Academic Ethics in Research Methodology

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Abstract: This research aimed to investigate academic ethics in research methodology of Mahasarakham University's Graduate Students, to compare between academic ethics in research methodology of Masters students and that of doctoral students and to construct predictive equations of factors that were related to behavioral academic ethics in research methodology. The samples of the study were 66 doctoral students and 434 Master students, who were enrolled in the faculty of Education, Mahasarakham University. The research instrument included: a 30-items scale on the academic ethics in research methodology with discriminating powers ranging from 0.19-0.63 and a reliability of 0.8645. The collected data were analyzed by percentage, mean and standard deviation t-test. Pearson Product-Moment Correlation Coefficient and Multiple Regression Analysis were employed for hypothesis testing. The results of the study showed: that all students who involved as the sample of the study had average scores of 26.35 (SD = 3.00) on academic ethics knowledge and 26.41 (SD = 3.06) on academic ethics behavior, while their attitude score toward academic ethics was at a high level, that there was no difference among masters students and doctoral student in terms of academic ethics knowledge score, academic ethics attitude score and academic ethics behavior score and that academic ethics knowledge and attitude toward academic ethics could predict academic ethics behavior. The multiple correlation coefficient (R) was 0.908 with predicting powers at 82.40%. The equations in the raw-scores form and standard-score form could be written as: the predictive equations in the raw-score form: $Y' = 1.072 + 0.877$ know $+ 0.560$ Att and the predictive equations in the standard-score form: $Z_{y'} = 0.860Z_{know} + 0.081Z_{Att}$.

Key words: Academic ethics, behavior, research methodology, graduate studies, Thailand

INTRODUCTION

Regarded as a major component in developing the country, human resource plays an important role in the advancement of the country. The crucial role in seeking knowledge, discovering new technology, developing and imparting knowledge and skills for work and education, therefore, it is necessary to develop quality of human resource.

To reach that goal, education is considerably employed for the sake of the well-living in normal lives and the development of the country under aspects of society, economy and politics changes.

According to the educational management as listed in Thailand Education Act (1999), education is classified into two major levels: basic education and higher education. In the higher education level, there are two levels of study: undergraduate and graduate. With responsibility of academics, lecturers and instructors in teaching in both government and private institutions are considered (Office of the National Education Commision, 1999).

Inevitably, education at the graduate level is especially important to the country development. Graduate students are often required to conduct a research with good knowledge of research methodology. Thus, a qualified and reliable research needs a good qualification and a well-rounded researcher.

For that reason, academic ethics in research methodology is prominently proposed as an indicator to examine academic ethics of Mahasarakham university's graduate students in their research methodology. Graduate students' role in serving society is crucial. As an educated group, they are highly expected to help develop the nation growth of education and society aspect. If their ethics are lessened, instead of doing that they might cause society trouble.

Regard to the fact that nowadays most tertiary institutions have abandoned teaching ethics in classrooms, instead, much emphasis is placed only on promoting academic excellencies. As a result, students are not much successful in their work. Many of them are needed to hold not only knowledge but also honesty and sincerity. That is because, knowledge acts as a car, while ethic acts as a steering. To reach one's destination, we need to drive a car and take a steering with.

Academic ethics is an international controversial issue of all developing society. It has become, a crucial problem and has a potential effects on behaviors, values and norms of people.

In the aspect of behaviors, the changes of human behaviors occur due to modern environment as well as new technology. Consequently, some of human behaviors are not as what the society expected. There are now a generation of undesirable characteristics. With respect to the values and norms, people struggle for surviving in the fast changes and of the advent of foreign cultures in Thai society. This phenomenon has obviously been reflecting in ways of living. Without ethics, people take advantages at the expense of others. This reflects the decline of not having ethics.

At tertiary education, instructors have been tackled with this problem even though, they are expected to have high level of academic ethics. However, the exploring of innovation and the advanced science has been brought to solve the education deficiency. Many attempts have been imparted as the best solution. Importantly, academic ethics aspect should be taken into account.

Although, the tertiary education has established in Thailand for >90 years, there is less attention on implanting and bringing up people on aspect of academic ethics. To plagiarize other's written work or to take and use ideas, passages from other's work are viewed negatively and illegally (Prasitratsin, 1993). Another effect is affected on both a researcher and respondents. (Setthabutra, 1999).

Graduate students are required to read, study, compile and compose their papers, reports, proposals, articles or research by their own. On the other hand, they do the practice of implying, original materials from someone else's written or creative work, in whole or in part, into one's own. As a result, academic papers or published research are violated even on words, sentences and paragraphs.

In terms of academic, plagiarism by students, professors, or researchers is considered academic dishonesty and offenders and is subject to academic censure. Some individuals, who are caught plagiarizing in academic claim that they are plagiarized unintentionally, as they fail to include quotation or give the appropriate citation done. Plagiarism is concerned with the issue of false attribution.

This has brought up and led to a problematic dimension of students' behaviors during studying and even after graduation. The lack of academic ethics, since that time, has spread in educational cycle throughout the country.

At tertiary education, in 2006, MSU graduate school operated two research degree programs: a doctoral program with 16 fields of study and a master program with 44 fields. Students are required for conducting a thesis if they choose Plan A. If they choose plan B, they are required for conducting an independent study.

Graduate students are expected to have purposes of learning and ambition for great achievement. Moreover, desirable characteristics like: diligence, thoughtful and systematic thinking and creativity are needed (Srisa-ard, 2003). In regard to the synthesis on independent studies and theses, some have found the repetition in whole of other's research. Many students feel a great pressure to get papers done well. Hence, some steal, copy other person's research to do their research make up false data or hire somebody else.

Therefore, it is essential to investigate academic ethics of Mahasarakham university's graduate students in their research methodology. The findings of the research are exploited to the academic ethics development of the students and support the country development.

MATERIALS AND METHODS

Objective:
- To study Academics ethics in research methodology of graduate students at Mahasarakham University
- To compare Academics ethics in research methodology of graduate students, which were categorized by educational level at Mahasarakham University
- To investigate factors related to academic ethics behavior in research methodology and to construct predictive equation

Hypothesis:
- Master degree students possess academic ethics in research methodology different from Doctoral students in three dimensions: academic ethics knowledge, academic ethics attitude and academic ethics behavior
- Academic ethics knowledge and attitude in research methodology can predict academic ethics behavior in research methodology of the graduate students' research methodology of Mahasarakham University

Expected outcome: Instructors of the graduate students and relevant institutes can use the outcomes from this study to set ethical activities for graduate students. The activities may promote and develop the graduate students' academic ethics. The students are ethical researchers, who will promote Thailand's educational development.

Procedure
Population and sample: The population of this study is graduate students from of the Faculty of Education, Mahasarakham University in academic year 2549 B.E. The

sample of this study consisted of 500 doctoral students and master degree student, which obtained from multi-staged random sampling.

Research variable

An independent: Variable is the graduate students' educational levels: master degree students and doctoral students.

A dependent variable: The academic ethics, which was categorized into three sides. They are academic ethics knowledge, academic ethics attitude and academic ethics behavior in research methodology.

Data collection tool: A tool for data collection was a academic ethics questionnaire on Research Methodology, which was modified from an academic ethics questionnaire in Research Methodology developed by Sombat Tayruakham (2543 B.E.). The tool contained wording on different situational conditions, which were exemplified actions on research methodology. In each item, which consisted of a situational condition, the students were required to answer the questions in three aspects:

- About the knowledge on technical ethics on research methodology, the students can answer right or wrong. The score is one or zero
- For ethical attitude on research methodology, the students can answer any of the five attitude levels questionnaires. There are five rating scales on the attitude questionnaire
- In academic ethics behavior, aspect of the methodology, the students can choose a propose argument (do or do not). There were 40 items for each aspect. The score was one or zero. Before using the questionnaire in the target group, it was brought to try-out with 97 graduate students from other centers. Academic ethics attitude questions on research methodology were used to collect data in the group. In order to obtain valid tool, the researcher employed discriminating power for each item, item total correlation, testing hypothesis for simple correlation (r_{xy}) of pearson product moment correlation coefficient. From the process, 30 items, which were statistically different (p<0.05 and r_{xy} = 0.17) were selected. The items showed discriminating power with range from 0.19-0.63 and Alpha Cronbach's Coefficient for total items was 0.8645

For data analysis, the researcher employed arithmetic means, standard deviation, t-test (independent samples) and multiple regression analysis.

RESULTS

Of graduate students, are rage scores of academic ethics knowledge and behavioral academic ethics were 26.35 (SD = 3.00) and 26.41 (SD = 3.06) in that order, where as the score of academic ethics attitude was at a high level ($\bar{X}$ = 3.9947, SD = 0.4426).

Academic ethics knowledge score, behavioral academic ethics score and academic ethics attitude score among masters and doctoral students were not different.

Academic ethics knowledge and academic ethics attitude can predict behavioral academic ethics, where the multiple correlation coefficient (R) was 0.908 with predicting power at 82.40% and the Standard Error of estimate (SE_{est}) was 0.004. The equations in the raw score form and standard-score form can be written as:

The predictive equation in the raw-score form:

$$Y' = 1.072 + 0.877 Know + 0.560 Att$$

The predictive equation in the standard-score form:

$$Z_{y'} = 0.860 Z_{Know} + 0.081 Z_{Att}$$

DISCUSSION

Academic ethics knowledge score and behavioral academic ethics score in research methodology of graduate students were 26.35 (SD = 3.00) and 26.41 (SD = 3.06) orderly, which were >80% of the full score. On the other hand, academic ethics attitude score was at a high level ($\bar{X}$ = 3.9947, SD = 0.4426). This may be because of ethics person must know what is good and what is not good to perform in his/her society and that may lead to a right performance. Graduate students had studied about research ethics in research methodology; therefore, they have academic ethics knowledge and behavioral academic ethics in advanced research methodology, which is in accordance with the Cognitive Development Theory of Kohlberg (1971) mentioned that ethics is an understanding about the wrongness, which happens from a reasoning thinking process and depends on cognitive maturity. According to Piaget's cognitive development theory, based on which Kohlberg developed his theory, human's cognition has many stages of development and each stages is age-related and has a distinct ways of thinking. Furthermore, Kohlberg's theory also relates to Bandura's Social Learning Theory (Bandura, 1977). As a result, we can conclude that graduate students who have a high level of academic ethics knowledge will have a good ethics attitude to academic ethics in research methodology and many lead to a good behavioral academic ethics, finally.

Academic ethics knowledge score, behavioral academic ethics score and academic ethics attitude score among master and doctoral students were not different. This may be because of the masters and doctoral students had already studied about the research methodology. Moreover, there is no law to control about research ethics, which forces members to operate under the same law. Therefore, we cannot stop the academic ethics, violation in the research methodology. So, this makes no difference of academic ethics score in research methodology for the master and doctoral students. However, when we consider each item separately, the different finding will be summarized as follows:

For academic ethics knowledge in the research methodology, it found that the doctoral students had academic ethics knowledge higher than the master students at 0.01 of the significant level in the following issues:

- A modification of others' research or an adaptation of some parts or all parts of others' research without a mention to research's owner
- A publicly reveal of information, which caused a bad result to a sample group
- A research, which did not state the names of co-researchers

Furthermore, in an issue of a data collection when a research's result did not meet a stated hypothesis, the doctoral students had academic ethics knowledge higher than the master students at 0.05 of the significant level.

For academic ethics attitude, it found that the doctoral students had academic ethics attitude higher than the master students at 0.01 of the significant level in the following issues:

- Choosing a research topic by considering a research's benefits and application
- Choosing an incomplete research topic to conduct a complete product
- Choosing a research topic by considering the nation's development

Moreover, the doctoral students had academic ethics attitude higher than the master students at 0.05 of the significant level in according to the following issues:

- A honesty and a responsibility to a studying topic
- A publicly reveal of information, which causes a bad result to a sample group
- A data collection when a research's result did not meet a stated hypothesis

For behavioral academic ethics in the research methodology, the doctoral students had behavioral academic ethics higher than the master students at 0.01 of the significant level in the following issues:

- Choosing a research topic by considering a research's benefits and application
- Choosing an incomplete research topic to conduct a complete product
- A publicly reveal of information, which caused a bad result to a sample group

However, the doctoral students had behavioral academic ethics higher than the master students at 0.05 of the significant level in according to the following issues:

- A modification of others' research or an adaptation of some parts or all parts of others' research with out a mention to research's owner
- A collection of data during the final examination in the 2nd semester because a researcher was afraid that a school would be closed
- A data collection when an information was not meet a researcher's expectation

This may be because ethics is an understanding about the wrongness, which happens from a reasoning thinking process and depends on cognitive maturity (Kohlberg, 1971). Also, the doctoral students have more experience in studying and conducting a research than the master students. Furthermore, the master students of Mahasarakham University who enrolled in the special curriculum have a different target to join the curriculum. That is some master students enrolled the curriculum because they need to develop themselves whereas some master students enrolled the curriculum only for a certificate. On the other hand, the doctoral students are a group of students who need knowledge to develop their works. The target of the doctoral study is to develop a new body of knowledge and a dissertation must be printed in academic journals. Thus, the doctoral students must aware of ethics violation such as copying or taking others' research. So, this makes the doctoral students have academic ethics higher than the master students.

Academic ethics knowledge and academic ethics attitude could predict behavioral academic ethics in the research methodology by cooperatively explaining the variance of behavioral academic ethics in the research methodology, which equaled to 82.40% ($R^2 = 0.824$) whereas, academic ethics knowledge in the research methodology was equal to 81.90% ($R^2 = 0.819$). This is because ethics is an understanding, which comes from a

reasoning thinking process. So, behavioral academic ethics of each person depends on how well he knows about right or wrong. On the other hand, academic ethics attitude in the research methodology can explain about the variance of behavioral academic ethics at 0.5%, which is very low.

This is because academic ethics attitude of many people relates to value in that society. Thus, how each person performs does not depend on whether, he likes or not. Instead, it depends on what he must do. For example, an ethics violation of the master and doctoral students may generate because of the university's regulations, which sometimes those students do not want to do like that.

RECOMMENDATIONS

As a result of research study, academic ethics knowledge related to behavior academic ethics in research process and it can be described that there is much variance. Therefore, graduate school administrators who are in charge of administering master and doctoral programs should orient the academic ethics knowledge in research process among the freshmen and promoting them to concern about academic ethics at the beginning of semester.

As a result of research study, academic ethics knowledge had a highest effect to behavior academic ethics in research process (β = 0.860). Therefore, instructors should add academic ethics knowledge into their lessons. Moreover, the thesis or case-study advisors should check and ask their students to be careful about doing some mistakes in academic ethics.

For further research, the recommendations are:

- It should be study the forth elements of academic ethics (knowledge, attitude, reason and behavior ethics in research process) in terms of Multi-Level Analysis
- In terms of a Multi-Group study, it should be study the causative factors, which have an effect to behavior academic ethics in research process. Examples of causative factors are internal and external factors, such as instructors who are teaching in graduate programs and groups of teaching experts

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