty support lecturers to improve research skills? Actually this faculty hasn't prepared our own research training course, but the university has. However, there are not so many lecturers who participate in those courses. In spite of the University inviting good speakers, there are only around 30-40 percent of lecturers in this faculty who attend the courses. Lecturers know that they can learn from internet, for instance, last year the University invited qualified and famous guest speakers to teach how to write research proposal. However, some lecturers have these skills already and they preferred to do something else rather than join the course. The development of research skills for the lecturers in the Faculty of Science started with obtaining research funding from the faculty and from the national funding or other organizations. Some lecturers received post-doctoral research funding and then continued to develop their skills. There are only a few lecturers who argue that they didn't receive the information and requested for training courses. If we provide those courses, they will be the same topics as University did. I think lecturers who have master degree should have experience in doing research, especially if they did their thesis by themselves. Sometimes lecturers did research in pairs formed from between the lecturers who have and have not had research experience. The inexperience person is the member, while the experienced lecturer is the team leader or mentor.	**คณะมีการพัฒนาทักษะความรู้ด้านการวิจัยให้แก่คณาจารย์อย่างไร** คณะไม่มีการสร้างตรงนี้เอง แต่มหาวิทยาลัยเป็นผู้ทำโดยจะเป็นแกนกลาง แต่ก็ได้รับการตอบรับไม่ดีนักประมาณ 30 – 40 % จากอาจารย์ในคณะ เพราะหัวข้อที่มาสอน อาจารย์สามารถดูได้จาก Internet ถึงแม้ว่าจะมีวิทยากรดีๆ มาพูด เช่นการเขียนโครงการวิจัย อาจารย์พอรู้อยู่แล้ว จึงเอาเวลาไปทำอย่างอื่นดีกว่าสำหรับอาจารย์ในคณะวิทยาศาสตร์ ถ้าจะมองว่าอาจารย์มีพัฒนาการทางด้านวิจัยมาอย่างไรนั้น กล่าวคือ อาจารย์ที่เคยได้ทุนของคณะก็ถือเป็นจุดเริ่มต้น แล้วจึงขยับไปขอทุนแผ่นดินที่สภาวิจัยแห่งชาติ บางคนก็ขอทุน Post-doctoral เป็นการต่อยอดให้กับคนจบปริญญาเอกใหม่ๆ อาจารย์จะมีการพัฒนาไปเอง แต่จะมีก็เพียงกลุ่มอาจารย์เด็กๆ ส่วนน้อยที่ไม่ค่อยได้รับรู้ก็จะเรียกร้องให้มีการอบรม แต่มันก็จะไปซ้ำกับของที่มหาวิทยาลัยจัด สำหรับเรื่องการเขียนขอทุน ถ้าอาจารย์เรียนปริญญาโทมาแล้ว ก็น่าจะรู้วิธีการเขียนขอทุน ถ้าตอนที่เรียนเขียน proposal เอง บางทีคณะจะให้มีการจับคู่กันทำวิจัยระหว่างอาจารย์ที่มีประสบการณ์มากกับน้อย ทำให้มี Mentor มาช่วย คนที่มีประสบการณ์ก็จะเป็นหัวหน้าโครงการเป็น trainer ไปโดยปริยาย
Does the graduate institution have any impact on research productivity? No, it doesn't. The lecturers in the Faculty of Science who graduated in Thailand or abroad carry out research except the old lecturers who have worked in this institution since the university was a teaching college.	**สถาบันที่จบมีผลต่อการวิจัยอย่างไร** ผมว่าไม่น่าจะเกี่ยวข้องนะ อาจารย์ที่จบทั้งในประเทศและต่างประเทศก็ทำวิจัยกันทั้งนั้น ยกเว้นอาจารย์เก่าๆ) อาจารย์ที่อยู่มาตั้งแต่มหาวิทยาลัยเป็นวิทยาลัยการศึกษา(
Do the family duties have any impact on research productivity? Yes, it does. Lecturers, who have no children, can spend more time doing research. However lecturers	**ภาระครอบครัวมีผลอย่างไรต่อการวิจัย** ภาระครอบครัวมีผลแน่นอนต่อการทำวิจัยเพราะอาจารย์ที่ยังไม่มีลูกสามารถทุ่มเทเวลาได้เต็มที่ แต่คนที่มีลูกก็พยายามร่วมมือนะ

who have children try to work on research as well. On the other hand, the young generation has more time to do research because they are single. Generally lecturers do research on the weekend. Some lecturers have 1-2 research projects.	ดังนั้นพวก Young Generation จึงทำวิจัยกันมากกว่า อาจารย์เดี๋ยวนี้แต่งงานกันช้า ปกติอาจารย์ต้องเสียสละเวลาช่วงวันหยุดเสาร์ – อาทิตย์มาทำงานวิจัย อาจารย์ที่คณะมีงานวิจัยกันทุกคน บางคนมี 1 – 2 โครงการ
Does the content of subjects support research productivity? Yes, it does. The content of science subjects that we teach requires us to do research. We have both undergraduate and post-graduate students. If lecturers do not do research, they have no money to support the student's research project. The students prefer to work with lecturers who have research grants. Many of my bachelor degree students request permission to continuing studying the master degree course by doing research with me. Thus lecturers have high motivation to encourage students to do research. Both undergraduate and post-graduate students must do research. The costs are approximately 10,000 baht per student's project.	**ธรรมชาติของคณะวิทยาศาสตร์มีส่วนสนับสนุนการทำวิจัยอย่างไร** ธรรมชาติของคณะวิทยาศาสตร์มีผลต่อการทำงานวิจัย เรามีนิสิตปริญญาตรีและปริญญาโท ถ้าเราไม่ทำวิจัย เราก็ไม่รู้ว่าจะไปเอาเงินที่ไหนมาให้กับนิสิตทำงานวิจัย อาจารย์ที่มี grants จะมีนิสิตมองทันที เช่น นิสิตของผมที่จบปริญญาตรีและต้องการเรียนต่อปริญญาโท ก็อยากมาทำงานวิจัยต่อกับผม อาจารย์จึงมีส่วนอย่างมากที่ผลักดันให้นิสิตต้องการทำวิจัย นักศึกษาของคณะตั้งแต่ปริญญาตรีถึงปริญญาโทต้องทำวิจัย ซึ่งก็มีค่าใช้จ่ายประมาณ 10,000 บาทต่อคน
How does the University research policy impact on research productivity? Although the university's research policy directly supports sciences, the University doesn't provide enough funds. The other universities have higher research funding between 5-10 million baht per year. It seems that this university has no plan for the motivation of lecturers. Generally lecturers have their own connections with other institutions. They can receive information from their friends. I have connection with my friends in Kasetsart University. I received information about the government funding for doing integrated research projects for the year 2009. I was rushed in preparing my proposal in order to join the national project. This University is a local institution. We have no qualified instructors to be a member of the national research administrative committee. This is the weakness of small and local universities. Therefore, if the lecturers need information, they should have their own connections. They should be ready for submitting research proposals at the time when the government first announces the availability of research funding. As I know, this university proposes to be a research University, but there is no formal regulation to motivate lecturers in doing research and publishing in the international journals. Nowadays to publish article in some international journals, lecturers must pay for the publication fee. For instance, it costs 5,000 baht per page, 10 pages equal to 50,000 baht. If the university has a plan to support this task, they should inform us and try to get rid of fussy financial regulations because lecturers now have to collect all bills and present them to the financial office. Moreover, they are not confident that they will	**นโยบายการวิจัยของคณะและของมหาวิทยาลัยมีผลอย่างไรต่อการวิจัย** ถึงแม้ว่านโยบายของมหาวิทยาลัยจะให้การสนับสนุนด้านวิทยาศาสตร์ แต่มหาวิทยาลัยก็ไม่ได้ให้ทุนอะไร ในขณะที่สถาบันอื่นมี grants มากมาย ปีละ 5 – 10 ล้านบาท ดังนั้นมหาวิทยาลัยเองไม่ได้สร้างแรงจูงใจอะไร อาจารย์ที่มีความรู้ทางด้านการวิจัยเขาจะมี connection กับอาจารย์นอกมหาวิทยาลัย ดังนั้นเขาจึงได้ข้อมูลข่าวสารค่อนข้างมาก อย่างเช่นผมมี Linkage กับมหาวิทยาลัยเกษตรศาสตร์ ผมก็ได้รับรู้ก่อนว่าจะมีการให้ทุนโครงการบูรณาการปี25 49 ผมก็รีบทำ proposal เพื่อจะได้เข้าไปเป็นส่วนหนึ่งของโครงการใหญ่ และที่เราไม่ค่อยรู้เรื่องเพราะเราไม่มีอาจารย์ผู้ใหญ่เข้าไปเป็น board ของเขา) สภาวิจัยแห่งชาติ (เลยนี่เป็นข้อเสียของมหาวิทยาลัยขนาดเล็กและมหาวิทยาลัยต่างจังหวัด เราไม่มีอาจารย์ที่มีความเชี่ยวชาญพอเพียงที่เขาจะเชิญไปเป็น board ของวิจัยดังนั้นข่าวสารข้อมูลจึงต้องอาศัย connection ส่วนตัว อาจารย์ต้องเตรียม proposal อยู่ตลอดเวลา ถ้ารัฐบาลมีนโยบายอะไรออกมา เขาจะได้พร้อมที่จะเสนอผลงาน มหาวิทยาลัยต้องการเป็นมหาวิทยาลัยวิจัย แต่ยังไม่เห็นการผลักดันที่เป็นรูปธรรมแม้แต่เรื่องของการตีพิมพ์ลงวารสารระดับนานาชาติ ก็ไม่มีความชัดเจน ไม่มีใครเขียนขอเพราะบาง Journal ต้องเสียเงินในการตีพิมพ์ เช่น page charge หน้าละ 5,000 ลง 10 หน้าก็ 50,000 มหาวิทยาลัยน่าจะมีอะไรมาสนับสนุน บอกมาให้ชัดเจนเลย และไม่ต้องเอาระเบียบส่วนกลางมาจับ มันจะช่วยได้มาก ปัญหาก็คือต้องมีใบเสร็จที่จะมาขอเบิก ตีพิมพ์ไปแล้วก็ไม่

receive their money back, when they pay in advance to publish research articles in international journals. Is it possible to give publication budget to publish articles in the well-known journals? Our faculty has provided a publication budget. There are two lecturers who can ask for publication funding. Our faculty research committee has developed criteria to judge the members of a project. If all the members are the staff in the Faculty of Science, they receive the whole fund. Otherwise, if there are only two people from our staff, they will receive two thirds the fund. Furthermore, the Faculty of Science has budget for writing academic works as well.	แน่ใจว่าจะได้เงินค่าตีพิมพ์ที่สำรองจ่ายหรือไม่ ถ้าเอาเป็นว่าอาจารย์มี paper แล้วเอาไปโชว์ให้มหาวิทยาลัยดูว่าเขาสามารถตีพิมพ์ได้แล้ว ขอเป็นเงินสมนาคุณมาเลย จะเป็นเงินเท่าไรก็ว่ากันไป โดยเฉพาะการตีพิมพ์ใน Journal ที่มีการค้นคว้ากันมาก)วารสารการวิจัยที่มีคนอ่านมากๆ (ตรงนี้มหาวิทยาลัยก็ไม่ได้ประกาศออกมาชัดเจน แต่คณะมีแล้วคืออย่างน้อย 2 รายที่มาของเงินเพื่อตีพิมพ์ แต่เราต้องพิจารณาชื่อผู้ร่วมวิจัยทั้งหมดว่าอยู่ในคณะของเราหรือเปล่า ถ้าอยู่ในคณะเรา เขาขอมา 20,000 เราก็ให้หมด แต่ถ้ามี 3 คน โดยที่ 2 คนเป็นอาจารย์ในคณะ ก็ได้สองในสามเป็นต้น นอกจากนี้ก็ยังมีการสนับสนุนเงินในการเขียนตำรา
What will the changes be in research situation from the past to the future? I have changed the research assessment committee. In the past, our faculty invited Deans, Associated Deans and Directors to be on the research assessment board. But we now invite experienced people who have doctoral degrees to be on our research committee. However, some lecturers have criticized that the committee were not fair because the lecturers who received research funding were the group of committee. But I am not a member. We lack experts who can judge the quality of the project because each lecturer does research based on their own expertise and field of interest; hence, what the committee can do is to examine the content and significance of output and results. Generally the lecturers avoid being on the research committees, because they fear being blamed for giving unfair treatment. I recommended that if they are members of the research team, it is unnecessary to evaluate their own projects. In the future, we will reduce the amount of research funding, as we have plenty of research projects that are carried out from both lecturers and students. The research funding will be provided for new instructors only. We will increase supported money for publication instead.	**ทิศทางการวิจัยของคณะมีการเปลี่ยนแปลงอย่างไรจากอดีตถึงอนาคต** อย่างน้อยผมก็ได้เปลี่ยนรูปแบบการประเมิน เพราะเท่าที่ผ่านมามีคนจะมาประเมินคือพวกผู้ใหญ่ เช่น คณบดี รองคณบดี ผู้อำนวยการสถาบัน ซึ่งท่านเหล่านั้นจะมีเวลาหรือ ผมเปลี่ยนหมดเลย ไม่เอาผู้ใหญ่เลย ผมเอาอาจารย์ที่ทำวิจัยที่จบปริญญาเอกมาเป็น board มาช่วยกันประเมิน แต่ก็ยังมีการวิพากษ์วิจารณ์ว่าเล่นพรรคเล่นพวกเพราะว่าคนที่ได้คือคนที่เป็นหัวหน้าทีมและเป็นคณะกรรมการ แต่ตัวผมเองไม่ได้เป็นคณะกรรมการด้วย เราไม่มี board ซึ่งเป็นผู้ชำนาญการ เราอ่าน proposal โดยพิจารณาในเรื่องหลักการและเหตุผลในการเขียน ดู output และ Result ที่ออกมา แต่หลายคนก็ไม่อยากเป็นกรรมการ เพราะกลัวโดนวิพากษ์วิจารณ์ ผมจึงให้หลักว่าถ้าคุณเป็น 1 ในทีมวิจัยที่เสนอ proposal คุณก็ไม่ต้องประเมินงานของคุณ เราหาผู้เชี่ยวชาญยากเพราะยิ่งทำก็จะลึกลงไปในแต่ละสาย แม้จะเป็นที่สำนักงานกองทุนสนับสนุนการวิจัยแห่งชาติเองก็หาผู้เชี่ยวชาญยาก ในอนาคตจะลดเพดานเงินวิจัยลง โดยเอาไปให้ในส่วนของการผลิต paper ในการตีพิมพ์เพราะเรามีวิจัยมากมายอยู่แล้วทั้งของนิสิตและอาจารย์ เราจะกันทุนไว้เพียงเพื่อให้อาจารย์ที่จบใหม่

What should the University do to increase research productivity?	**ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในเรื่องใดเพื่อให้คณาจารย์มีผลงานวิจัยมากขึ้น**
1. The niversity's Research Centre should have clearly defined directions and support the whole organization's research activities as shown in the policy. 2. The University Research Centre acts as the intermediary of resources allocation and facilities management. Some lecturers act as they are the owners of the machinery, especially the expensive ones. I wish everybody would have the right to use the equipment. Moreover, the research unit should pay for the technicians' salary, as well as provide money for machinery maintenance. 3. The regulation should support and encourage lecturers to do more research by reducing rules that are tightly restrictive. 4. Encourage lecturers to share research facilities by setting time schedules of equipment reservation and also pay for machinery maintenance by examining the amount of budgets that each lecturer receives. For instance, anyone who gains higher research funding, he/she should have the right to use the equipment first and maybe longer than the other people but he/she should pay a higher rate of machinery maintenance. 5. Now our research committees are younger than the faculty administrative board, they cannot comment on the senior lecturers. By the way, if we ask the senior lecturers to be on the research committee, they are unavailable. 6. Resource allocation is not sufficiently managed. Some lecturers are selfish. For instance, a lecturer wants to use machine A, he must pay for maintenance and should have publication. After that he can use his productivity evidence to ask for promotion. Some lecturers have a big office; we should determine how many students they can advise and how they use resources (room). 7. The university should have formal regulation to force lecturers who have tenure status to produce research. 8. Increase technicians to be 1:3 or 1:2 because now there are 20 lecturers per 1 technician. The number of technicians is insufficient to maintain the equipment. We should have more budgets such as 200,000 baht a year for employing an extra 2 technicians. But we now have to pay 500,000 baht a year for maintenance. The maintenance cost is more expensive than to increase the amount of technicians' salary. Because the university has no money to support us, it becomes the duty of each faculty. When the equipment is out of	1. ตั้งศูนย์วิจัยที่มีทิศทางชัดเจนและสามารถ Support ทั้งมหาวิทยาลัย ให้ตอบสนองกับนโยบายของมหาวิทยาลัยและของรัฐบาล 2. เมื่อมีศูนย์วิจัยจึงสามารถดึงทรัพยากรและจัดการเกี่ยวกับการใช้เครื่องมือต่างๆร่วมกัน เนื่องจากเวลานี้อาจารย์บางท่านเกิดความเป็นเจ้าข้าวเจ้าของเครื่องมือไม่อยากให้คนอื่นใช้เพราะเครื่องมือบางชิ้นราคาสูง ดังนั้นเพื่อให้ทุกคนมีส่วนร่วมในการใช้เครื่องมือ สถาบันวิจัยควรมาเป็นผู้จัดการและเป็นผู้สนับสนุนค่าใช้จ่ายให้กับ Technician) ผู้ดูแลเครื่องมืออุปกรณ์ในการวิจัยของคณะ(ให้เขามีเงินเดือนมากขึ้นและจัดสรรเงินทุนในการดูแลเครื่องมือ 3. กฎระเบียบควรเอื้ออำนวย กล่าวคือเวลาที่อาจารย์คิดจะเสนองานวิจัยขึ้นมา มักจะโดนบีบให้อยู่ในกฎระเบียบของมหาวิทยาลัย 4. สนับสนุนให้มีการใช้เครื่องมือร่วมกัน ทำตารางเวลามาเลยว่าใครจะใช้ได้นานเท่าไร แล้วนำเงินทุนวิจัยที่ได้มาส่วนหนึ่งมาสนับสนุนการดูแลเครื่องมือ ใครได้ทุนมามากก็ได้ใช้เครื่องมือ เพราะทุกวันนี้คณะต้องออกเงินค่าซ่อมเครื่องมือ เราไม่มีการจัดสรรทรัพยากรอย่างมีประสิทธิภาพเป็นการสูญเสียโดยใช่เหตุ อาจารย์บางคนยังมีความเห็นแก่ตัวอยู่ เช่น ถ้าคุณจะใช้เครื่องมือนี้ก็เอาเงินมาลงสนับสนุน ต้องมีผลงานตีพิมพ์ แล้วค่อยนำผลงานไปเสนอขอตำแหน่งทางวิชาการ บางคนมีห้องพักขนาดใหญ่ก็ควรดูว่า เป็นที่ปรึกษานิสิตกี่คนใช้ทรัพยากรคุ้มหรือไม่ 5. คณะกรรมการการวิจัยของคณะมีอาวุโสน้อยกว่าผู้บริหารคณะ จึงไม่สามารถควบคุมอาจารย์ผู้ใหญ่ จะให้อาจารย์ผู้ใหญ่มาดูแลกันเองก็ไม่มีเวลา 6. ควรมีมาตรการที่เอาจริงว่า อาจารย์ที่มีตำแหน่งวิชาการ ควรมีผลงานออกมาเท่าไรอย่างไร 7. เพิ่มจำนวนเจ้าหน้าที่ฝ่ายเทคนิคเป็น 1 : 3 หรือ 1 : 2 แต่ปัจจุบันอาจารย์ 20 คน เจ้าหน้าที่เทคนิค 1 คน มันไม่พอไม่สามารถ maintain เครื่องมือ เราไม่ยอมจ้าง เราน่าจะมีงบประมาณเพิ่ม เช่น ปีละ 200,000 บาทให้จ้างช่างเทคนิค 2 คน แต่เรามีงบซ่อมเครื่องมือถึง 500,000 บาท ดังนั้นเมื่อช่างเทคนิคไม่พอ เครื่องมือเสียหายมากก็ต้องซ่อม เสียงบประมาณมากกว่าการจ้างบุคลากรเพิ่ม อัตราจ้างของมหาวิทยาลัยไม่ดี คณะต้องนำเงินรายได้มาจ้างเอง เขาจะได้มาช่วยดูแลเครื่องมือ

order, lecturers cannot perform their tasks; therefore, they waste their time and resources. 9. Encourage lecturers to participate in solving problems, and then inform the President about what we need. The lecturers are always too busy, they are not interested in solving problems. 10. The persons who want to do research should have a willingness to perform their tasks. They have to donate their free time as sometimes they have to work on the weekend. Researchers should realize that research is source of knowledge. Lecturers cannot use only the knowledge from the textbooks, they should read updated papers. Lecturers should apply for research funding because the lecturers who have grants can support students and purchase equipment. If they have no grant, they have to use the faculty's budget, it is not fair especially when they ask for amount of funding. Therefore, it is the responsibility of the lecturers to apply for obtaining outside grants. 11. Doing research should not place restriction on publicizing their outcomes. We should examine the usefulness of each project. The lecturers who have tenure status should publish their works in the peer review journal. The conference has lower rate of productivity assessment.	เพราะเมื่อมันพังจะเกิดการเสียเวลาที่ประเมินค่าไม่ได้ งานวิจัยต้องหยุดชะงักทั้งของนิสิตและอาจารย์ 8. ให้อาจารย์ในคณะมาช่วยกันแก้ปัญหา ประชุมกันเป็นคณะกรรมการเสนออธิการบดีว่า เราว่าแบบนี้ดีท่านจะว่าอย่างไร แต่ตอนนี้อาจารย์มีภาระงานมากจึงไม่สามารถสนใจเรื่องพวกนี้ 9. คนทำวิจัยต้องมีใจรัก และเสียสละ เพราะทำวิจัยจะทำให้เสียความเป็นส่วนตัว เช่น เสาร์ – อาทิตย์ ต้องมาทำงาน 10. นักวิจัยยังต้องมองเห็นการพัฒนาความก้าวหน้าของตัวเอง เราจะมาใช้แต่ Text book ไม่ได้ เราต้องอ่าน paper ที่ต้อง update อยู่ตลอดเวลาความรู้ได้จากประสบการณ์จริงแล้วนำไปถ่ายทอดให้นิสิตอย่างมีประสิทธิภาพ นอกจากนี้การมีงานวิจัยก็สามารถรับนิสิตได้มากขึ้น อาจารย์ที่มีทุนวิจัยสามารถให้เงินกับนิสิตที่มาขอทำวิจัย ถ้าอาจารย์หาทุนไม่ได้ ก็ต้องไปเอาเงินที่ภาควิชา เป็นการเบียดเบียนภาควิชา นิดหน่อยไม่เป็นไรมากๆ ก็ไม่ไหว ดังนั้นการหาทุนวิจัยจึงเป็นหน้าที่ของอาจารย์ อาจารย์ที่มีทุนก็สามารถซื้อเครื่องมือและวัตถุดิบได้เลย 11. การวิจัยอย่าไปเน้นเรื่องการตีพิมพ์มาก ควรดูเรื่องการเอาไปใช้ ผมว่าควรเอาเรื่องการใช้ประโยชน์มาเป็นการประเมินด้วย เพราะตอนนี้ถ้าใครมีตำแหน่งวิชาการก็ต้องตีพิมพ์ใน Journal ที่มี peer review แต่สำหรับการไป Conference ได้ผลงานที่ต่ำมาก

Case Nine
Faculty of Humanities and Social Sciences

Interview Date: 2 June 2005
Time: 11.00am

What are research environment in your faculty? In the past, research in this faculty was not as common as at this time because we have just recovered from an economic crisis. Moreover, government policies about research and academic affairs were not clear. Nowadays there are some changes that were affected by external factors; we have to compete with neighbouring countries and the other countries in the world. The government has a policy to implement research and people have started searching for more knowledge. People are more interested in studying for a master degree. Whilst lecturers are interested in doing research, there is not much research productivity that comes out because it is just at the early stages of development.	**บรรยากาศในการวิจัยของคณะเป็นอย่างไร** ในอดีตการวิจัยของคณะยังไม่มีความกว้างขวางเท่าปัจจุบัน เนื่องจากภาวะเศรษฐกิจที่พึ่งพื้นตัว อีกประการหนึ่งนโยบายของรัฐบาลเองก็ยังไม่ชัดเจนในเรื่องวิจัยและวิชาการ ในปัจจุบันมีปัจจัยภายนอกที่เปลี่ยนแปลง ไป ในการที่เราต้องแข่งขันกับประเทศเพื่อนบ้านและประเทศอื่นๆ ในโลก รัฐบาลเองก็ยังมีนโยบายที่ส่งเสริมเรื่องนี้มาก และสภาพแวดล้อมที่คนในสังคมเริ่มมีการค้นหาความรู้มากขึ้นเรียน ปริญญาโทกันมากขึ้น อาจารย์ก็เริ่มสนใจการวิจัยมากขึ้น แต่ผลงานวิจัยก็ยังมีไม่มากนัก เพราะเป็นเพียงการเริ่มต้น
What are the factors that influence lecturers to do less research? The reasons why lecturers do less research consist of two main factors: Personal factors: 1. Some lecturers finished master degrees for a very long time ago and the course did not have a research program. They studied only research methods and have never done any research. As a result, they cannot do research topics that they are interested in to increase knowledge for teaching. **2.** Some lecturers don't have a researcher's personality. Researcher's personality requires them to be observant, love to search for information, ask questions and use what they are learning for continuing study. Lecturers who haven't had those personalities are not interested in doing research. However, some of them prefer performing academic works, such as writing books or other documents.	**สาเหตุที่คณาจารย์ทำวิจัยน้อยคืออะไร** สาเหตุที่คณาจารย์ทำวิจัยน้อยจะมีสาเหตุหลักมาจาก 2 ประการ คือ ปัจจัยภายในตัวบุคคล 1. อาจารย์บางท่านจบปริญญาโทมานานแล้วและไม่ได้จบในแผนที่มีการ ทำวิทยานิพนธ์ (จบแผน ข) เรียนแค่ระเบียบวิธีการวิจัย ก็จะล้าเวทีการวิจัย จึงไม่สามารถทำวิจัยในเรื่องที่สนใจ เพื่อไปเพิ่มพูนความรู้ในการสอนได้ **2.** อาจารย์บางท่านไม่มีบุคลิกภาพของนักวิจัย บุคลิกภาพของนักวิจัยก็คือ ความเป็นคนช่างสังเกต ช่างค้นคว้า ช่างซักช่างถาม เป็นคนที่จะนำสิ่งที่ได้เรียนรู้มาไปศึกษาเพิ่มเติม อาจารย์ที่ไม่มีบุคลิกภาพที่สอดคล้องกับการเป็นนักวิจัยจึงไม่ค่อยสนใจการวิจัย แต่อาจสนใจการทำงานด้านวิชาการอื่นๆ เพราะอาจารย์หลายท่านเขียนหนังสือหลายเล่มหรือเอกสารต่าง ๆที่มีคุณค่าและน่าสนใจออกมาเป็นจำนวนมาก
External factors: 1. Workload. As we know, our staff has the highest teaching workload. We teach general subjects which contain more than 20 credits. We have both major and minor subjects. The Faculty of Humanities and Social Sciences has 14 departments and more than 150 subjects were taught per year. There are more than four thousand students studying bachelor and master degrees as well as special courses (Continuing programs) excluding those who learn Thai and the English language. That is why our lecturers have high teaching workload. They have no time to think of doing anything else. 2. In the past, we have a lack of research funding,	ปัจจัยภายนอก 1. จากภาระการสอน อย่างที่ทราบกันคือ คณะมนุษยศาสตร์และสังคมศาสตร์มีภาระการสอนสูงที่สุดในบรรดาคณะต่าง ๆ ในสถาบันนี้ เราเปิดสอนวิชาสาขาทั่วไปประมาณ 20 กว่าหน่วยกิต เรามีวิชาเอกและวิชาโท คณะมี 14 ภาควิชา ที่สอนมีไม่ต่ำกว่า 150 วิชาต่อปี จำนวนนักศึกษาทั้งหมดของ ปริญญาตรี –ปริญญาโท ภาคปกติและภาคพิเศษ (ภาคต่อเนื่อง) ประมาณมากกว่า 4,000 คน ซึ่งไม่รวมนักศึกษาจากภายนอกที่เข้ามาเรียนภาษาไทยและภาษาอังกฤษ จะเห็นได้ว่าอาจารย์มีงานมากมาย จึงไม่มี

but now we have an amount of research funding three times more than before. Hence, the lack of research funding is not the current problem that causes lecturers to not do research. **3.** Insufficient supported facilities from the faculty to establish research-supporting centre. Our research centre has been established for only a year. We have just begun implementing supporting systems. We are not yet strong in this area and also we have insufficient officers to assist researchers.	เวลาไปคิดงานวิจัยต่าง ๆ เพราะมีภาระงานการสอนมาก 2. ในอดีตไม่มีทุนวิจัย แต่ในปัจจุบันเรามีทุนวิจัยส่งเสริมจำนวนมากกว่าที่เคยมีมาประมาณ 3 เท่า ดังนั้นการไม่มีทุนวิจัยในปัจจุบันคงไม่ใช่ประเด็นหลักที่ทำให้อาจารย์ทำวิจัยน้อย 3. ปัจจัยสนับสนุนจากคณะในการตั้งหน่วยงานส่งเสริมวิจัย เนื่องจากหน่วยงานส่งเสริมวิจัยของคณะพึ่งจะก่อตั้งเมื่อ 1 ปีเศษ ๆ จึงเป็นการเริ่มต้นและพึ่งจะพัฒนาระบบปัจจัยสนับสนุนจึงยังไม่เข็มแข็งพอและเจ้าหน้าที่ก็ยังไม่ค่อยมี
What are the factors that encourage lecturers to do research? 1. According to my view, I am interested in doing research and understand that lecturer who want to progress in this career must do research, study about the research problems and compare new knowledge with previous theories. They should use conceptual thinking in textbooks to integrate into modern knowledge, also supporting what they have learnt from the textbooks. The textbooks are not exactly one hundred percent true and research is something that can be used to support teaching. If knowledge in the textbook is not matched with the results of my research, I can then show my students the difference. Students should not believe without their own assessment, they should learn to solve problems and get results themselves. I use research outcomes to make lessons become clearer and bring ideas to students by letting them think and find their own answer using research methods. 2. Ability to manage time. I think I spend forty percent of time doing research and the other 60 percent teaching and administrating. Besides this, my duty is to balance research funding that we received from inside and outside the faculty. I keep our faculty's budgets for supporting research activities, while outside sources of money are spent to build network linking with	**ปัจจัยที่ส่งเสริมให้อาจารย์ทำวิจัยมากคืออะไร** 1. ในส่วนตัว ผมมีความสนใจในการทำวิจัยและมองว่าคนที่จะเติบโตก้าวหน้าในสายวิชาชีพอาจารย์ก็น่าจะทำวิจัย เรียนรู้ปัญหาจากการวิจัยและนำความรู้ที่ได้จากการศึกษามาเทียบเคียงกับทฤษฎีและแนวคิดในตำรา นำมา match กัน เราสามารถที่ได้ข้อมูลที่ทันสมัยมา support สิ่งที่เกิดขึ้นในตำรา เพราะตำราก็ไม่ใช่สิ่งที่ถูกต้อง 100 % และงานวิจัยจะเป็นสิ่งที่เสริมขึ้นมา ถ้าตำราเขียนไม่ตรงกับวิจัย เราก็จะชี้ให้นิสิตได้เห็นอย่างชัดเจนในความแตกต่างว่าไม่ต้องเชื่อใครควรพิสูจน์ด้วยตนเอง ผมนำผลวิจัยมาพิสูจน์การเรียนการสอนให้เกิดความชัดเจนและเชื่อมโยงต่อไปยังนิสิตให้เขาคิดเป็นทำเป็น หาคำตอบโดยใช้หลักของการวิจัย .2ถ้าพิจารณาเรื่อง Time management ผมมองว่างานวิจัย น่าจะอยู่ที่ 40% ของงานที่ต้องทำ และอีก 60% คือการ บริหาร และการสอน นอกจากนี้ก็พยายาม balance ระหว่างทุน ภายในกับภายนอก ทุนภายในเราจะต้องเก็บ ไว้บ้างเพื่อให้เกิดการหล่อลื่นให้วิจัยสามารถดำเนินไปได้ สำหรับภายนอกก็จะเป็น สร้างเครือข่ายให้เกิดวิจัยในระดับภาควิชา คณะ และมหาวิทยาลัย ก็เลยมองว่า ตนเองน่าจะทำวิจัยมาต่อยอดกระตุ้นให้นักศึกษาคิดเป็นทำเป็น สำหรับผมใน 1 ปี จะมี งานวิจัย 2 ชิ้น คือ
departments, faculties and other universities. I continue doing research as well as encouraging students to think and to learn by themselves. I do 2 research projects a year, one of which is a big project, and one small project dependant on the quantity of work and level of funding.	ชิ้นขนาดกลางหรือเล็ก อีกชิ้นก็ใหญ่หน่อย คือดูจากปริมาณงานและเงินวิจัย

How does your faculty support lecturers in publishing their research? Publication is the next process after finishing doing research. We utilize knowledge that we derive from research projects. We have two types of research. The first is called 'action research' in which there is no emphasis on publication. Nowadays we do more action research and apply for patents. Today the proportion of action research is nearly equal to academic research or applied research in which the emphasis is on publication. This faculty has two research journals, consisting of a Humanities and Social Science Research Journals in which publishes general articles and a Research Journal in which publishes only research articles. However, it is difficult to separate clearly between general and research articles. We then have to integrate it into one research journal under the auspices of a peer review system. We have peer review in order to raise the quality of the journals. Our journal is distributed two times a year. This University also has an English research journal that supports us as well. Moreover, this faculty also encourages lecturers to offer presentations in research conferences. We provide the budget. Furthermore, we have a budget for lecturers who want to publicize their research article in international journals. Generally we inform lecturers in advance about who wants to do publication in the international journals. Unfortunately, it's still an unplanned task. Lecturers do not think that their quality of work can be published in international journals. Thais are inclined to be somewhat humble. They are more willing to hide their work rather than show it. Therefore we cannot get definitely response from them.	**คณะมีการสนับสนุนการตีพิมพ์อย่างไร** การตีพิมพ์เป็นเรื่องที่ต่อเนื่องจากการวิจัย เมื่อทำวิจัยเสร็จ เราก็ต้องนำไปใช้ เรามองวิจัยเป็น 2 ด้าน คือ ด้านการนำไปใช้ที่เรียกว่า Action Research ที่ไม่เน้นการตีพิมพ์ นำวิจัยจากหิ้งสู่ห้าง ถือว่าเป็นคุณภาพของการวิจัย ปัจจุบันมี Action Research มากขึ้น มีการจดสิทธิบัตรอันจะทำให้ Action Research มีสัดส่วนใกล้เคียงกับ Academic Research หรือ Applied Research ที่มุ่งการทำวิจัยเพื่อลงตีพิมพ์ ทางคณะมีวารสารการวิจัย 2 ฉบับ คือ วารสารมนุษย์ศาสตร์และสังคมศาสตร์ที่เน้นเรื่องการลงบทความและวารสารวิจัยที่ลงตีพิมพ์ผลงานวิจัย แต่เนื่องว่าเราไม่สามารถ แยกแยะงานบางชิ้นที่เป็นงานวิจัยและกึ่งบทความได้อย่างชัดเจน เราจึงต้องนำมารวมกันใน 1 เล่ม แล้วทำให้งานวิจัยนั้นถูกกลั่นกรองจาก Peer Reviewให้งานมีคุณภาพมากขึ้น เรามีวารสารของคณะที่ออกทุกๆ 6 เดือนและมีวารสารของทางมหาวิทยาลัย นอกจากนี้คณะยังสนับสนุนให้อาจารย์ไป present ผลงานใน Conference ต่างๆ ทางภาควิชาสามารถ allocate budgetให้อาจารย์ไป present ผลงานได้ในต่างประเทศ นอกจากนี้เรามีนโยบายส่งเสริมให้เงินช่วยเหลืออาจารย์ให้อาจารย์ไปตีพิมพ์ในวารสารต่างประเทศ ปกติแล้วเราจะแจ้งไปยังภาควิชาล่วงหน้าว่าจะมีอาจารย์ไปตีพิมพ์ใน Journal ต่างประเทศหรือไม่ แต่ก็ยังเป็นเรื่อง unplannedอยู่เพราะอาจารย์ที่ทำวิจัย เขายังไม่คิดว่าผลงานของเขาสามารถตีพิมพ์ในวารสารต่างๆประเทศได้ โดยลักษณะของวัฒนธรรมไทยเป็นเรื่องราวของการถ่อมตน อาจารย์จึงคิดว่าเก็บไว้ดีกว่าแสดงออกมา ดังนั้นเราจึงไม่ได้คำตอบตรงนี้ชัดเจนเท่าไร คณะเองมีนโยบายที่จะให้เงินบางส่วน แต่ยังไม่ผลตอบกลับมาอย่างเต็มที่นัก
How does your faculty motivate lecturers to do research? In fact, I received the first research funding from this faculty. I used to work in another University in which noone taught me how to write research proposals and I had no feedback on any possible corrections. In the previous university I had no hope for doing research and there was not much research funding. Also the topics were too specific. It seemed that I had to be involved in work that what I didn't like. I didn't receive any funds or motivation. In this university, I would like to thank the Dean of this faculty who provides two types of research funding. First is the research funding under faculty's research topics that focuses on gaining new knowledge as announced in the university's policy. Second is the	**แรงจูงใจของคณะในการทำวิจัยคืออะไร** จริง ๆ แล้วคณะนี้เป็นคณะแรกที่ผมได้ทุนวิจัย ผมเคยทำงานที่อื่นมาก่อนที่นั่นขอทุนยาก ไม่มีใครชี้แนะการเขียน Proposal และไม่มี Feedback กลับมาว่าเราควรแก้ไขอย่างไร ที่นั้นเป็นที่แรกที่ทำให้ผมไม่มีความหวังด้านการวิจัย ประกอบกับเงินทุนก็ไม่ได้มีมากมายและมักจะกำหนดหัวข้อที่ specific มาเลย เหมือนกับว่าเราถูกบังคับให้ทำในสิ่งที่เราไม่ยากทำ ทำให้เราไม่ได้ทุนและไม่เกิดแรงจูงใจ แต่สำหรับที่นี่ต้องขอขอบคุณคณบดีของคณะ ที่จัดหาทุนไว้ให้ 2 ประเภท คือ ทุนวิจัยตามทิศทางของคณะ เพื่อให้เกิดองค์ความรู้ตามนโยบายที่ได้รับมาและทุนวิจัยตามที่อาจารย์สนใจ ภาควิชาบริหารธุรกิจเปิดกว้างให้อาจารย์มีทุนทำวิจัยและ

research funding under the topics that lecturers are interested in. This faculty opens opportunities for lecturers in doing research by supporting resources such as when lecturers need money to search information and also to make copies of books. The faculty supports the lecturers by providing plain paper, printers, assistant officers, and time.	ช่วยสนับสนุนทรัพยากร ในระยะที่ผู้วิจัยไปเก็บข้อมูลวิจัยเบื้องต้น เขาไม่มีเงินมาก ทางภาควิชามีส่วนอย่างมากในการให้ทรัพยากร เขาต้องใช้เงินทุนในการค้นคว้าและถ่ายเอกสาร ดังนั้นแรงสนับสนุนตรงนี้เกิดจากนโยบายและแรงกระตุ้นที่เหมาะสมจากคณะในการจัดหากระดาษ เครื่องพิมพ์ คน และเวลาไว้ให้
What will the changes be in research situations in your faculty from the past to the future? We have to respond to the changes of the surrounding environment. This faculty is growing fast, but we still insist on our aims to encourage our eastern region to become a knowledge-based society. We make slightly changes to create a flexible process. But as to the future, I cannot guess because it depends on the faculty's and university's policy as well as other external factors.	**ทิศทางการวิจัยของคณะการเปลี่ยนแปลงจากอดีตถึงอนาคตอย่างไร** เมื่อสภาพแวดล้อมเปลี่ยนแปลงไปเราต้องตอบสนอง คณะมนุษยศาสตร์และสังคมศาสตร์มีการเติบโตขึ้น แต่เรายึดมั่นในปณิธานของคณะคือการใช้ภูมิปัญญาท้องถิ่นภาคตะวันออก ซึ่งรายละเอียดปลีกย่อยอาจมีการปรับเปลี่ยนไปบ้างอย่างยืดหยุ่น ในอนาคตยังไม่สามารถบอกได้ เพราะขึ้นอยู่กับนโยบายของคณะและมหาวิทยาลัย รวมถึงปัจจัยภายนอกด้วย
How does your faculty improve lecturers' research skills? Research plays a part in everything. We have projects to enhance research knowledge. The Dean and administrative staff also support research activities. We have training programs about classroom research as mentioned in our mission statements for developing teaching and research activities. Lecturers who have no time to do research during working hours, have to do research as an overtime job. We encourage lecturers to do classroom research by beginning with small projects then moving to bigger ones later. We set classroom research training in the year 2004 and gained good response from our staff. We invited a qualified person to be a guest speaker and also did assessments after we finished the training course. We did this after 6 months to see whether lecturers had any research outcomes or not. We have never stopped helping lecturers to prepare for research funding. Moreover, at the beginning of May 2005, we provided training courses about how to write a qualified research proposal. We invited a national researcher from the Thai Research Fund Regional Office to teach and to inform us about the sources of funding. There were so many lecturers participating in this training course, and at least 10 lecturers who planned to submit their research proposals. Our faculty has 600,000 baht left for supporting them. We ask them to submit their research projects this June 2005, and we predict that at least 5 research projects will be submitted.	**คณะมีการพัฒนาทักษะการวิจัยให้คณาจารย์อย่างไร** เรามองว่าการวิจัยนั้นสอดแทรกไปในทุกๆ เรื่องเรามีการจัดโครงการที่ให้ความรู้เรื่องการวิจัย คณบดีและทีมบริหารให้การสนับสนุนอย่างเต็มที่ เรามีการอบรมเรื่องการวิจัยในชั้นเรียนอันเป็นส่วนหนึ่งของวิสัยทัศน์ของคณะในการพัฒนาการสอนควบคู่ไปกับการวิจัย ดังนั้นอาจารย์ที่บอกว่าไม่มีเวลาการวิจัย เขาต้องทำงานวิจัยนอกเวลา เราเลยสนับสนุนให้ทำวิจัยในชั้นเรียนที่เริ่มจากงานวิจัยเรื่องเล็กๆ แล้วค่อยขยายออกไป เราจัดอบรมเรื่องการวิจัยในชั้นเรียนในปี 2547 ก็ได้รับการตอบรับดี วิทยากรที่เชิญมาก็ดี เราก็ทำการติดตามและประเมินผลหลังการอบรม 6 เดือนว่ามีการวิจัยเกิดขึ้นหรือไม่หลังจากที่ผ่านการอบรมแล้ว เรามีทุนวิจัยให้ซึ่งเป็นการสนับสนุนอย่างต่อเนื่อง และเมื่อต้นเดือนพฤษภาคม 2548 เรามีการอบรมเรื่องเขียนวิจัยออย่างไรให้ได้ทุน เราได้เชิญนักวิจัยระดับชาติมาสอนในเรื่อง 'การเขียน proposalงานวิจัยที่มีคุณภาพ' เราได้เชิญวิทยากรมาจากสำนักงานกองทุนสนับสนุนการวิจัย เพื่อมาบอกถึงแหล่งทุนต่างๆ ซึ่งกระตุ้นอาจารย์ได้มาก มีอาจารย์สนใจทำวิจัยมากขึ้นอย่างน้อย10 ท่าน คณะมีเงินเหลืออีก 600,000 บาทเพื่อสนับสนุนในส่วนนี้ เราได้ขอให้อาจารย์เขียน proposal ส่งมาในเดือนมิถุนายน 2548 นี้ ซึ่งคงมีงานวิจัยเข้ามาอย่างน้อย 5 ชิ้น

How does graduated institution affect research productivity? Factors that affect research productivity come from both internal and external factors, but the most important thing is how we can motivate lecturers by focusing on their interests. Besides this, each person's innate talent and added talent should be examined. Lecturers who have added talent but do not have innate talent, can improve themselves. The university can assist them. Therefore, wherever lecturers graduated, either government or private universities, Thailand or abroad, if they have both innate and added talent plus confidence, I do believe that they can carry out research.	**สถาบันที่จบการศึกษามีผลอย่างไรต่อการวิจัย** เรื่องของการทำงานวิจัยมันขึ้นอยู่กับปัจจัยภายนอกและภายในสิ่งสำคัญขึ้นอยู่ที่การดึงความสนใจของอาจารย์ออกมา รวมทั้งเรื่องของพรสวรรค์และพรแสวง คนที่มีพรสวรรค์และพรแสวงเขาจะไปได้ดี ส่วนคนที่มีพรแสวงแต่ไม่มีพรสวรรค์ เขาสามารถพัฒนาความสามารถได้โดยนำความสามารถที่เขามีมาเสริมกับสิ่งที่มหาลัยจะมีให้เพิ่มเติม ดังนั้นผมมองว่าไม่ว่าจะจบจากสถาบันใดเอกชนหรือรัฐบาล ในประเทศหรือต่างประเทศ ถ้าเขามีพรสวรรค์และพรแสวง รวมทั้งมีความเชื่อมั่นที่ดีในการเรียนรู้และติดตามผล เขาจะสามารถทำงานวิจัยได้
How does the level of education affect research productivity? I think there is no difference between the level of education. Whatever the level of education lecturers have, if they are interested in doing research, searching for answer, and utilizing the knowledge, then they have the ability to do research. The level of people's ability to do research may differentiate because lecturers have unequal fields of experience. Persons who have more experience can see the world wider than the less experienced one. Therefore, the doctoral graduates usually have more knowledge than the lower qualified people because they have more opportunity to discuss with their advisors and other people. It is the advantages that drive those people to produce more research productivity. On the other hand, when examining the quantity of work, we cannot justify the claim that the doctoral graduates have more amount of work than	**ระดับการศึกษามีผลอย่างไรต่อการวิจัย** ผมคิดว่าไม่มีความแตกต่างไม่ว่าเขาจะจบการศึกษาระดับไหนมา ถ้าเขาสนใจงานวิจัย การค้นคว้าหาคำตอบ สังเกตอะไรได้แล้วจะนำไปทำอะไรต่อไป คนเหล่านั้น สามารถทำงานวิจัยได้ แต่จะขึ้นอยู่กับระดับการวิจัย ทั้งนี้ก็คือ Field of experience คนที่มีประสบการณ์น้อยเขาจะมองโลกไม่กว้างเท่ากับคนที่มีประสบการณ์มาก ดังนั้นคนที่จบปริญญาเอก เขาจะมีการสั่งสมประสบการณ์ ไว้มากเขามีโอกาสได้คุยกับอาจารย์กับบุคคลภายนอก เขาจะมี experience มากกว่ามันเป็น advantage ที่ทำให้เขามีงานวิจัยมาก ถ้าพิจารณาถึงปริมาณงานไม่สามารถบอกได้ว่า คนที่จบปริญญาเอกจะมีปริมาณงานมากกว่าขึ้นอยู่กับความสนใจของแต่ละคน แต่คนที่มีโอกาสมากกว่าคือคนที่เรียนสูงกว่า อย่างไรก็ดีมันก็ไม่ยุติธรรมที่จะมอง

the lower one. It depends on personal interest, but people, who have more chances, usually are the higher graduates. However, it is unfair to think like this. The Thai Research Fund Regional Office now also has research funding for bachelor degree graduates, as well as projects to implement young researchers by allowing them to do action research. Thus, it can be concluded that lecturers who have different levels of education may have different level of research. Doctoral graduates do research for finding new knowledge, while the lower graduates may do research for utilizing knowledge and researching something that surrounds them.	แบบนี้ ตอนนี้สำนักงานกองทุนสนับสนุนการวิจัยจะมีทุนวิจัยให้สำหรับคนที่จบปริญญาตรีด้วย ส่วนสำนักงานคณะกรรมการอุดมศึกษาก็มีโครงการพัฒนานักวิจัยรุ่นเยาว์ให้เป็นนักวิจัยที่คิดค้นสิ่งประดิษฐ์ในลักษณะ Action Research ดังนั้นสรุปได้ว่าการที่คนมีระดับการศึกษาต่างกันก็จะมีระดับของการวิจัยแตกต่างกัน ในระดับปริญญาเอกอาจเป็นเรื่องของการสร้างองค์ความรู้ ส่วนระดับรองลงมาก็เป็นเรื่องนำไปใช้และวิจัยสิ่งใกล้ตัว
How do family duties affect research productivity? In the past, family duties had some affects on research productivity. But now, it can be an advantage because sometimes we receive research assistants, especially lecturers whose wives or husbands are also lecturers. They are able to assist each other. However, family duties can be the obstacle in some cases, but if lecturers are patient, they can succeed.	**ภาระครอบครัวมีผลอย่างไรต่อการวิจัย** ผมคิดว่าในอดีตมีผล แต่ในปัจจุบันถือเป็นข้อได้เปรียบ เพราะเป็นการได้ผู้ช่วยงานวิจัยมาเป็นทีมงาน โดยเฉพาะคนที่มีสามีหรือภรรยาอยู่ในวงการใกล้เคียงกันเขาก็สามารถเป็นผู้ช่วยได้ ผมมองว่าเป็นข้อเปรียบในเรื่องกำลังใจ หรือได้แรงงานมาบางส่วนที่ช่วยเหลือกันได้ในบางประเด็น แต่บางครั้งถ้าต้องดูแลครอบครัว หุงหาอาหาร อาจเป็นอุปสรรค์ได้ แต่ถ้าใจเขาสู้เขาก็สามารถผ่าน

	อุปสรรค์ไปได้
How do demographic factors affect research productivity? I don't think demographic factors have any influence on research productivity. It depends on personal interest.	**ปัจจัยด้านประชากรศาสตร์มีผลอย่างไรต่อการวิจัย** ผมไม่คิดว่าปัจจัยด้านประชากรศาสตร์จะมีผลกระทบ มันขึ้นอยู่กับตัวบุคคลมากกว่าว่าเขาสนใจจะทำวิจัยหรือเปล่า
How does the nature of Science and Social Sciences affect research productivity? As social science is a dynamic system, it gives us more opportunities to do research because of its changes. Our thoughts right now may be changed in the future. Therefore the change of ideas can be the research topic itself. We should not limit our projects for studying current events in Thailand, but look forward to the future or backward to the past, as well as observing other mysterious parts. In fact, the restriction of research is how people utilize research results for their monetary benefits. Some people understand that research in social sciences produces no monetary advantages. Therefore, we do not receive fund.	**ธรรมชาติของ Science และ Social Sciences มีผลอย่างไรต่อการวิจัย** Social Sciences เป็น dynamic ผมมองว่าเป็นโอกาสเพราะมีการเปลี่ยนแปลงอยู่ตลอดเวลา ให้เราคิดแบบนั้นแบบนี้ แต่เมื่อเวลาผ่านไปเราอาจคิดได้อีกอย่าง เพราะฉะนั้นเมื่อมีการเปลี่ยนแปลงของเวลาก็ทำให้เราสามารถคิดค้นทำวิจัยได้ตลอด นอกจากนี้ในเรื่องของspace หรือพื้นที่ก็ไม่ได้จำกัดอยู่เพียงแค่ ในประเทศไทย แต่จริงๆแล้วงานวิจัยด้านมนุษยศาสตร์และสังคมศาสตร์ไม่ได้จำกัดอยู่ในกรอบของในพื้นที่ แต่สามารถมองไปยังมติของอดีตและอนาคต และสามารถมองไปยังมติที่ไม่สามารถพิสูจน์ได้ แต่สิ่งที่เป็นข้อจำกัดกลับเป็นเรื่องของมุมมองของผู้ที่นำผลวิจัยไปใช้ทางการเงินว่าไม่เกิดทางประโยชน์ด้านเศรษฐทรัพย์ ก็เลยกลายเป็นว่าไม่ได้รับทุนมา
What should the University do to increase research productivity? The amount of research productivity depends largely on the lecturers' interest. The university should improve human abilities by: 1. Building supportive research environment. 2. Working system should bring benefits and support research activities. 3. Incentives and rewards can be both monetary and non-monetary incentive based on the systems and working environment. 4. Either more or less research productivity, the outcomes should be utilized in class and applied to private organizations. Research which is not used by anyone is a useless product. 5. Research must be done under ethical standards. Research should be worked under a code of ethics because now someone hires other people to do his project. This is improper. Sometime lecturers conclude research projects with biased results in order to satisfy their supervisors. Unethical people should receive punishment, while giving rewards to lecturers who do the right thing in order to make a difference. 6. The University should employ research assistants. Research assistants play an important role in making sure research is accomplished. They can be bachelor or master degree students. Moreover when they join a research team, they can learn how to do research. When they have research experience, they can be good researchers in the future.	**ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในเรื่องใดเพื่อให้คณาจารย์มีผลงานวิจัยมากขึ้น** ในโลกของการวิจัยจะมีงานวิจัยมากหรือน้อยขึ้นอยู่กับคน ดังนั้นสิ่งแรกคือการพัฒนาคน โดย 1. สร้างสภาพแวดล้อมให้เอื้ออำนวยต่อการวิจัย 2. ระบบการทำงานต้องพัฒนาให้เอื้อประโยชน์และสนับสนุนหรืออย่างน้อยไม่เป็นอุปสรรค์ต่อการวิจัย 3. ให้สิ่งจูงใจหรือ Rewardที่ทั้งต้องเป็นตัวเงินและไม่เป็นตัวเงิน แต่ต้องสอดคล้องกับระเบียบและสภาพแวดล้อม 4. ผลงานวิจัยจะมากหรือน้อยต้องมีการนำไปประยุกต์ใช้ ในห้องเรียนและภาคเอกชน งานวิจัยที่ไม่มีการนำไปใช้หรือวิจัยบนหิ้งเป็นงานวิจัยที่ไร้ค่า 5. งานวิจัยต้องทำภายใต้จรรยาบรรณ งานวิจัยต้องมี Code of ethics เพราะมีการรับจ้างทำวิจัยหรืองานวิจัยที่มีการสรุปผลข้อมูลอย่างไม่ถูกต้องเพื่อเอาใจผู้หลักผู้ใหญ่ควรมีมาตรภายในการลงโทษและให้รางวัลกับคนที่ทำถูกต้องโดยให้การยกย่องชมเชยให้เกิดความแตกต่างระหว่างแกะขาวกับแกะดำ 6. ควรมีการสนับสนุนในเรื่องของผู้ช่วยนักวิจัยในระดับมหาวิทยาลัย คนที่เป็นนักวิจัยอย่างเดียวไม่สามารถทำงานได้ด้วยตนเองถึงแม้จะมีทุนวิจัยวิจัยก็ไม่สามารถทำให้สำเร็จได้ ผู้ช่วยนักวิจัยจะมีบทบาทในเรื่องของ Administration ผู้ช่วยนักวิจัยอาจจะเป็นนักศึกษา

They can learn how to write research proposals. Researchers should learn both research methods and research management. Nowadays lecturers who do research generally gain more money than teaching especially the experts. For instance, lecturers in the Faculty of Science, are now obstructed by the insufficient of classroom and laboratory. If they teach more, their income may increase by 10-20 percent. Therefore, the main income for the Faculty of Science is research that focus on knowledge development. Science is dynamic and study about facts and reasons. But for Business Administration, the lecturers' income generally derives from teaching because we open post-graduate programs which face high competition on quantity while quality is still in doubt. Teaching philosophy for business programs does not stress market segmentation or benefit seeking, but emphasizes the building of continuous knowledge by teaching people to think for themselves and be a leader. Students who receive master degree generally work as the manager. Therefore, quality control and the amount of productivity should be closely monitored when teaching business. Productivity = Output/Input If the result is equal to one it is balanced. If the result is more than one it is benefited. Good productivity should be controlled quality rather than quantity as quantity is not a stable output. If students want to have a sustainable life in the future, they should have creative thinking in which they derive from research and learn from their class.	ปริญญาตรี – ปริญญาโทโดยให้มามาเรียนรู้ด้วยการผู้ช่วยงานวิจัย เมื่อเขามีประสบการณ์ระดับหนึ่งแล้ว เขาจะเติบโตเป็นนักวิจัยคือทำให้เขาได้ฝึกฝนถึงขั้นตอน การเรียนรู้และการเขียน proposal ซึ่งคนที่ก้าวกระโดดมาเป็นนักวิจัยเลยจะไม่ได้เรียนรู้ขั้นตอนในเบื้องต้น นักวิจัยควรมีความรู้เรื่องงานวิจัยและการบริหารงานวิจัย ในปัจจุบันคนที่ทำวิจัยจะได้เงินมากกว่าสอนโดยเฉพาะคนที่ทำวิจัยเก่งๆ ยกตัวอย่างเช่น อาจารย์คณะวิทยาศาสตร์จะไปสอนก็ถูกจำกัดด้วยจำนวน class และก็ถูกจำกัดด้วยเรื่องของห้องเรียน ห้อง Lab ถ้าสอนเพิ่มขึ้นก็มีรายได้มากขึ้นไม่เกิน 10 – 20 % ดังนั้นสำหรับคณะวิทยาศาสตร์ รายได้หลักคือการวิจัย และพัฒนาองค์ความรู้เชิงวิทยาศาสตร์ ซึ่งเป็นDynamic เป็นเรื่องของการมีเหตุมีผล แต่ที่คนบอกว่าการสอนในสาขาบริหารธุรกิจน่าจะได้เงินมากกว่าเห็นจะจริง เพราะมีการเปิดหลักสูตรปริญญาโทที่มีการแข่งขันกันมากในด้านปริมาณ แต่ในเรื่องของคุณภาพยังเป็นเรื่องที่กังขา ที่จริงปรัชญาของการสอนปริญญาโทมิใช่เป็นเรื่องของการแบ่งส่วนตลาดหรือผลประโยชน์ แต่เป็นเรื่องของการให้ความรู้ให้คนคิดเป็นทำเป็นและสามารถที่จะเป็นผู้นำในระดับหนึ่งได้ คนที่เรียนปริญญาโทจะทำงานอยู่ในระดับของผู้จัดการซึ่งเป็นตำแหน่งของผู้นำองค์กร ดังนั้นการสอนวิจัยต้องเข็มงวดในเรื่องคุณภาพให้ชัดเจนและผลผลิตก็ต้องไปด้วยกัน ผลผลิตที่ดีได้ควรเน้นคุณภาพ เพราะปริมาณไม่สามารถอยู่ได้ในระยะยาว ถ้าต้องการให้สามารถอยู่ต่อเนื่องในอนาคตต้องเน้นทางด้านปริมาณและคุณภาพ
Where are the sources of information? Sources of information generally derive from classroom, newspapers and other sources such as from communication and research institutions. The ability to gain information depends on each person's interest and self-confidence. All lecturers are able to do research, but they always say that they have no time. Nevertheless if they have self- confidence, they can do research.	**แหล่งข้อมูลที่ใช้ในการวิจัยได้จากที่ไหน** แหล่งข้อมูลในการวิจัยจะมากจากใน class การอ่านหนังสือพิมพ์ การติดตามรับข้อมูลข่าวสาร การพูดคุยและจากทุนวิจัย มันเป็นเรื่องที่ต้อง build ความสนใจและ self – confidence คือทุกคนทำได้ แต่มักจะอ้างว่าไม่มีเวลา ที่จริงแล้วทุกคนสามารถทำอะไรได้หมดขอให้มีself – confidence ก็ทำวิจัยได้

What should the university do to increase research productivity?

The amount of research productivity depends largely on the lecturers' interest. The university should improve human abilities by:

1. Building supportive research environment.
2. Working system should bring benefits and support research activities.
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4. Either more or less research productivity, the outcomes should be utilized in class and applied to private organizations. Research which is not used by anyone is a useless product.
5. Research must be done under ethical standards. Research should be worked under a code of ethics because now someone hires other people to do his project. This is improper. Sometime lecturers conclude research projects with biased results in order to satisfy their supervisors. Unethical people should receive punishment, while giving rewards to lecturers who do the right thing in order to make a difference.
6. The university should employ research assistants. Research assistants play an important role in making sure research is accomplished. They can be bachelor or master degree students. Moreover when they join a research team, they can learn how to do research. When they have research experience, they can be good researchers in the future. They can learn how to write research proposals. Researchers should learn both research methods and research management. Nowadays lecturers who do research generally gain more money than teaching especially the experts. For instance, lecturers in the Faculty of Science, are now obstructed by the insufficient of classroom and laboratory. If they teach more, their income may increase by 10-20 percent. Therefore, the main income for the Faculty of Science is research that focus on knowledge development. Science is dynamic and study about facts and reasons. But for Business Administration, the lecturers' income generally derives from teaching because we open post-graduate programs which face high competition on quantity while quality is still in doubt. Teaching philosophy for business programs does not stress market segmentation or benefit seeking, but emphasizes the building of continuous knowledge by teaching people to think for themselves and be a leader. Students who receive master degree generally work as the manager. Therefore, quality control and the amount of productivity should be closely

ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในเรื่องใดเพื่อให้คณาจารย์มีผลงานวิจัยมากขึ้น

ในโลกของการวิจัยจะมีงานวิจัยมากหรือน้อยขึ้นอยู่กับคน ดังนั้นสิ่งแรกคือการพัฒนาคน โดย

1. สร้างสภาพแวดล้อมให้เอื้ออำนวยต่อการวิจัย
2. ระบบการทำงานต้องพัฒนาให้เอื้อประโยชน์และสนับสนุนหรืออย่างน้อยไม่เป็นอุปสรรค์ต่อการวิจัย
3. ให้สิ่งจูงใจหรือ Rewardที่ทั้งต้องเป็นตัวเงินและไม่เป็นตัวเงินแต่ต้องสอดคล้องกับระเบียบและสภาพแวดล้อม
4. ผลงานวิจัยจะมากหรือน้อยต้องมีการนำไปประยุกต์ใช้ ในห้องเรียนและภาคเอกชน งานวิจัยที่ไม่มีการนำไปใช้หรือวิจัยบนหิ้งเป็นงานวิจัยที่ไร้ค่า
5. งานวิจัยต้องทำภายใต้จรรยาบรรณ งานวิจัยต้องมี Code of ethics เพราะมีการรับจ้างทำวิจัยหรืองานวิจัยที่มีการสรุปผลข้อมูลอย่างไม่ถูกต้องเพื่อเอาใจผู้หลักผู้ใหญ่ควรมีมาตรภายในการลงโทษและให้รางวัลกับคนที่ทำถูกต้องโดยให้การยกย่องชมเชยให้เกิดความแตกต่างระหว่างแกะขาวกับแกะดำ
6. ควรมีการสนับสนุนในเรื่องของผู้ช่วยนักวิจัยในระดับมหาวิทยาลัย คนที่เป็นนักวิจัยอย่างเดียวไม่สามารถทำงานได้ด้วยตนเองถึงแม้จะมีทุนวิจัยวิจัยก็ไม่สามารถทำให้สำเร็จได้ ผู้ช่วยนักวิจัยจะมีบทบาทในเรื่องของ Administration ผู้ช่วยนักวิจัยอาจจะเป็นนักศึกษา ปริญญาตรี – ปริญญาโทโดยให้มามาเรียนรู้ด้วยการผู้ช่วยงานวิจัย เมื่อเขามีประสบการณ์ระดับหนึ่งแล้ว เขาจะเติบโตเป็นนักวิจัยคือทำให้เขาได้ฝึกฝนถึงขั้นตอน การเรียนรู้และการเขียน proposal ซึ่งคนที่ก้าวกระโดดมาเป็นนักวิจัยเลยจะไม่ได้เรียนรู้ขั้นตอนในเบื้องต้น นักวิจัยควรมีความรู้เรื่องงานวิจัยและการบริหารงานวิจัย ในปัจจุบันคนที่ทำวิจัยจะได้เงินมากกว่าสอนโดยเฉพาะคนที่ทำวิจัยเก่งๆ ยกตัวอย่าง เช่น อาจารย์คณะวิทยาศาสตร์จะไปสอนก็ถูกจำกัดด้วยจำนวน class และก็ถูกจำกัดด้วยเรื่องของห้องเรียน ห้อง Lab ถ้าสอนเพิ่มขึ้นก็มีรายได้มากขึ้นไม่เกิน 10 – 20 % ดังนั้นสำหรับคณะวิทยาศาสตร์ รายได้หลักคือการวิจัย และพัฒนาองค์ความรู้เชิงวิทยาศาสตร์ ซึ่งเป็น Dynamic เป็นเรื่องของการมีเหตุมีผล แต่ที่คนบอกว่าการสอนในสาขาบริหารธุรกิจน่าจะได้เงินมากกว่าเห็นจะจริง เพราะมีการเปิดหลักสูตรปริญญาโทที่มีการแข่งขันกันมากในด้านปริมาณ แต่ในเรื่องของคุณภาพยังเป็นเรื่องที่กังขา ที่จริงปรัชญาของการสอนปริญญาโทมิใช่เป็นเรื่องของการแบ่งส่วนตลาดหรือผลประโยชน์ แต่เป็นเรื่องของการให้ความรู้ให้คนคิดเป็นทำเป็นและสามารถที่จะเป็นผู้นำในระดับหนึ่งได้ คนที่

monitored when teaching business. Good productivity should be controlled quality rather than quantity as quantity is not a stable output.	เรียนปริญญาโทจะทำงานอยู่ในระดับของผู้จัดการซึ่งเป็นตำแหน่งของผู้นำองค์กร ดังนั้นการสอนวิจัยต้องเข็มงวดในเรื่องคุณภาพให้ชัดเจนและผลผลิตก็ต้องไปด้วยกัน ผลผลิตที่ดีได้ควรเน้นคุณภาพ เพราะปริมาณไม่สามารถอยู่ได้ในระยะยาว

Case Ten
Faculty of Engineering

Interview Date: 17 May 2005
Time: 10.00am

Could you please give me some details of your work and research experience? The Faculty of Engineering has been established for 10 years. I have worked in this faculty for 3 years and worked in this position for a year. During this three years, I have completed three research projects. I have been learning about research methodology since I first started studying for my doctoral degree. I am interested in conducting research about Geotechnical Engineering. My recent research projects are about numerical simulation of soil-pipeline interaction and soil stabilization. The numerical simulation research project didn't require a large amount of research funding, therefore it is suitable for new researchers who have just started to learn about researching. Also, soil stabilization is practical research that easier to apply for research funding.	**กรุณาเล่าถึงประสบการณ์การทำงานและการวิจัยของท่าน** คณะวิศวกรรมศาสตร์เปิดมาได้ 10 ปี ผมทำงานในตำแหน่งนี้มา 1 ปี แต่เป็นอาจารย์ มา 3 ปี ผมทำงานวิจัยมา 3 ปี มีผลงานมา 3เรื่อง ผมเรียนรู้เกี่ยวกับการวิจัยตอนเรียนปริญญาเอก ผมสนใจทำวิจัยเกี่ยวกับ Geotechnical Engineering ผลงานที่ผมกำลังทำอยู่ในปัจจุบันเกี่ยวกับ numerical simulation of soil-pipeline interaction และ soil stabilization. ซึ่งผมคิดว่าการวิจัยเกี่ยวกับ numerical simulation จะเหมาะกับนักวิจัยใหม่เพราะไม่ต้องใช้ทุนมาก ส่วน soil stabilization จะเป็นการวิจัยที่เน้นเรื่องการปฏิบัติการ ซึ่งง่ายต่อการหาทุน
How is research work important to Faculty of Engineering? The lecturers in this faculty agree that research is as important as the university's commitments themselves. However, lecturers in my faculty put more effort on teaching rather than research. Faculty of Engineering has 30 lecturers in which there are only 30 percent or 1in 3 of lecturers who perform research works.	**งานวิจัยสำคัญต่อคณะวิศวกรรมศาสตร์อย่างไร** คณาจารย์มองว่างานวิจัยเป็นสิ่งสำคัญตามที่มหาวิทยาลัยกำหนดไว้ แต่คณะก็เน้นการสอนมากกว่า การวิจัยยังเป็นอันดับรองลงไป ในคณะมีอาจารย์ประมาณ 30 คน แต่มีอาจารย์ที่ทำวิจัยประมาณ 30 % หรือ 1 ใน 3
What are staff's attitudes toward research? The lecturers are willing to do research but they have high teaching workload.	**คณาจารย์มีทัศนคติอย่างไรต่อการวิจัย** อาจารย์อยากทำวิจัยแต่มีภาระงานมาก
How is the research environment in your faculty? Research environment in this faculty is not full of vitality. The lecturers in my faculty are not interested and have no enthusiasm to do research, due to the fact that the Faculty of Engineering is relatively new and the faculty members are so young. They plan to continue studying for their doctoral degrees. Moreover, this university's administrators are now positioning this institution as a research university. Nevertheless, I have never found out the definition of their 'Research University' at all as well as there is no index to measure work performance to achieve the goal. Furthermore within my faculty, some lecturers have negative attitude toward lecturers who perform research activities. There is a significant different here from other universities, because we lack a leader who can motivate us to do research.	**บรรยากาศในการวิจัยของคณะเป็นอย่างไร** บรรยากาศการวิจัยในคณะวิศวกรรมศาสตร์นั้นไม่ค่อยมีชีวิตชีวา คณาจารย์ไม่ค่อยสนใจงานวิจัยและไม่มีความกระตือรือร้น เพราะ คณะของเราเป็นคณะใหม่ และอาจารย์ส่วนใหญ่อายุน้อยอีกทั้งมุ่งที่จะเรียนต่อในระดับปริญญาเอก นอกจากนี้การที่ผู้บริหารของมหาวิทยาลัยต้องการเปลี่ยนมหาวิทยาลัยนี้เป็นมหาวิทยาลัยวิจัยนั้น ผมยังมองไม่เห็นเลยว่า เขาได้นิยามคำว่า Research University ว่าอย่างไร และเขาจะใช้อะไรเป็นตัววัดการดำเนินงานเพื่อให้บรรลุตามวัตถุประสงค์ อีกทั้งคณาจารย์บางคน) ในคณะวิศวกรรมศาสตร์(ยังมีทัศนคติที่ไม่ดีต่ออาจารย์ที่ทำวิจัย ใครทำวิจัยนั้นน่าหมั่นไส้ มันไม่เหมือนกับมหาวิทยาลัยอื่น เราขาดผู้นำที่จะมาชี้แนะให้เราทำวิจัย
What are the factors impacts that influence lecturers to do less research?	**ปัจจัยที่ทำให้คณาจารย์ทำวิจัยน้อยคืออะไร**

1. The lecturers have insufficient research experience. They are young and have few research mentors to assist them. The new lecturers do not recognize what they should do, especially lecturers who don't have doctoral degree. They do not understand the lecturers' roles. 2. This faculty hasn't had research policies. We only encourage academic lecturers to be research productive. However, we didn't offer much research funding as we received some resistance from the staff who do not carry out research. We are at an early stage; therefore there is no criteria to measure the quality of research proposals. We offered grants to all proposals. Last year, we offered 19 research grants. Nevertheless, we now have more criteria to measure the quality of research proposals before granting. We may ask them to publish their works in Thai or international journals. Nonetheless we don't have sufficient funding to cover the salary for researchers. We have cancelled some projects because the university has not allowed them to continue. 3. As our research projects are for commercial uses, thus it's unsuitable for publication. We rarely conduct any innovative research. The researches are in the form of practical research that aims to solve specific problems such as the problem of production process or the creation of a new product. Those projects do not produce any new knowledge. The research is only for solving surface problems. We do not study in deeper detail as this may take longer than the one year. The reasons we cannot offer research grants that take more than a year to finish is because of the difficulty to follow up. However, if the lecturers receive research grants from outside institutions, the length of time may be extended longer than a year. There is insufficient research equipment. Our faculty's equipment is limited for teaching bachelor degree students. The faculty needs more funding. If the faculty has enough facilities, lecturers can do research. However, they may encounter complicated purchasing processes.	1. อาจารย์มีประสบการณ์น้อย อาจารย์ในคณะมีเกณฑ์อายุเฉลี่ยต่ำและขาดคนมาแนะนำในเรื่องงานวิจัย อาจารย์ใหม่ๆ จะไม่มีใครมาสอนว่าควรทำอะไรและ โดยเฉพาะอาจารย์ใหม่ที่ยังไม่จบปริญญาเอกยิ่งไม่รู้ใหญ่ว่าอาจารย์ที่เคยเป็นอาจารย์เค้าทำอะไรอย่างไร 2. คณะยังไม่มีนโยบายสนับสนุนงานวิจัยที่เป็นรูปธรรม มีเพียงแต่การพยายามกระตุ้นให้อาจารย์ทำวิจัยมากขึ้น แต่ก็ไม่ได้ให้ทุนมากนักเพราะมีการต่อต้านพอสมควรในกลุ่มที่ไม่ทำ สำหรับคณะวิศวกรรมศาสตร์เป็นเพียงช่วงเริ่มต้นสำหรับการวิจัยจึงยังไม่มีเกณฑ์มากในการพิจารณาคุณภาพของเค้าโครงงานวิจัย ใครขอทุนมาก็ให้หมด ปีที่ผ่านมาให้ไป 19 ทุน แต่ปีต่อๆไป เราจะมีมาตรการมากขึ้น เช่น อาจมีข้อแลกเปลี่ยนว่า เมื่อได้ทุนไปแล้วต้องมีการตีพิมพ์ในวารสารการวิจัยของไทยหรือต่างประเทศก็ได้ สำหรับเรื่องค่าตอบแทนของผู้วิจัยยังไม่มีให้ แต่ก่อนเคยมีแต่ตอนหลังยกเลิกเพราะขัดต่อระเบียบของมหาวิทยาลัย .3งานวิจัยมีการทำแบบเชิงพาณิชย์มากทำให้นำไปตีพิมพ์ไม่ค่อยได้ คณะยังไม่ได้ทำวิจัยประเภทที่เป็นนวัตกรรมใหม่ การวิจัยที่ทำจะเป็นแบบ Practical เพื่อการแก้ปัญหาใดปัญหาหนึ่ง เช่น แก้ปัญหาในเรื่องการผลิต หรือสร้างผลิตภัณฑ์ใหม่เพื่อตอบสนองตลาด ทำให้ยังไม่เกิดองค์ความรู้ใหม่เป็นเพียงการแก้ไขปัญหาระดับพื้นผิวไม่ได้ลงลึกไปในรายละเอียด เพราะวิจัยที่ต้องลงลึกไปในรายละเอียดมักใช้เวลาในการคิดค้นยาวนาน แต่วิจัยของคณะใช้เวลาวิจัยเพียง 1 ปีให้ได้งานออกมา และเหตุผลที่ไม่ให้ทุนระยะยาว เนื่องจากยากต่อการติดตาม แต่ถ้าเป็นทุนจากภายนอกจะให้เวลานานกว่า ทรัพยากรเครื่องมือในคณะมีไม่เพียงพอต่อการทำวิจัย มีเพียงพอต่อการสอนนิสิตปริญญาตรีเท่านั้น จะต้องมีการลงทุนมากกว่านี้ ดังนั้นถ้าเครื่องมือพร้อมก็สามารถทำวิจัยได้ แต่ก็ต้องวุ่นวายกับระเบียบในการจัดซื้อ
What are the kinds of research topics carried out? Most research topics go by subject departments. Generally the projects are laboratory researched and are based on statistical calculations only**.**	**หัวเรื่องงานวิจัยที่คณาจารย์สนใจคืออะไร** จะมีหัวข้องานวิจัยตามสาขาวิชาที่เปิดสอน โดยส่วนใหญ่เป็นการวิจัยโดยใช้การทดลองและการคำนวณ
How does your faculty support lecturers in publishing their research work? We have very little research publication output also we have no plan to print out any research journals.	**คณะมีการสนับสนุนการตีพิมพ์อย่างไร** ไม่ค่อยได้ตีพิมพ์และคณะวิศวกรรมศาสตร์ก็ไม่มีวารสารงานวิจัยอีกทั้งไม่คิดจะทำด้วย
Does the faculty use research productivity as	**คณะมีการใช้ผลงานวิจัยเพื่อพิจารณาผลงานของคณาจารย์**

criteria for academic promotion? Actually we don't have so many lecturers who have tenure status. Hence, a lecturer pays less attention to do researching for promotion. We have other alternatives to receive promotions, without doing research, e.g. teaching, and administering in which lecturers are more interested.	**หรือไม่** คณะวิศวกรรมศาสตร์มีอาจารย์ที่มีตำแหน่งวิชาการไม่มากดังนั้น คณาจารย์จึงไม่ค่อยได้ทำวิจัยเพื่อขอตำแหน่ง เรามีวิธีอื่นสำหรับการเลื่อนตำแหน่ง คือ ใช้การสอน การมีตำแหน่งเป็นผู้บริหาร ที่คณาจารย์ให้ความสนใจมากกว่าการทำวิจัย
How does the level of education affect research productivity? Lecturers who possess doctoral degrees generally recognize how good lecturers should perform, especially the lecturers who graduated from abroad. They learned from their advisors and look to them as role models.	**ระดับการศึกษาของคณาจารย์มีผลอย่างไรต่อผลงานวิจัย** คณาจารย์ที่จบปริญญาเอกจะตระหนักได้ว่าอาจารย์ที่ดีควรเป็นอย่างไร เช่นเดียวกับอาจารย์ในต่างประเทศ ดังนั้นอาจารย์ที่จบจากต่างประเทศจะดู Advisor ของเขาเป็นแบบอย่าง
What are the sources of research funding? Research funding comes from 10 percent of the faculty's incomes, of which every year there is money still left; and from external sources such as The Thai Research Fund Regional Office.	**ทุนวิจัยได้มาจากแหล่งใด** ทุนวิจัยได้มาจากเงินรายได้ของคณะ 10 % แต่ใช้ไม่หมดและได้จากเงินสนับสนุนจากภายนอก เช่น จากงบประมาณแผ่นดินและจาก สำนักงานกองทุนสนับสนุนการวิจัย (Thai Research Fund Regional Office)
How does graduated institution affect research productivity? Graduated institution has no affect on research productivity, it depends on personal interest. As I mentioned before, lecturers who graduated from overseas, looked at their advisors as role models.	**สถาบันที่จบมีผลต่อการผลิตงานวิจัยอย่างไร** คิดว่าไม่มีผลต่อการวิจัยขึ้นอยู่กับตัวบุคคลมากกว่า แต่อย่างที่บอกอาจารย์ที่จบจากต่างประเทศจะดู Advisor ของเขาเป็นแบบอย่าง
Where are the sources of information? The sources of information are ineffective. Both my faculty and the university's library do not have enough information for engineering research proposes. In addition, this faculty is a new establishment; therefore the University's library provides more books for the other faculties. I visit the AIT library more often than this university's library.	**แหล่งข้อมูลสนับสนุนการวิจัยได้มาจากแหล่งใด** แหล่งข้อมูลที่มีอยู่ไม่ค่อยดี คณะเองมีห้องสมุดแต่ก็ยังไม่ดีมาก หรือห้องสมุดของมหาวิทยาลัยเองก็ไม่มีแหล่งข้อมูลทางด้านวิศวกรรมศาสตร์ นอกจากนี้คณะวิศวกรรมศาสตร์เป็นคณะใหม่ ฉะนั้นข้อมูลในห้องสมุดจึงเป็นของคณะอื่นมากกว่า ผมเองยังไปเข้าห้องสมุดของ AIT)Asian Institution of Technology) มากกว่าที่นี่เลย
What are the changes in research situation from the past to the future? Our lecturers now have more enthusiasm to conduct research. This is because of the increased number of doctoral graduate lecturers. They are the role models for new comers. Nevertheless, the doctoral graduate lecturers are still young and have just begun their teaching. They lack research experience, and they need mentors. Unfortunately, this faculty is a new establishment; it is difficult to find experienced people. As I am a new researcher, I certainly solicit advice from more experienced professors who have expertise in topics. Unfortunately, the experts in this university are very difficult to find. In the future, our faculty should have linkage with other universities or invite experts to be the consultants.	**คณะมีการเปลี่ยนแปลงเกี่ยวกับทิศทางการวิจัยจากอดีตถึงอนาคตเป็นอย่างไร** เท่าที่ผ่านมาคณาจารย์มีความกระตือรือร้นมากขึ้น อาจเป็นเพราะว่าอาจารย์ทีจบปริญญาเอกมีจำนวนมากขึ้น อาจารย์จึงมีความตื่นตัวที่จะเป็นตัวอย่างให้กับรุ่นน้อง แต่จุดอ่อนก็คือ อาจารย์ที่จบปริญญาเอกเป็นแค่การเริ่มต้น ไม่ค่อยรู้อะไรมากนัก ดังนั้นจึงต้องการ Mentor มาคอยชี้แนะ คณะวิศวกรรมศาสตร์ยังใหม่ จึงหาตรงนี้ยากนิดหนึ่ง อย่างเช่นตัวผมที่เป็นนักวิจัยใหม่ ผมต้องการคำแนะนำจากนักวิจัยที่มีประสบการณ์ในเรื่องที่ผมสนใจ แต่ที่นี่มันยากที่จะหาคนที่มีคุณสมบัติ ในอนาคตการวิจัยของคณะควรจะต้องมี Linkage กับมหาวิทยาลัยอื่นๆ ในการทำวิจัยร่วมกันหรือเชิญอาจารย์จากภายนอกมาเป็นที่ปรึกษาของภาควิชาให้เข้ามาช่วยชี้แนะ

How does your faculty support lectures to improve research skills? Normally when the university has research training courses or seminars, our faculty members are willing to join the programs by themselves.	**คณะการให้การสนับสนุนการเรียนรู้เพื่อเพิ่มทักษะการวิจัยให้แก่คณาจารย์อย่างไร** เมื่อมีการอบรมเกี่ยวกับการวิจัยที่มหาวิทยาลัยจัดขึ้นอาจารย์ในคณะพยายามไปร่วมเรียนรู้ถึงวิธีในการทำวิจัยไม่ได้มีการบังคับให้ไปฟังแต่อย่างใด
How do family members affect research productivity? Family members have less affect on research productivity. I receive a great support from my family as my spouse is a university lecturer. She understands my work and also helps motivates me.	**ภาระครอบครัวมีผลอย่างไรต่อการวิจัย** ภาระครอบครัวไม่น่าจะมีผลกระทบ) ด้านลบ(ต่อการวิจัย ผมได้รับการสนับสนุนจากคนในครอบครัว เพราะภรรยาของผมก็เป็นอาจารย์มหาวิทยาลัยเช่นกัน เขาจะเข้าใจและให้กำลังใจ
What should the University do to increase research productivity? People tend to think that doing research is a daunting task; however, research topics can be derived from what we do in our everyday life, such as the content in the subjects that we teach. If we understand that doing research is a routine job that we have to do everyday, we will get used to it and finally can produce good research results and of course, we need support from the University.	**ท่านคิดว่ามหาวิทยาลัยควรปรับปรุงในส่วนใด เพื่อให้มีผลงานวิจัยมากขึ้น** คนมักจะคิดว่าการทำวิจัยเป็นงานที่น่ากลัว แต่จริงๆ แล้วหัวข้อวิจัยเราจะได้จากสิ่งที่เราพบเห็นในชีวิตประจำวัน อย่างเช่นจากเนื้อหาวิชาที่เราสอนนักศึกษา ถ้าคิดว่าการวิจัยเป็นภาระงานที่เราต้องทำทุกวัน เราก็ทำได้ เราจะเกิดความเคยชิน และในที่สุดเราก็สามารถทำงานวิจัยได้ แต่แน่นอน ต้องได้รับการสนับสนุนจากมหาวิทยาลัยด้วย

Case Eleven
Institute of Marine Sciences

Interview Date: 13 May 2005
Time: 10.00am

What are your roles toward institutional research unit?	**ท่านมีบทบาทในการสนับสนุนงานวิจัยของสถาบันอย่างไร**
1. I offer research funding by examining the staff that have a lower level of research experience first. There is approximately 500,000 baht a year available, depending on the quantity of proposals. The researchers must use the funding for real purchases up to 50,000-100,000 baht per project. If this institution has appropriate equipment already, we permit them to use that equipment. 2. I encourage staff to participate in research presentations based on the institution's regulations. We have budget available for presenting their papers in other countries. In the past, we only offered money for staff that did oral presentations, but now, we allow staff to present posters for the first time. However, if they want to attend any conference in Thailand, we let them go, and offer additional funding for registration and travel. For attending conferences abroad, we allow them to go once every two years rather than every year because the institution has to spend a lot of money. 3. We support publication activities. Normally, researchers are confronted with time restriction, especially those staff who are not full time workers. The full-time staff who mainly do research always have outcomes and publication. On the other hand, other staff members who have to do extra jobs, often don't have enough time. We encourage them to do presentations in conferences instead. They write only abstract and analysis papers for presentation. This is another way to present their research to the public. 4. We encourage staff to publish papers in magazines such as agricultural magazines, and fish magazines. Moreover, we also have telephone records for researchers who are consultants of which they can use as evidence of research activity to apply for rank promotion.	1. ตั้งงบประมาณโดยจะเน้นไปที่การให้ทุนบุคลากรที่มีประสบการณ์ทำงานวิจัยน้อยประมาณปีละ 50,000 บาท ขึ้นอยู่กับปริมาณ proposal ที่เสนอมาแต่ต้องมีการซื้อจริง เช่น 50,000 – 100,000 บาทต่อ 1 โครงการ หรือถ้าบางส่วนสถาบันมีอุปกรณ์อยู่แล้ว เราก็จะสนับสนุนให้ใช้อุปกรณ์นั้นๆ 2. ส่งเสริมให้บุคลากรเข้าร่วมในการนำเสนอผลงาน โดยให้เป็นไปตามระเบียบ และเราก็มีงบประมาณในการไปนำเสนอผลงานในต่างประเทศ ในอดีตการจะไปต่างประเทศต้องเป็นการไป Oral Presentation เท่านั้น แต่ในปัจจุบันเราลด scale ลงมา คือ ในครั้งแรกอาจไปในฐานะ Poster ได้ ส่วนการไปนำเสนอผลงานในประเทศ เราให้ไปทั้งหมด เราจ่ายให้ทั้งค่าลงทะเบียน ค่าเดินทาง ถ้าไปต่างประเทศเพื่อร่วม Oral Presentation เราให้ 2 ปีครั้ง แต่ถ้าจะให้ไปทุกปีเราจะใช้งบประมาณมากเกินไป 3. สนับสนุนให้มีการตีพิมพ์ คนที่ทำงานวิจัยจะมีปัญหาเรื่องเวลาโดยเฉพาะเจ้าหน้าที่ๆ ไม่ได้ทำงาน Full Time เพราะเขาจะมีภาระงานอื่นๆ แต่สำหรับพนักงาน Full Time จะสามารถผลิตงานวิจัยออกมาได้โดยไม่ต้องแบ่งเวลาไปทำอย่างอื่นเขาจะมี publication ไปด้วย แต่สำหรับพนักงานที่มีงานอื่นจะใช้การไป present ผลงานแทน เขาก็เขียนเป็น Abstract และบทวิเคราะห์ เพื่อนำผลงานไปนำเสนอ ซึ่งตรงนี้ก็เป็นทางออกอีกทางหนึ่งในการนำผลงานไปเผยแพร่ต่อสาธารณชน 4. ช่วยส่งเสริมการนำงานวิจัยไปลงในวารสารที่เกี่ยวข้อง เช่น วารสารทางด้านการเกษตร หรือบางคนที่เลี้ยงปลาสวยงามก็ไปลงวารสารการเลี้ยงปลา โดยให้เขียนในภาษาที่เข้าใจง่ายๆ นอกจากนี้สถาบันยังมีกระบวนการบันทึกโทรศัพท์เวลาที่มีใครมาปรึกษาเรื่องต่างๆ เก็บไว้เป็นหลักฐานในการอ้างอิงผลงาน

Could you please give me some details of your work and research experience? I am interested in doing research about breeding marine animals. I do research about designing houses for marine animals, and how the change of water quality affects the animal's life. I completed a master degree in water cleaning systems, and I apply these previous skills to design habitats for marine animals in order to gain new knowledge. Last year I didn't do much research and had no publication. I attended only one international conference. In addition, I did 2-3 presentation projects twice a year. Unfortunately I have had no time to write research projects but I always write articles in magazines. I have been doing research from when I first graduated. During the first year that I graduated, I worked for a private organization as a researcher. After that I worked for this university. Here I face many problems about research, especially when purchasing equipment. The situation here is different to the private organization because the supervisors in private organizations are not involved in equipment purchase, but are free to concentrate on their research outcomes. I have worked in this position for 7 years. Before taking this position, I worked as the head of department in private industry.	**กรุณาเล่าประสบการณ์การทำงานและการวิจัยของท่าน** ผมชอบวิจัยเรื่องการเพาะเลี้ยงสัตว์น้ำ ซึ่งเกี่ยวกับการออกแบบที่อยู่อาศัยให้สัตว์น้ำและศึกษาการเปลี่ยนแปลงคุณสมบัติของน้ำว่าจะมีผลกระทบต่อสิ่งมีชีวิตอย่างไร รวมถึงเทคนิคการเพาะขยายพันธุ์สัตว์น้ำ ตอนผมเรียนปริญญาโท ผมเรียนเรื่องการบำบัดน้ำเสีย ผมนำความรู้มาประยุกต์ให้เข้ากับการออกแบบสิ่งแวดล้อมสำหรับสิ่งมีชีวิต เพื่อสร้างองค์ความรู้ใหม่ ปีที่ผ่านมามีงานวิจัยที่เข้ามามาก แต่ไม่มีการตีพิมพ์ มีแต่ที่ไป International Conference ในทุกๆ 2 ปี ก็มีประมาณ 2 –3 เรื่อง เวลาเราไม่มีเพียงพอที่จะนำไปตีพิมพ์เพราะต้องทำงานบริหารด้วย แต่ผมเขียนบทความลงนิตยสารบ่อย ผมทำงานวิจัยตั้งแต่เรียนจบ ตอนจบใหม่ ๆ ผมทำงานให้กับบริษัทเอกชน ผมทำงานวิจัยมาตลอด แต่เมื่อเข้ามาอยู่ในระบบราชการผมมองเห็นปัญหาเลยว่างานวิจัยจะมีอุปสรรคเช่นการซื้อวัสดุครุภัณฑ์จะต้องถูกตรวจสอบ แต่ถ้าเป็นเอกชนเขาไม่สนใจ เขาดูผลงานที่ออกมามากกว่า ผมอยู่ในตำแหน่งนี้มา 7 ปี แต่ก่อนหน้านี้ก็เป็นหัวหน้าฝ่ายต่างๆมาตลอด
How is research important to your institution? Research is the method for developing new knowledge. Researchers must have imagination and if they don't, they cannot be researcher. However, their imagination must be based on knowledge, competency and a recognition of possible outcomes. The researcher should not stop creating ideas because if he stops, he may not reach the desired destination of contributing to knowledge. This institution has two main responsibilities. The first is for being a research institution, and the second is providing academic services. Research is the most important task in introducing new technology and new knowledge, and this can then be shown to the public in the form of academic service. Research brings benefits in breeding marine animals and preserving natural resources for raising more income and productivity. Our institution supports and encourages lecturers to do continuous research projects that bring benefits to institution, agriculturists, other people, and specific private companies who are interested in technological development. Therefore, research is a main duty for institutional development.	**การวิจัยมีความสำคัญต่อต่อสถาบันวิทยาศาสตร์ทางทะเลอย่างไร** งานวิจัย คือ การที่เราสร้างองค์ความรู้จากจินตนาการ นักวิจัยที่ไม่มีจินตนาการอย่ามาทำงานวิจัย และจินตนาการนั้นต้อง base on ความรู้ความสามารถและการวิเคราะห์ความเป็นไปได้ คนที่เป็นนักวิจัยจริง ๆ จะต้องไม่หยุด เพราะถ้าหยุดก็จะไปไม่ถึงเป้าหมายที่ตั้งไว้ สถาบันมีภารกิจหลักอยู่ 2 ประการ คือ เป็นสถาบันวิจัยที่มีภารกิจในการวิจัยและการให้บริการทางวิชาการ ซึ่งงานวิจัยคือภารกิจที่สำคัญที่ทำให้เกิดเทคโนโลยีและความรู้ใหม่ๆ สามารถนำไปเผยแพร่ต่อสาธารณชนในรูปแบบของการบริการวิชาการ โดยนำผลวิจัยไปใช้ประโยชน์ในการเพาะเลี้ยงและอนุรักษ์ทรัพยากรธรรมชาติทำให้เกิดผลผลิตและรายได้ ทางสถาบันจะส่งเสริมให้งานวิจัยมีการต่อยอดขึ้นไปเพื่อยังประโยชน์ต่อทั้งสถาบัน เกษตรกร ประชาชนทั่วไปและบริษัทเอกชนที่สนใจงานวิจัยการใช้งานด้านเทคโนโลยี ดังนั้นโดยภาระหน้าที่แล้ว วิจัยคือภาระหน้าที่หลักที่จะสร้างความก้าวหน้าให้เกิดขึ้นกับสถาบัน
What is the attitude of staff toward research? We have staff whose main work is doing research and staff who are the supporters such as the office	**บุคลากรของสถาบันมีทัศนคติอย่างไรต่อการวิจัย** เรามีบุคลากรที่มีหน้าที่หลักในการวิจัยและบุคลากรฝ่ายสนับสนุน

staff. We have 25 researchers working in institution now and some staff who are studying abroad. We have a total of 150 people working in this institution including supporting staff. Out of 25 researchers, half of them are full time workers and their main responsibilities are to do research and to take care of marine animals by supplying food and maintaining all systems. Thus, some of the full time workers have to do other jobs as well, and research is only 50-70 percent of their responsibility. Moreover, around 5-6 full time researchers have to work in administrative positions. Our staff members don't have an academic position. We are scientists, and are responsible for doing research, providing academic services, breeding marine animals, and organizing the aquarium. Our works are therefore different from the scientists who work for Faculty of Science.	ต่างๆ เช่น ฝ่ายสำนักงาน บุคลากรที่ทำวิจัยโดยตรงจะมี 25 คน ซึ่งมีบางส่วนที่กำลังไปศึกษาต่อ โดยรวมแล้วบุคลากรทั้งหมดมี 150 คน สำหรับบุคลากร 25 คนนั้นเป็นพนักงาน Full Time ครึ่งหนึ่งที่รับผิดชอบด้านการวิจัย ดูแลสถานเลี้ยงสัตว์น้ำเค็มและการทำ supplied อาหารสัตว์น้ำรวมถึงการดูแลระบบต่างๆ ดังนั้นจะมีคนจำนวนหนึ่งที่วิจัยเป็นแค่ครึ่งหนึ่งของภาระงานคือประมาณ 50 – 70 % และบางส่วนอีกประมาณ 5 – 6 คนมาทำงานด้านบริหาร บุคลากรของสถาบันไม่ได้มีตำแหน่งเป็นอาจารย์ แต่เป็นนักวิทยาศาสตร์โดยจะดูแลเรื่องการทำวิจัยและบริการวิชาการรวมทั้งดูแลเรื่องการขยายพันธ์สัตว์และดูแลพิพิธภัณฑ์สัตว์น้ำ แต่จะแตกต่างจากนักวิทยาศาสตร์ที่ทำงานในคณะวิทยาศาสตร์ที่จะทำงานในห้อง LAB ของคณะ
Does the institution put emphasis on quantitative or qualitative research? We emphasis quantitative research by using statistics. We do research about marine science in which statistics plays a very important role to measure difference; for instance, when we feed the animals, we need to compare the different quantity of foods that can make them grow well.	**สถาบันเน้นการวิจัยเชิงปริมาณหรือเชิงคุณภาพ** งานวิจัยของสถาบันเน้นการใช้สถิติ เราเป็นงานวิจัยด้านวิทยาศาสตร์เทคโนโลยี สถิติจึงมีความสำคัญในการวิเคราะห์ความแตกต่าง เช่น การให้อาหารสัตว์น้ำ เรามาวิจัยถึงปริมาณโปรตีนที่มีต่อการเจริญเติบโตของสัตว์
What are the forms of research? Generally research outcomes that the public is not directly interested in are reported as written articles. We also have another form of writing work which is a full report that is submitted to the provider of the research funding. We try to encourage our staff to do publication or present the outcomes in the form of reports, manuscripts, and consultation to private companies or agriculturists. In the case of unpublished papers, we encourage staff to offer presentation at academic conferences, both in Thailand and abroad, but these papers must be based on the usual academic standard. We have not produced many publications because some of our staff are still studying. We have 5-6 staff members who are doctoral graduates from out of the total 25 people.	**รูปแบบของงานวิจัยของสถาบันเป็นอย่างไร** งานวิจัยของสถาบันที่ไม่ได้รับความสนใจจะถูกเขียนเป็นบทความนอกจากนี้ก็จะอยู่ในรูปแบบที่เป็นรายงานเพราะเวลาได้ทุนมา เราก็ต้องเขียนรายงานเต็มรูปแบบฉบับสมบูรณ์เสนอให้ผู้ให้ทุนรับทราบ เราก็พยายามให้บุคลากรมีการตีพิมพ์หรือแสดงในรูปแบบของรายงานและ Manuscripts ต่างๆ หรือการนำผลวิจัยออกใช้จริง เช่น เวลาที่มีเอกชนหรือเกษตรกรมาขอคำปรึกษา แต่ถ้างานวิจัยไม่ถูกตีพิมพ์ เราก็พยายามให้ไปนำเสนอในงานประชุมวิชาการต่างๆ ทั้งในประเทศและต่างประเทศ ซึ่งต้องสอดคล้องกับข้อกำหนดที่วางไว้ ส่วนการตีพิมพ์นั้นยังมีจำนวนไม่มาก เพราะเรามีปัญหาเรื่องบุคลากรที่ไปศึกษาต่อ ตอนนี้เรามีบุคลากรที่จบปริญญาเอก 6 – 7 คนจาก 25 คน

What are the changes in research direction from the past to the present? In the past, our institution had less research funding than other compatible institutions. But now we are trying to improve the level of funding and to implement good research outcomes. Administrators can be the model for this by submitting proposals that could possibility gain large funding by mainly focus on applied research. In the past, we received only a hundred thousand baht, but we now have a bigger fund for many millions baht. Thus this is an index to demonstrate our achieve which has not been done just within one or two years. Now our institution has the highest amount of research outcomes when compared with other units in this institution. Unfortunately, we face a lot of problems. Now we have higher amount of funding we now have to examine how we can assist staff to finish their research projects. It is not only a personal problem. We have to find the exact source of the troubles. We should act as the facilitator who can assist them rather than blame them, and avoid using strict regulations as the method of performance assessment or punishment because researchers refuse to do research if the situation is not supported.	**ทิศทางการวิจัยของสถาบันมีการเปลี่ยนแปลงอย่างไรจากอดีตถึงปัจจุบัน** ในอดีตสถาบันมีเงินทุนสนับสนุนวิจัยน้อยมาก แต่ตอนนี้เราพยายามที่จะพัฒนาและส่งเสริม ผู้บริหารจะเป็นตัวอย่างในการเขียนขอทุนในจำนวนที่มากขึ้น โดยเน้นวิจัยที่เป็น Applied Research แต่ก่อนได้ทุนหลักแสน แต่ปัจจุบันได้หลายล้าน ดังนั้นสิ่งนี้คือตัวชี้แนวทางการบริหารงานวิจัยว่า มันไม่สามารถเกิดผลในปีสองปี ตอนนี้สถาบันมีวิจัยมากที่สุด แต่ก็มีปัญหามากที่สุด ดังนั้นเราต้องมาพิจารณาว่าเมื่อมีเงินทุนแล้วจะทำอย่างไรให้บุคลากรทำวิจัยให้สำเร็จ ซึ่งมันไม่ใช่ปัญหาแค่ตัวบุคคลต้องดูว่าปัญหาที่แท้จริงเกิดจากอะไร เราต้องเป็น Facilitator เราต้องไม่ใช่คนที่จะคอยนำระเบียบกฎเกณฑ์มาจับว่าทำไมนักวิจัยทำวิจัยไม่สำเร็จแล้วคอยให้คุณให้โทษซึ่งจะทำให้คนไม่อยากทำวิจัย
How does policy influence research productivity? Now that this university has been announced to be a research university, we have already set the quality standard of what this university expects staff to do. This university must show an exact job responsibility because in order to be a research University, we need to reduce teaching hours and set the portion of teaching and research at the standard level. It is the responsibility of every department to understand their roles. Unfortunately, we organize using Thai management styles that still using compromising methods rather than assistance.	**นโยบายการวิจัยของมหาวิทยาลัยและของสถาบันมีส่วนสนับสนุนการวิจัยอย่างไร** ตอนนี้มหาวิทยาลัยได้ประกาศตัวเป็นมหาวิทยาลัยวิจัย และกระบวนการมาตรฐานคุณภาพก็ถูกกำหนดไว้แล้วว่ามหาวิทยาลัยต้องการอะไร ถ้ามหาวิทยาลัยจะประกาศเป็นมหาวิทยาลัยวิจัยหรือมหาวิทยาลัยการเรียนการสอนก็ต้องมีข้อกำหนดชัดเจนที่ต้องปฏิบัติตามภารกิจ ดังนั้นการที่จะเป็นมหาวิทยาลัยวิจัยก็ต้องลดเรื่องการเรียนการสอนลงต้องปรับสัดส่วนให้เป็นมาตรฐาน หน่วยงานต่างๆ ต้องเข้าใจ แต่ในระบบบริหารงานแบบไทยๆ มักใช้การประนีประนอม แต่ถ้าคิดจะปฏิบัติแล้วก็ควรปฏิบัติ
As this university puts emphasis on science, does your institution have any advantages? Actually the portion of science and social sciences budget is nearly the same. Some people misunderstand that sciences gain more advantages. In this, they may not be accurately examining the facts. If a research worker submits a research project that relates to the national policy, they can then receive more chances in getting funding. A person who clearly realizes this can produce better qualified research proposals. Although We have let researchers work through their personal interest alone for very long time, we should set and fix a more strategic policy right now.	**การที่นโยบายของมหาวิทยาลัยเน้นการวิจัยด้านวิทยาศาสตร์มีผลสนับสนุนการวิจัยในสถาบันของท่านอย่างไร** ที่จริงผมว่ามันเป็นสัดส่วนทางวิทยาศาสตร์หรือสังคมศาสตร์ตามๆ กัน บางคนอาจมองว่านโยบายเน้นด้านวิทยาศาสตร์และเทคโนโลยีมาก เราไม่ได้มองกันที่ข้อเท็จจริง ถ้าเราเขียน proposal ให้สอดคล้องกับนโยบายที่กำหนด เราก็มีโอกาสเขียน proposal ให้ได้เงินมากขึ้น คนที่เข้าใจวิจัยจะสามารถเขียนให้สอดคล้องได้ เราเคยปล่อยให้นักวิจัยทำตามใจมานานแล้ว ดังนั้นเราควรวางเป้าหมายการวิจัยให้สอดคล้องกับแผนการวิจัยของประเทศ
What are the obstacles that cause researchers to be less inclined to do research?	**สาเหตุที่เป็นอุปสรรคต่อการวิจัยของสถาบันคืออะไร**

1. The first area is in the regulations, which date back to the year 1997. When I discussed with this university's administrators about the reasons why lecturers didn't do research, I found that regulation was one of the obstacles. The regulations should be clearly defined and be more convenient because they currently it obstruct our institution's research performance. For instance, we do research about animals such as fish. When we purchase a fish, the university asks for the receipt. However, it is not possible for a fisherman to provide a receipt. When we asked them to fill out the form, they were not agreeable to this. If the regulation is the hindrance like this, we cannot use fish to do research. 2. We have a lack of facilitators. This university hasn't had any unit which takes direct responsibility for resource provision. However, nowadays the system is getting better. We now have a Vice-President for Research Affairs. However comparing with the other universities, they have already had facilitation centres to help in equipment purchase. We must understand that researchers are like the artists. Our performance is directly related to our emotion. We do it only if we want to do it. In other universities, they have research units that are responsible for research and development. The research unit acts as the coordinator between researchers and outside organizations. The researcher will gain more knowledge from doing research. However, some researchers may do research as a duty in their ordinary life, and they may not recognize the value of their work, also they may view their works as simple things. It is one of the facilitator's duties to bring benefits from those research outcomes to the public's notice. Furthermore, the facilitator should be the centre for providing research funding; it should not be the duty of the researcher to contact the owner of research funding directly. For instance, the facilitator should have a person who is responsible for managing financial document as the scientists don't like to do the accounting. I have to do a lot of research, and while I need to do accounts by myself as well, I don't really have enough skill. Sometimes I lose receipts and have to find them. Then facilitator should play a part here and also be the source of fundamental information such as providing central database about agriculture, biological technology and social science. For example, the central databases should have a weather forecast and sea map. But now, it is the duty of the researcher to contact the sources of information directly. If we want to enter a wild protected	1. ระเบียบกฎเกณฑ์ เมื่อประมาณปี 2541 ผมได้คุยกับมหาวิทยาลัยแล้วว่าทำไมคนถึงทำวิจัยกันน้อย สิ่งหนึ่งที่พบคือ เรื่องของระเบียบกฎเกณฑ์ที่สร้างภาระให้กับนักวิจัย เราควรมาพิจารณาถึงความโปร่งใสและการสร้างความสะดวกให้กับนักนักวิจัย เพราะการวิจัยของสถาบันมีข้อจำกัด เราศึกษาในเรื่องของสิ่งมีชีวิต เช่นเวลาที่เราจะไปซื้อปลามาเลี้ยงสักตัวต้องมีใบเสร็จ แค่เราจะขอให้ชาวประมงกรอกแบบฟอร์มต่างๆ เขาก็ไม่อยากขายปลาให้เราแล้ว เราจะไปเอาใบเสร็จเขาคงไม่มีให้ ดังนั้นถ้าระเบียบกฎเกณฑ์มาเป็นอุปสรรคก็จะไม่สามารถทำงานวิจัย เราจึงขอแก้ระเบียบแต่เรายังคงให้เกิดความโปร่งใสเพื่อให้คนหันมาทำวิจัยมากขึ้น 2. เราขาดหน่วยงานที่เป็น Facilitators ที่แท้จริง คือ มหาวิทยาลัยเรายังไม่มีหน่วยงานที่จะมารับผิดชอบ เรามีแค่ฝ่ายงานวิจัย แต่ปัจจุบันนี้ก็ดีขึ้น เรามีรองอธิการบดีฝ่ายวิจัย แต่ในมหาวิทยาลัยอื่น เราจะเห็นว่าเขามีสถาบันวิจัยที่รับหน้าที่เป็น Facilitator เราต้องเข้าใจว่าคนที่ทำวิจัยก็เหมือนกับพวกศิลปิน การทำงานขึ้นอยู่กับอารมณ์อยากทำเราก็ทำ ในมหาวิทยาลัยอื่นจะมีหน่วยงานวิจัยและพัฒนาที่ทำหน้าที่ประสานงานต่างๆ ระหว่างตัวนักวิจัยกับหน่วยงานภายนอก นักวิจัยจะมีความรู้มากขึ้นในระดับหนึ่งและเมื่อเขาทำวิจัยเป็นประจำแล้ว เขาจะรู้สึกว่างานที่ทำนั้นพื้นๆ ทำให้บางทีเขามองไม่เห็นคุณค่าในงานที่ทำ ดังนั้น Facilitator ก็ควรจะเป็นฝ่ายที่นำงานวิจัยไปสร้างประโยชน์ Facilitator ควรเป็นตัวกลาง เช่น การขอทุนวิจัยก็ผ่าน Facilitator ไม่ใช่ให้นักวิจัยไปติดต่อหน่วยงานเอง มีคนทำวัสดุครุภัณฑ์ เรื่องการเงินให้เรียบร้อย เพราะคนที่ทำงานวิทยาศาสตร์การทำบัญชีต่างๆ เป็นเรื่องที่ไม่คุ้นเลย อย่างผมที่มีงานวิจัยมากๆ ผมต้องมีเวลามาตรวจใบเสร็จเองซึ่งเป็นงานที่ไม่ถนัด บางทีเงินขาดไปเราก็ต้องไปหา ดังนั้น Facilitator ควรจะดูแลเรื่องการเงินและตระเตรียมข้อมูลพื้นฐาน เป็นต้นว่าการที่มหาวิทยาลัยทำวิจัยเกี่ยวกับเรื่องเกษตร เทคโนโลยีชีวภาพหรือสังคม เราควรมีข้อมูลพื้นฐานเก็บไว้ที่ส่วนกลาง เช่น ข้อมูลด้านอุตุนิยมวิทยา แผนที่ทะเล ข้อมูลพวกนี้ควรจะเป็นข้อมูลส่วนรวม แต่ปัจจุบันเวลาจะทำวิจัย นักวิจัยต้องทำเรื่องเสนอในหน่วยงานต่าง ๆ เพื่อขอข้อมูล รวมทั้งการขอเข้าไปในเขตอนุรักษ์ Facilitatorควรจะจัดการตรงนี้ให้ ซึ่งจะช่วยให้งานวิจัยไปได้เร็วไม่ต้องไปพวงกับเรื่องต่าง ๆ

area, the facilitators should be the organizers. 3. There are so many types of researchers. Some of them usually take advantage from any gaps in the regulations to obtain extra money. They may do it in an improper manner. It is then necessary to set rules to control them. But the rules should not be too strictly enforced or to block other researchers. We should have positive control, for instance, we should have assessment every 3 months. This institution has around 18 million baht of research funding, which consist of 13 projects. It is the duty of the facilitators to evaluate the work progress and to find the reasons why tasks are incomplete. They may invite researchers and administrators to join the discussion. The cause of the problem may have occurred because of the purchasing process that was still unsolved. The researchers may be on the blacklist if the problem is still not corrected. In addition, the problems may have occurred because the researchers have high workload. We should have clear job responsibilities. For instance, if those researchers are full-time workers, we must examine what we can get from them. We have to do an assessment case by case. We cannot use the same standard to assess all people, especially comparing full-time staff with part-time staff as they have different job activities. Moreover, in the case of a staff member who hasn't had any publication, we may examine other aspects of their work. They may make institution become well-known in other ways, and we should give them some incentives rather than put blame on them.	3. ตัวนักวิจัยเอง นักวิจัยมีหลายประเภท จากการที่เราทำระเบียบต่าง ๆ ให้มันง่ายขึ้นก็จะมีนักวิจัยบางประเภทที่มองเห็นเงิน เขาก็จะทำอะไรที่เบี่ยงเบนไปบ้าง ดังนั้นเราต้องมีมาตรการควบคุมโดยมีกระบวนการต่างๆที่ไม่ถึงกับเข้มงวดมาก ควรเป็นการควบคุมแบบให้กำลังใจ เช่น 3 เดือนเข้ามาดูเสียที สถาบันนี้ได้ทุนวิจัยทั้งหมด 18 ล้าน จาก 13 โครงการ Facilitator ก็ควรเข้ามาดูว่าทำไมโครงการนั้นโครงการนี้ไม่ก้าวหน้า แล้วมาคุยกันระหว่าง Facilitator นักวิจัยและผู้บริหาร เป็นต้นว่าปัญหาอาจเกิดจากการจัดซื้อจัดจ้าง แต่จริง ๆ แล้วปัญหาเหล่านี้ไม่ได้ถูกแก้ มันถูกพูดกันเฉย ๆ เวลาเกิดปัญหาก็จะเป็น Blacklist ว่าบุคคลนั้น ๆ มีงานวิจัยค้างมาก ซึ่งอาจเป็นเพราะมีภาระงานมากเกินไป อาจเป็นไปได้ว่าเราควรกำหนดให้ชัดเจนเลย ถ้าเขาเป็น Full time เราก็ต้องดูว่าเราจะหวังอะไรจากเขาได้บ้าง เราก็ต้องประเมินเขาตามนั้น แต่บางคนไม่ใช่ Full time เราก็ไปประเมินเขาแบบ Full time ไม่ได้ มิฉะนั้นจะเกิดการ Conflict ระหว่างคนทำงานหรือบางคนที่ไม่ได้ตีพิมพ์แต่ถ้าเขาสามารถสร้างชื่อเสียงให้กับสถาบันหรือมหาวิทยาลัยได้ เราก็ควรมีอะไรตอบแทนเขาอย่าไปมองว่าเขาเป็นคนที่ทำให้เกิดปัญหา

What are the reasons for staff doing more research? Research is our main task. It does not depend on whether that department uses research as the assessment method for performance evaluation. If the tasks cannot be defined clearly, a problem will occur because someone is able to work without doing research. We have groups of people who think that research is their life, and they must do research. In the case, the researchers who are not willing to submit proposal for external funding, we provide them with small research funding to do limited projects. We have some researchers who apply for big research project funding and receive funding from government institutions. Some of them do research with other faculties or other institutions. Researchers who work here for a long time generally apply for outside funding, as lecturers in other universities do. It is the duty of researchers to find research funding. However, there are not many international grants because we have a lack of cooperation. The majority of research funding derives from the Thai Research Fund Regional Office. It depends on the ability of researchers to get those funds. Therefore, for an expert, funding is not the problem. The Thai government provides 0.1 percent of GDP for research funding which is quite a large amount. There are so many people who apply for those funds; however, there are not many qualified projects. Nevertheless I noticed that some doctoral graduates still did not understand what research was. Higher education sometimes doesn't build a qualified researcher, as we have only ordinary researchers. We cannot assist them too much because they may not learn how to think by themselves. The real researcher must use their imagination, and know how to make their wishes real. We each develop possible ways to succeed, but generally researchers have different personal views. Thus their proposals come out in different directions. In addition, another mistake made is that the majority of research in Thailand that is proposed is to be finished within one year. But in fact, the research about technological development is difficult to finish within a year. Moreover, research in Thailand focus too much on publication rather than examining how to utilize the research results. Luckily, the Thai Research Fund Regional Office has begun to change direction in evaluating work assessments based on the usefulness of research.	**สาเหตุที่สถาบันมีการทำวิจัยมากคืออะไร** การทำงานวิจัยเป็นภาระงานหรือไม่ ขึ้นอยู่กับว่าหน่วยงานนั้น ๆ มีการกำหนดภาระงานให้ชัดเจนและนำไปประเมินหรือเปล่า เพราะถ้ามันชัดเจนมันก็ไม่เป็นภาระ ทำให้บุคลากรบางส่วนสามารถทำงานไปเรื่อย ๆ โดยไม่ต้องทำงานวิจัยก็ได้ แต่จะมีคนอีกกลุ่มหนึ่งที่รู้สึกว่างานวิจัยเป็นชีวิต ต้องทำงานวิจัย ซึ่งคนเหล่านั้นก็จะใช้งานที่เขาทำเป็นประจำมาทำ Research แต่คนบางกลุ่มก็ไม่อยากวุ่นวายในการทำโครงการไปขอเงิน เขาก็จะได้รับเงินสนับสนุนจากสถาบันมาทำงานเล็ก ๆ ของเขาไป แต่ก็มีอีกกลุ่มหนึ่งที่อยากทำวิจัยที่ใหญ่ขึ้นโดยการเขียนขอทุนในงบประมาณที่มากขึ้นจากเงินอุดหนุนที่มีเข้ามา ส่วนใหญ่จะมาจากงบประมาณแผ่นดินหรือสภาวิจัยแห่งชาติ นอกเหนือจากที่เบื้องต้นสถาบันเป็นคนให้แต่ไม่มาก บางคนก็ทำวิจัยข้ามคณะข้ามสถาบัน คนที่ทำงานมานานก็จะไปขอทุนวิจัยจากภายนอกคล้ายกับวัฒนธรรมในต่างประเทศที่นักวิจัยสามารถดึงทุนวิจัยเข้าสถาบันได้มากน้อยแค่ไหน ดังนั้นจึงเป็นหน้าที่ของนักวิจัยที่ต้องหาทุน แต่ทุนวิจัยจากต่างประเทศก็มีไม่มากเพราะความร่วมมือยังมีน้อยเกินไป แหล่งเงินแหล่งใหญ่ก็คือจากสำนักงานกองทุนสนับสนุนการวิจัย ดังนั้นนักวิจัยที่มีความสามารถในการเขียนขอทุนได้ครั้งละมาก ๆ จะมองว่าเงินไม่ใช่ปัญหา ถึงแม้ว่าบางคนจะมองว่างบประมาณวิจัยแห่งชาติแค่ประมาณ 0.1% ของ GDP ที่จริงมันเยอะนะ ถึงจะมีคนขอทุนมากก็ต้องมองว่า Proposal ที่มีคุณภาพจริง ๆ ก็มีไม่มากนัก จริง ๆ แล้วบางคนเรียนปริญญาตรี – โท – เอก ก็ยังมองไม่ออกว่างานวิจัยคืออะไร เรายังไม่มีการสร้างนักวิจัยจริง ๆ เราสร้างแค่นักวิจัยพื้นฐาน แต่ถ้าเราป้อนมาเกินไปเขาจะคิดไม่เป็น เพราะฉะนั้นนักวิจัยจริง ๆ ต้องมีความฝันและสามารถสร้างฝันให้บรรลุเป้าหมาย ส่วนใหญ่มันมีทางแต่คนมักมองไม่เห็นหรือเห็นไม่เหมือนกัน ดังนั้นคนที่เสนอ Proposal จึงไปคนละทิศคนละทาง และข้อเสียอีกอย่างหนึ่งก็คือ ประเทศไทยนั้นทุนวิจัยที่ให้ต้องมีผลสำเร็จใน 1 ปี แต่จริง ๆ แล้วงานพัฒนาด้านเทคโนโลยีไม่สามารถเห็นผลได้ใน 1 ปี และบางครั้งหน่วยงานวิจัยที่ให้ทุนบางหน่วยงานเน้นว่าต้องมี Publication แต่ไม่เน้นการใช้ประโยชน์ ในประเทศไทยไม่มองจุดนี้ แต่ในสำนักงานกองทุนสนับสนุนการวิจัยก็จะเริ่มมองตรงจุดนี้และนำมาประเมิน แต่จริง ๆ ประเทศไทยไม่เคยเน้นวิจัยเพิ่งจะมีในช่วงหลัง
How does your institution provide research facilities to your staff? This institution provides both basic and advanced equipment, such as equipment to measure water quality and the quantity of metal, which are quite expensive tools. We have plenty of equipment, but	**สถาบันมีการสนับสนุนเครื่องมือและอุปกรณ์การวิจัยอย่างไร** สถาบันมีอุปกรณ์พื้นฐานและอุปกรณ์ Advance สนับสนุนเต็มที่ เช่น ถ้าทำวิจัยเกี่ยวกับคุณภาพน้ำ เราก็มีเครื่องวิเคราะห์คุณภาพน้ำ เครื่องวิเคราะห์โลหะหนักที่มีราคาสูง เรามีเครื่องมือค่อนข้าง

we have a lack of proper management schedule for facility utilization. For instance, if a researcher receives research funding of 3 million baht, he must make a commitment that his project must be finished within 3 years if we are to let him use this equipment. We must ask for researcher's commitment, but they think that we are too strict and are trying to force them to finish. We still have unfinished projects. We need to re-examine the problems associated with these projects. Whether the researchers need to be fined or not is still in question. We don't have a clear assessment standard because the research system is still very complex. We have to set a 4 year strategic plan. But the problem is the strategic plan from the Ministry of Education, and the Ministry of Science and Technology which do not head in the same direction. This demonstrates that the upper management level also has unclear plan. However, we have some research institutions that can act as role models, such as at Mahidol University. Unfortunately, so many departments try to over react to situations such as this.	สมบูรณ์ แต่เรายังขาดระบบการจัดการที่ดี เช่น การที่นักวิทยาศาสตร์ตั้งงบวิจัยมา 1 โครงการ ต้องดูว่ามี Commitment หรือไม่ เป็นต้นว่าจะซื้อเครื่องมือ 3 ล้านบาท คุณจะ Commitment ได้ไหมว่าในอีก 3 ปีคุณจะมีผลงานจากเครื่องมือตัวนี้ เราพยายามใส่ความคิดเหล่านี้ให้นักวิจัย แต่พวกเขาอาจมองว่ามันเป็นการ FORCE มากเกินไป เรามีการทำวิจัยที่ไม่ประสบความสำเร็จ เราก็ต้องไปดูว่าเกิดจากอะไร ส่วนการทำวิจัยถ้าไม่สำเร็จจะถูกปรับหรือไม่นั้นจริงๆ แล้วเราไม่ได้มีการประเมินอย่างชัดเจนเพราะระบบงานวิจัยยังสับสนวุ่นวายอยู่ เราต้องกำหนดแผลกลยุทธ์ 4 ปี แต่แผนกลยุทธ์ที่กระทรวงศึกษาธิการส่งมาแบบหนึ่ง ในขณะที่กระทรวงวิทยาศาสตร์และเทคโนโลยีส่งมาอีกแบบหนึ่ง ซึ่งดูเหมือนว่าหน่วยงานในระดับบนก็ยังไม่มีอะไรที่เป็นมาตรฐานชัดเจน อันที่จริงเรามีแบบอย่างที่ดีในการพัฒนานักวิจัย เช่น ดูจากมหาวิทยาลัยมหิดล สำหรับที่มหาวิทยาลัยนี้ยังไม่มีหน่วยงานที่มองเห็นภาพแล้วทำ แต่ในปัจจุบันก็มีหลายหน่วยงานที่ทำตัวเหมือนว่าตัวเองเป็นผู้สร้างกฎเกณฑ์

As the university proposes to be a Research University, does it have any affect on your institution? Now that the university proposes to be a research university, it is necessary to examine the sources of research problems. We can now create corporate culture to motivate lecturers in doing more research especially during the next 6-7 years. The administrators should provide the role model for this by submitting research projects for bigger fund such as 10 million baht to encourage other researchers in following. But the problem is the administrators generally have a high workload. Thus some of them cannot finish their research works. It is then necessary for the staff to determine their own duties, the concept of work and the project management, especially the full-time staff. They must learn how to manage their time and publication. They have to build their own commitment about how to utilize their research outcomes and how to gain accomplishment. But it is not an easy task. For some of the staff members that haven't done any presentation abroad because of poor English, may have assistance with learning by joining international conference in Thailand instead. We encourage our staff to do presentation one or two times a year depending on their developmental level. Generally, they can present a poster the first time, but the second time, they should do an oral presentation.	**จากการที่มหาวิทยาลัยประกาศว่าจะเป็นมหาวิทยาลัยวิจัย นั้นมีผลต่อการวิจัยของสถาบันท่านอย่างไร** การที่มหาวิทยาลัยต้องการที่จะเป็นมหาวิทยาลัยวิจัยและมีการประกาศออกมา เราก็ต้องมาดูว่าปัญหาวิจัยเกิดจากอะไร แต่ตอนนี้เราก็สามารถสร้างวัฒนธรรมที่ทำให้คนหันมาทำวิจัยมากขึ้น ในช่วง 6-7 ปีที่ผ่านมาเห็นได้ชัดเจนถ้าไปดูสถิติการวิจัย จะเห็นว่ามหาวิทยาลัยมีงานวิจัยเพิ่มขึ้นเพราะคนที่ทำงานบริหารควรทำตัวเป็นแบบอย่างในการเขียนขอทุนวิจัยในแบบที่ไม่เคยมีใครได้มาก่อน เช่น Project ระดับ 10 ล้าน พอเราเป็นตัวอย่าง นักวิจัยที่เคยเห็นว่างานวิจัยได้เงินนิดหน่อยไม่น่าทำและยังมีระเบียบยุ่งยาก พอมีคนเห็นว่าทำได้ก็มีคนทำตาม แต่ตัวผู้บริหารจะแย่เพราะต้องทำงานวิจัยด้วย ซึ่งทำให้มีปัญหาการทำงานไม่เสร็จ ดังนั้นนักวิจัยจึงต้องเข้าใจงานที่ตัวเองทำ ต้องเข้าใจในเนื้องานและการบริหารงานวิจัย โดยเฉพาะพวก Full time ต้องเข้าใจว่าเขาต้องจัดสรรเวลาในการวิจัย ต้องมี Publication ซึ่งต้องสร้าง Commitment แต่ปัจจุบันยังไม่มี Commitment ในเมื่อเรากระตุ้นทำให้คนมาทำวิจัยได้แล้วก็ต้องดูต่อไปว่าทำอย่างไรให้เขาเกิดผลงานออกมาและทำอย่างไรให้สำเร็จ มันไม่ง่ายเลย บางคนไม่เคยไป present ระดับ International ในต่างประเทศเพราะเขาไม่เคย present เป็นภาษาอังกฤษ เราก็ให้โอกาสเขาเรียนรู้การ present ผลงานในประเทศระดับ International ไปก่อน เราสนับสนุนให้บุคลากรไป present งาน แต่ว่าจะไป 1 ครั้งหรือ 2 ครั้ง เราต้องดูว่าเมื่อเขาไปแล้วมีการพัฒนาอย่างไร การให้ไปต้องเป็นเงื่อนไขของการพัฒนา เช่น ครั้งแรกไปเป็น poster แต่ครั้งที่ 2 ควรเป็นการไป Oral Presentation
How does your institution support lecturers to do publication? In my opinion, having publication is a good thing because it can be an evidence for promotion. However, it should be realized how those researches can be used in real life. Some researchers don't publish their works, but they use their studies to assist the farmers in increasing their farm's productivity. I think, this productivity should be added to the job assessment process. At this time no one accepts this evaluation method, and I think, sometimes the benefits are not directly based on publication. This institution hasn't had any research journal. We only used to distribute research document to other universities and libraries. But now we stop doing that because the Director disagrees. He argues that if we distribute a document like this, our staff do not produce any publication.	**สถาบันของท่านให้การสนับสนุนตีพิมพ์ผลงานวิจัยอย่างไร** บางครั้งการมี publication นั้นดีเพราะสามารถใช้ประกอบการประเมินผลงาน แต่นอกจากนั้นควรพิจารณาเรื่องการนำผลงานไปใช้ด้วย เนื่องจากนักวิจัยบางท่านไม่มีการตีพิมพ์ผลงาน แต่สามารถนำผลงานไปช่วยฟาร์มที่มีปัญหาให้มีผลิตผลดีขึ้นก็ควรนำมาพิจารณาด้วย เพราะบางครั้งประโยชน์ก็ไม่ได้อยู่ที่การตีพิมพ์ แต่ตอนนี้ก็ยังไม่เป็นที่ยอมรับ สถาบันเองไม่มีวารสารวิจัย ที่เคยทำเป็นเพียงเอกสารเผยแพร่ส่งไปตามมหาวิทยาลัยหรือห้องสมุดต่าง ๆ แต่ตอนนี้ไม่ได้ทำแล้ว เพราะผู้บริหารมองว่าถ้าทำแบบนี้คนจะไม่ยอมตีพิมพ์ เราจึงเลิกและมาผลักดันให้มีการตีพิมพ์มากขึ้น

Where are the sources of information? The institution of Marine Science has our own library. We have a computer lab and we also are the first unit that started to develop a network and internet system. We have a marine science database in our library. We try to collect as much information as possible. This network is linked into the university's system but actually, the network should be established with the university, not this institution. The systems should be integrated, but the university does not have enough money; hence, each institution has to set up the network by themselves.	**แหล่งข้อมูลในการวิจัยได้จากที่ใด** เรามีห้องสมุดเฉพาะทางและมีห้อง computer สถาบันแห่งนี้ได้สร้างระบบ Network ขึ้นมาในระดับต้นๆ ของมหาวิทยาลัย เราลงทุนเอง เราสนับสนุนการ ACCESS เข้าไปในwebsiteของสถาบันที่มีฐานข้อมูลในระบบNetworkของห้องสมุดที่จะรวบรวมข้อมูลและเอกสารเกี่ยวกับวิทยาศาสตร์ทางทะเลให้ได้มากที่สุด ซึ่งต่อมา Network ก็เชื่อมต่อเข้าห้องสมุดของมหาวิทยาลัย แต่ที่จริงระบบฐานข้อมูลควรเกิดจากหน่วยงานกลางไม่ใช่จากหน่วยงานย่อย เพราะระบบต่างๆ ควรถูก Integrate เข้าด้วยกัน แต่ในเมื่อส่วนกลางไม่มีเงิน มันก็ต้องถูกทำขึ้นจากหน่วยงานย่อย เนื่องจากหน่วยงานย่อยไม่สามารถรอให้หน่วยงานส่วนกลางทำได้
How does the level of Education affect research productivity? It is not exactly true that a person who has higher level of education has more research productivity than the lower one. Normally the doctoral graduates have their own publications as a result of their graduation. But after they begin to work, they may not have any publication for 4-5 years, For instance, I didn't have any publication for 7-8 years. But I attended some presentations in the conference and had research projects that assist agriculturists. It is essential to examine what tasks each person does. For example, I have to do administrative jobs. This institution didn't have a qualified research team, we only had research assistants. We have to re-examine whether we have a sufficient amount of staff or not. Some of our technicians are continuing studying bachelor, master and doctoral degree, but it cannot be guaranteed that after they graduate, they can do research or understand the research methods. Some doctoral graduates have produced so many mistakes when they do research because they have low experience. However, they have good basic skills that can be developed. On the other hand, staff who are not doctoral graduate are also able to do research. We have to give proper motivation techniques. Is it possible to let them do research by avoiding offering them other jobs? They should spend their time doing research. But in fact, our staff has to do so many tasks. We have two types of researchers. First, the researcher who do research because they like it. The second, the researcher who does research because of the money. At this moment, young lecturers are promoted to be administrators, and as a result they may lose the chance to do research. Moreover, the rank promotion is based on the length of working time rather than personal ability. Therefore, a person who gets promotion may not qualify as a researcher. Good researchers should not loose their possible ideas, but think of a productive way to proceed.	**ท่านคิดว่าระดับการศึกษามีผลอย่างไรต่อการวิจัย** มันไม่เสมอไปว่าคนที่จบสูงจะมีงานวิจัยมากกว่า เราพบว่าคนที่จบปริญญาเอกจะมี publication ติดตัวมา แต่พอทำงานอาจไม่มี publicationเลยใน 4 – 5 ปี เช่นผมไม่มี publication เลย 7–8 ปี แต่ผมมี conference มี Abstract และมีผลงานที่เกษตรกรสามารถนำไปใช้งานได้ ดังนั้นเราจึงต้องมองว่าเขาทำอะไร เช่น ผมต้องทำงานบริหารมากเป็นต้น เรายังไม่มีนักวิจัยที่ดีที่สามารถทำวิจัยเองได้ ที่เรามีเป็นเพียงผู้ช่วยวิจัยมากกว่า เราต้องมาดูว่าเรามีบุคลากรเพียงพอไหม เราได้พัฒนาเขาพอเพียงหรือไม่ อย่างเช่น Technician ของสถาบันบางคนเราให้เขาเรียนต่อในระดับปริญญาตรี–โท–เอก แต่ก็ไม่ใช่ว่าทุกคนที่จบออกมาแล้วสามารถทำวิจัยได้หรือเข้าใจการวิจัย บางครั้งอาจารย์ที่จบปริญญาเอกมาแล้วแต่เวลาทำวิจัยกลับมีรูรั่วมากมายเพราะขาดประสบการณ์ในการทำงาน แต่เขามีดีอยู่แล้วเราน่าจะพัฒนาเขาได้ คนที่ยังไม่จบปริญญาเอกก็สามารถทำวิจัยได้ เราต้องมาดูอีกทีว่าเราจะกระตุ้นให้เขาทำงานได้อย่างไร เป็นไปได้ไหมว่าถ้าคนที่เขาทำงานวิจัยเราอย่าไปมอบหมายงานอื่นให้ ให้เขาทำงานวิจัยอย่างเต็มที่ แต่ในความเป็นจริงดูเหมือนว่าถ้าใครทำอะไรได้ก็ให้ทำไปเสียทุกอย่าง คนที่ทำวิจัยจะมีอยู่ 2 ประเภทคือ คนที่ทำด้วยใจรักและคนที่ทำเพราะเงิน ในปัจจุบันอาจารย์อายุน้อยๆถูก Promote ให้มาทำงานในตำแหน่งบริหารทำให้เขาเสียโอกาสในการทำวิจัยและในบางตำแหน่งที่เป็นตำแหน่ง Fix ซึ่งการ Promote จะดูตามอายุงานไม่ได้ดูที่ความสามารถ ทำให้คนที่ได้รับการคัดเลือกไม่มีความรู้ที่ดี นักวิจัยที่ดีไม่ควรปิดกั้นความคิดที่เห็นว่าสามารถเป็นไปได้ เราควรหาหนทาง นักวิจัยบางคนที่ไม่ประสบความสำเร็จเพราะหาตัวเอง

Sometimes, a researcher has failed because they did not understand the research field well enough themselves. They don't understand what they like or what field they want to become well-known in. This is especially so for new researchers. They usually follow the trend. They must have experts to guide them on how to think for themselves. Unfortunately, the Thai education system does not let students learn how to think.	ไม่เจอ ไม่รู้ว่าตนเองชอบอะไร ไม่รู้ว่าอยากให้คนรู้จักในเรื่องอะไร โดยเฉพาะนักวิจัยที่เพิ่งจบออกมาใหม่ ๆ บางคนพอไปได้ยินได้ฟังอะไรมาก็ไปทำตามเขา ดังนั้นคนที่มีประสบการณ์ต้องเป็นผู้ช่วยสร้างวิธีคิด แต่ผมมองว่าระบบการศึกษาของไทยไม่ได้ช่วยให้คนคิดเป็น
How do demographic factors affect research productivity? Demographic factors do not affect research productivity. This institution has more females than males. Research productivity is depended on the working methods. The accomplishment depends on the people and how can we support them.	**ปัจจัยด้านประชากรศาสตร์มีผลอย่างไรต่อการวิจัย** ไม่น่าจะเกี่ยว ที่นี่มีผู้หญิงมากกว่าผู้ชาย สำหรับเรื่องของผลผลิต ผมว่าไม่ใช่ประเด็นมันขึ้นอยู่กับวิธีการทำงานมากกว่า ความสำเร็จมันขึ้นอยู่กับคนและเราจะช่วยส่งเสริมเขาได้อย่างไร
What will the trends of research direction in the future be? This institution puts emphasis on the quality of work and international publication. We try to raise the quantity of work, and the research should be used in daily life. For obtaining a patent, it may take time to achieve because of the expensive registration cost. In the future, they should have someone who is responsible for paying these costs. If researchers pay in advance, but no one purchases the patent, how can the researchers get their advanced money back? We also need a marketer because it is not the duty of researchers to sell their works. We have to learn research culture, and decide whether it should emphasis quality or quantity. We require good management. Our University can now increase the quantity of research productivity, and this is a good trend. During this 7-8 years, we have received more research funding, but the problem is we have so many unfinished works. It is the duty of the University's management team to find the solution to the problem of unfinished work. The University is in the process of motivating researchers in doing research, but within this institution, I may not put more emphasis on the quality of work, as no one would do research. But if someone can produce a qualified research, I may give him a reward.	**ในอนาคตการวิจัยของสถาบันจะมีทิศทางเป็นอย่างไร** สิ่งที่สถาบันเน้นก็คือคุณภาพของงานและการ Publicationในระดับนานาชาติ แต่ปริมาณก็ต้องเพิ่มขึ้นด้วย ผลของวิจัยควรนำไปใช้ได้จริงในชีวิตประจำวันและส่งเสริมให้คนเหล่านั้นเห็นว่านี่คือการพัฒนา จากนั้นจึงผลักดันให้เกิดการตีพิมพ์ แต่สำหรับเรื่องสิทธิบัตรในการจดสิทธิบัตรต้องใช้เงินและต้องใช้เวลา ดังนั้นเมื่อเสียค่าใช้จ่ายไปแล้วแต่ไม่มีคนสนใจซื้อลิขสิทธิ์ใครจะจ่ายเงินค่าจดสิทธิบัตรให้ล่ะเพราะฉะนั้นควรมีฝ่ายที่จะช่วยดูแลเรื่องผลประโยชน์เหล่านี้ในเรื่องของการตลาดไม่ใช่ให้นักวิจัยทำเองหมด เราต้องเข้าใจ Culture ของงานวิจัยว่าเขาเน้นปริมาณหรือคุณภาพ เราต้องมีการบริหารจัดการที่ดี มหาวิทยาลัยของเราตอนนี้มีงานวิจัยเพิ่มขึ้นถือว่าเป็นความสำเร็จอย่างหนึ่ง ใน 7–8 ปีที่ผ่านมามีทุนวิจัยมากกว่าเดิม แต่ปัญหาก็คือ มีงานค้างอยู่มากดังนั้นมันคือปัญหาของผู้บริหารงาน ตอนนี้มหาวิทยาลัยอยู่ในระยะที่สามารถดึงคนมาทำงานวิจัย สำหรับผมในฐานะที่เป็นผู้บริหารงานวิจัยผมยังไม่เน้นเรื่องคุณภาพมากเพราะจะทำให้ไม่มีคนอยากทำวิจัย แต่ถ้าใครทำให้เกิดคุณภาพได้เราก็มีรางวัลให้