

Teacher Education Students' Attitude towards Research Studies: A Case Study

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Abstract

In today's world, one of the criteria for progress is research. There can be no progress without research in almost if not all, human endeavors. Thus, a study on teacher education students' attitude towards research was conducted. Descriptive-correlation was employed using the Attitude toward Research Scale administered to 173 participants. Statistical tools such as mean, standard deviation, ranking and PPM were used to answer problems in this study. Results show that teacher education students were moderately negative towards research and research relevance to life. However, they are moderately positive towards research usefulness. On the other hand, they have a low level of research anxiety and research difficulties. Considering gender and curriculum, teacher education students were almost the same in their attitude towards research. However, females and those on the BSEd students are more positive than BEEd. Furthermore, the insufficient background was ranked first as research related factors while difficulty in analyzing and interpreting data was ranked first in terms of statistics-related factors. Teacher factor was also ranked first considering other related factors. Results also show that attitude towards research is related to students lack of interest, anxiety in conducting research, research relevance to life, and teacher factor. These findings reflect that teacher education students are not yet ready to engrossed research as a subject. Along this line, professors/instructors handling research subject should motivate teacher education students to develop positive attitude towards research. They are not only educators soon, but they are also future researchers.

Keywords: *Factors, Teacher Education Students, Attitude, Research, Case Study*

1. Introduction

Globalization, hastened by technological advancement, has dramatically changed human beings' way of life. Many inventions have been made which bring comfort and progress in man's existence. The latest fad in communication is proof of technological advancement, which men believe to be a product of research. Research is the key to progress. There can be no progress without research in almost if not all, human endeavors.

Research plays a significant role in our daily life. All inventions have been made possible with the help of research. Human beings were able to find a cure for flue, polio, and many other horrible diseases because of research. Not only in medicine, but it also helped a lot in technology. Talking to long-distance relatives is the outcome of research in technology (Gross, 2001). Research is the process of collecting and analyzing information to increase our understanding of the phenomenon under study (Swindoll, 2012).

In the context of education, research can be of tremendous value to the school and the educational system in general. As educators, we know that there are lots of problems in and outside of the classroom. Along this line, research can be of the best value and may help meet this need. For instance, teachers need to know what teaching approaches and materials can be used to help students learn better. Teachers must understand the learning preferences of the students for them to determine the specific teaching styles to apply for the best learning outcome. Similarly, school administrators should be aware of the impact of specific programs such as "Brigada Eskwela" to the teachers, students, parents, school administrators, the community, and the educational system in general. These scenarios require scientific research.

It is a must, therefore, for the students to be knowledgeable in conducting even simple researches to solve problems which may help improve the quality of life. However, with this significance of research to man's existence, students at the undergraduate level, typically tend to view research-related courses with negative attitudes and feelings (Papanastasiou, 2014). Several factors may influence Students' negative attitudes and beliefs toward research. It might be personal such as their sex, age, or maybe the curriculum or the course they have chosen. Others might be research-related factors such as an insufficient background in research, inadequate knowledge in scientific/research procedures, and appropriate skills in research or it can be statistics-related factors such as difficulty in analyzing and interpreting data and prior knowledge in statistics.

Along this line, there were studies conducted regarding attitudes towards research as reflected by the literature reviewed. However, few are studies conducted concerning factors influencing students' attitude towards research. Thus, this study was conducted.

2. Research Objectives

The following are the research objectives of this study:

2.1 To determine the attitude towards the research of the teacher education students in terms of:

- 2.1.1 Research usefulness
- 2.1.2 Research anxiety
- 2.1.3 Positive attitudes
- 2.1.4 Relevance to life
- 2.1.5 Difficulty of research

2.2 To identify which of the identified factors are more influential on teacher education students' attitude towards research.

2.3 To determine the relationship between teacher education students' attitude towards research and the identified factors.

3. Limitations of the Study

This study aims to determine teacher education students attitude towards research studies. Since participants of the study belong to one group of participant, the teacher education students, hence the case study research method was the most appropriate.

4. Research Methodology

4.1 Research Design

Descriptive-correlational method of research was utilized in this study. This method is the most appropriate because factors related to teacher education students' attitude towards research were identified and described. According to Latin and Berg (2004), descriptive research is typified by observations or descriptions of the status of a condition or situation. Investigators using this method do not manipulate variables or make things happen.

It is also a correlation because the relationship between factors and teacher education students' attitude towards research was determined. Salkind (2003) states that the most liked type of research to answer questions about the relationship among variables or event is correlational research. It provides some indications as to how two or more things are related to one another or, in effect, what they share or have in common or how well one or more pieces of information might predict a specific outcome.

4.2 The Subjects

The respondents of the study were the 173 teacher education students randomly selected using Raesoft sampling calculator from the 312 officially enrolled teacher education students of Philippine Normal University Visayas. They were grouped according to gender and curriculum. Of the 173 participants, 32 of them were males, while 141 were females. On the other hand, when grouped according to curriculum, 69 of the participants were Bachelor of Secondary Education (BSEd) students while 104 were Bachelor of Elementary Education (BEEd).

4.3 Research Instrument

To determine the attitude towards research of the teacher education students, the researchers adopted the questionnaire developed by Elena C. Papanastasiou. The researchers decided to adopt this research instrument as it is in consonance to the objective and purpose of the study. This research instrument was grouped into five dimensions, namely: research usefulness to the profession, research anxiety, positive attitudes, relevance to life, and research difficulty. This research instrument was considered valid and reliable. On the other hand, factors such as research-related, statistics-related, and other related factors were identified based on the review of the existing literature related to the topic of concern.

4.3.1 Validity of the Research Instrument

The research instrument used in this study was subject to validity using Lawshe's Content Validity Ratio (CVR). The research instrument was presented to ten jurors. These jurors are instructors and professors teaching research subjects in the university and the nearby colleges and universities. They are considered experts in the field of research and statistics education. Only ten of them were utilized as a panel of jurors for the assumption that valid and reliable result will be obtained. Besides Zamanzadeh, et al., (2015) expressed that determining the number of experts has always been partly arbitrary. At least five people are recommended to have adequate control over the chance agreement. They added that as the number of experts increases, the probability of chance agreement decreases. In this regard, result revealed that 5 of the 22 items have the CVR of 0.68 while 17 have the CVR of 1.00. Considering the average of CVR, the result shows that the average of 0.94 means that

experts were in agreement that the items are essential and can measure what the researcher intended to measure. Polit (2007) states that ICVI equal to or higher than 0.78 would be considered excellent.

4.3.2 Reliability of the Research Instrument

In the conduct of the reliability, the research instrument was pilot tested to teacher education students from the nearby colleges and universities in Negros Occidental. To determine the reliability coefficient, the researchers employed Cronbach Alpha. Reliability coefficient using Cronbach alpha was 0.91. This coefficient of reliability indicates that the research instrument was reliable to a very strong or high degree (Hair, Bush, & Ortinau, 2006).

5. Data Collection

The researchers collected data using the developed research instrument used to measure teacher education students' attitude towards research. The researchers utilized the following steps of data collection:

- a. A letter was sent to the director for academics asking permission for the conduct of the research instrument to the target participants.
- b. Sufficient copies of the questionnaires were reproduced.
- c. The researchers, with the authorization from the subject teachers, conducted the research instrument to the target participants.
- d. After the conduct, the questionnaires were retrieved, and data were then encoded to the Microsoft Excel and processed using SPSS.

6. Data Analysis

To answer the research objectives, the researchers employed the following statistical tools:

1. Means and standard deviations were used to determine the attitudes of teacher education students attitude towards research.
2. The ranking was used to determine factors that influence teacher education students' attitude towards research.
3. T-test for independent means was used to determine differences in the attitude towards research of the teacher education students when grouped according to sex and curriculum.
4. Pearson Product Moment of Correlation Coefficient (PPM) was used to determine the correlation between the identified factors and teacher education students' attitude towards research.

7. Results and Discussions

The results of this research were presented in four sections. The first presentation was on teacher education students' attitude towards research. The second presentation was on the differences between teacher education students attitude towards research when grouped according to sex and curriculum. The third presentation was on the influencing factors on the attitude towards research of the teacher education students. The last presentation was on the correlation between teacher education students' attitude towards research and the identified influencing factors.

7.1 Attitude Towards Research of the Teacher Education Students

Table 1. Attitude towards Research of the Teacher Education Students (n = 173)

Dimensions	M	SD
Research Usefulness	3.28	0.42
Research Anxiety	2.11	0.39
Positive Attitudes	2.94	0.40
Relevance to Life	2.91	0.39
Research Difficulty	2.12	0.44
As a Whole	2.74	0.23

Using the mean and standard deviations, Table 1 reflects that teacher education students were moderately negative ($M = 2.74$, $SD = 0.23$) towards research. They were not able to realize how important research is. Likewise, they were not able to recognize that the comfort humankind has experienced is a product of research. According to Oguan et al. (2014) in today's fast-changing world, research has become one of the most important intellectual possessions for every human being to change his way of life in accordance to the needs and demands of the society. It is a key ingredient in shaping up the world that man lives in and the new experiences they see and encounter in their surroundings. It opens new frontiers to many fields like education, business, economics, medicine, and science. Indeed, research in itself has made a significant contribution to man's giant leap towards the future. Thus, it is a must for the students to be knowledgeable in conducting even simple researches to solve problems which may help improve the quality of life. However, students at the undergraduate level, typically tend to view research-related courses with negative attitudes and feelings.

On the other hand, teacher education students are moderately positive ($M = 3.28$, $SD = 0.42$) towards research usefulness. Teacher education students believed that why research is included in the curriculum because educators found that there are many problems in and outside of the classrooms which need to be researched. However, this is contrary to the findings of Butt and Shams (2013), which showed low student-teacher attitudes towards research usefulness. According to Shams, student teachers do not see the significance of research in the teaching profession without knowing that teaching models and changes in the curriculum are the product of research.

Furthermore, results presented in this table indicates that teacher education students have low level of research difficulties ($M = 2.12$, $SD = 0.44$) and anxieties ($M = 2.11$, $SD = 0.39$). This means that research as a subject for them is not difficult, and they don't have fears towards research. However, this result is contrary to the result of the study conducted by Oguan et al., (2014). Their study revealed that students had experienced difficulties in their research course. Likewise, the study of Iqbal (2011) reported that the students in the selected universities in Pakistan experienced difficulty in conducting research. Most of the students from the sampled universities reported the same level of attitudes towards research because of the lack of research orientation and other academic activities related to research.

Table 2. Differences in the Attitude towards Research of Male and Female Teacher Education Students

Dimensions	Sex		t	p	Df
	Male (n = 32)	Female (n = 141)			
Research Usefulness	3.14 (0.46)	3.31 (0.40)	-2.06	0.04	171
Research Anxiety	2.24 (0.36)	2.08 (0.39)	2.07	0.04	171
Positive Attitudes	2.98 (0.44)	2.93(0.40)	0.76	0.45	171
Relevance to Life	2.80 (0.33)	2.93 (0.40)	-1.80	0.07	171
Research Difficulty	2.00 (0.41)	2.14 (0.45)	-1.67	0.10	171
As a Whole	2.63 (0.19)	2.68 (0.23)	-1.05	0.25	171

Significant at $p \leq 0.05$ level

Table 2 reveals the attitude and the difference in the attitudes of the teacher education students when grouped according to sex. Using t-test for independent means result shows the attitude and the difference between the attitude towards research of male ($M = 2.73$, $SD = 0.22$) and female ($M = 2.75$, $SD = 0.23$) teacher education students was moderately negative and were not statistically significant, $t(171) = -1.05$, $p > 0.05$. This means that male and female teacher education students have almost the same attitude towards research. This result was confirmed by Oguar et al. (2014) in their study on attitude and anxiety towards research, its influence on the students' achievement in the course which revealed that male and female students have almost the same attitude towards research in almost dimensions but female obtained the highest means in all dimension. Likewise, Hussain et al. (2013) revealed that there is an insignificant difference between male and female students attitude towards research. On the other hand, Shaukat (2014) expressed in their study that the males had significantly positive attitudes towards research than the females. Similarly, significant results were found on the different programs of study.

However, when dimension was considered individually, the attitude towards research of male and female teacher education students was statistically significant in terms of research usefulness and research anxiety. Significant differences in terms of research usefulness favor the females, which means that females are more engrossed in their research subject; thus, they believe that research is timely and relevant to the present time. On the other hand, significant differences in terms of research anxiety favor the males, which means that males are more anxious in their research subject. They are more anxious because they don't have enough background and knowledge in conducting and doing research.

It is clear for now that the nature of research as a subject is quite difficult for the students to undertake especially male students. They find research subject as boring and less interesting than their other subjects. Thus, the majority of them are negative towards this. Shauka et al. (2014) state that some researches have been conducted to explore the attitude towards research, and the majority of them showed that attitudes towards research are generally not positive. Students think that it is tough and dry to study the research (Adams & Holcomb, 1986). They do not understand the concepts of research and its importance in their professional life.

Table 3. Differences in the Attitude towards Research of the Teacher Education Students when Grouped According to Area of Specialization

Dimensions	Area of Specialization		t	p	Df
	BEEd (n = 104)	BSEd (n = 69)			
Research Usefulness	3.22 (0.45)	3.35 (0.34)	-2.02	0.05	171
Research Anxiety	2.09 (0.38)	2.14 (0.41)	-0.88	0.38	171
Positive Attitudes	2.87 (0.43)	3.04 (0.31)	-2.73	0.01	171
Relevance to Life	2.86 (0.36)	2.99 (0.43)	-2.21	0.03	171
Research Difficulty	2.12 (0.42)	2.11 (0.47)	0.04	0.97	171
As a Whole	2.63 (0.22)	2.73 (0.23)	-2.80	0.01	171

Significant at $p \leq 0.05$ level

As shown in Table 3, BEEd ($M = 2.63$, $SD = 0.22$) and BSEd ($M = 2.73$, $SD = 0.23$) attitude towards research was moderately negative. However, their attitude towards research in terms of research usefulness was moderately positive. Teacher education students believed that research nowadays is significant. Many inventions which bring comfort to human beings were considered as products of researches. The latest fad in communication is one of the significant contributions of research to humanity. Because of this, communication becomes faster and even more significant to everyone. Although they appreciate the importance of research, however, few of them are involved in research activities and even in conducting simple researches. As Siemens, Punnen, Wong, and Kanji (2010) contend that though the majority of the students felt that the research would be beneficial in their career, fewer than half of the students were significantly involved in any research activity during their schooling. Students who realize the need for spending more time on research activities are even fewer.

However, when differences in the attitude towards research were considered, the result indicates that the attitude towards research of BEEd and BSEd teacher education students was statistically significant $t(171) = -2.80$, $p < 0.05$. Likewise, significant differences were also observed in terms of research usefulness $t(171) = -2.02$, $p = 0.05$, positive attitudes $t(171) = -2.73$, $p \leq 0.05$, and research relevance to life $t(171) = -2.21$, $p < 0.05$. Significant differences in this regard favor BSEd teacher education students. This means that teacher education students who will be future teachers handling the junior and senior high school students are more positive towards research as a subject in the teacher education curriculum. They believe that they need to be knowledgeable and skillful enough in handling even simple and basic research. Although Shauka et al. (2014) studies deal with a degree as with M.As and Ph.Ds, however, results in this situation is reflective to the present investigation which only deal with Bachelor in Elementary Education and Bachelor in Secondary Education. Bachelor of Secondary Education is more challenging than Bachelor of Elementary Education because the former has specialization like mathematics, science, physical education, etc. which is more difficult to handle than those of the BEEd.

Going back to Shauka et al. (2014) study on Postgraduate Students' Attitudes towards Research, it was revealed that participants of higher degrees were significantly better than the participants of lower degrees on Factor 1 "research usefulness", positive attitudes towards

research (Factor 3) and perceived relevance of the research to the life (Factor 4). This is also the results of the attitudes of BEEd and BSEd teachers education students where significant differences favor the BSEd.

Along this line, it can be deduced that students who have more exposure in research works and activities are more positive than those who have fewer experiences. Thus, honing students to even simple researchers will enhance their skills in research and will motivate them to develop a positive attitude towards research.

7.2 Identified Factors Influencing Teacher Education Students Attitude Towards Research

Table 4. Research Related Factors on Attitude towards Research (n = 173)

<i>Research Related Factors</i>	<i>Sum of Ranks</i>	<i>Rank</i>
Insufficient background in research	334	1
Insufficient knowledge in scientific/research procedures	339	2
Appropriate skills in research	379	3

Considering factors influencing teacher education students' attitude towards research, Table 4 reveals that insufficient background in research ranks first, while inadequate knowledge in scientific/research procedures and appropriate skills in research ranks second and third, respectively. Teacher education students' responses in this regard reflected that background knowledge in research is essential in doing research. The research process is complex because this does not include only one process but a series of processes which means that insufficient knowledge in research, as well as research procedures, hinder any research undertaking of the students.

Research is a difficult task if students have no background knowledge and do not have any skills in conducting research. However, it is always a fact that we still experience difficulties in our first attempt. Thus, the knowledge and the competence of the teacher handling the subject research is vital.

Table 5. Statistics Related Factors on Attitude towards Research (n = 173)

<i>Statistics Related Factors</i>	<i>Sum of Ranks</i>	<i>Rank</i>
Difficulty in analyzing and interpreting data	241	1
Prior knowledge in statistics	283	2

Table 5 discloses that difficulty in analyzing and interpreting data was Rank one among the statistics-related factors that influence teacher education students' attitude towards research. This is followed by teacher education students' prior knowledge of statistics. It can be gleaned from the responses of teacher education students that they have difficulties in analyzing and interpreting data. This is difficult for them because analysis and interpretation of the data require critical thinking.

Furthermore, teacher education students believed that their knowledge of statistics influences their attitude towards research. As observed, students perceived research to be a hard undertaking because it involves statistics and statistics used concepts of mathematics. This makes research quite negative for them, especially if students were negative towards mathematics.

Along this line, students at the undergraduate level usually tend to view research methods courses negatively (Papanastasiou, 2005). Many records could show evidence of the students' negative attitudes towards research concerning courses in, statistics and mathematics. Students perceived research as a dull and meaningless subject in the curriculum. According to Mohammadi (2016) research is a detailed and organized effort in finding the truth. The primary mission of the universities is creating suitable circumstances for the production of knowledge to solve problems, thereby improve human beings' quality of life. This statement might be the reason why students perceive research as boring and meaningless.

Table 6. Other Related Factors on Attitude towards Research (n = 173)

<i>Other Research-Related Factors</i>	<i>Sum of Ranks</i>	<i>Rank</i>
Teacher factor	576	1
Time management	648	2
Too much workload/school work	655	3
Problems on finances	703	4
Lack of interest in research	782	5
Anxiety in conducting research	784	6
Relevance of research to life/studies	935	7
Family concerns	1004	8

It can be gleaned from Table 6 that teacher factor was ranked first among other research-related factors. This is followed by time management, too much workload/school work, problems on finances, and lack of interest in research were rank second, third, fourth, and fifth, respectively. Other research-related factors cited were lack of interest in research, anxiety in conducting research, the relevance of research to life/studies, and family concerns.

Responses of the teacher education students reveal that teachers' competence in teaching the subject research is an influencing factor on their attitudes towards the subject. It is also said that teacher competence affects the quality of teaching and determines the success of students' learning. Jalal et al. (2009) state that, "good quality of teachers can produce good quality of students, and then the poor quality of teachers can contribute to the poor achievement of students." Further, Richards and Schmidt (2002) define competence as "a description of the essential skills, knowledge, and behaviors required for the effective performance of a real-world task of activity." The definition covers three keywords: skills, knowledge, and behaviors that determine the effectiveness of actions. On the other hand, Bailey (2006) describes competence as "statements about what teachers are supposed to know and be able to do." These definitions and reflections from the concept of teacher and teacher competence clarify that teacher should equip knowledge and skills in handling research because the adage says, "We cannot give what we do not have."

Another influencing factor towards teacher education students' attitude towards research is time management. Indulging themselves in a course such as teaching entails a lot of paper-works, lesson plans, demonstration, midterm and final exams, and other related tasks and projects. Because of these, teacher education students do not have enough time to spend extra effort and time browsing papers that may help broaden their knowledge and skills in research.

Financial aspects are always a problem for any undertaking. Research undertaking perse is not financial free. In research undertaking, you need to have resources equivalent to the scope and the type of research you are going to undertake.

Other factors cited are also contributory to teacher education students' responses toward their research subject. Thus, teachers handling the subject should not neglect these factors because these affect teacher education students' perception of the subject research.

7.3 Correlation between Teacher Education Students' Attitude towards Research and the Selected Factors

Table 7. Correlation between Attitude towards Research and Research Related Factors

Variables Correlated	n	r
Attitude towards research and insufficient background in research	173	0.10
Attitude towards research and insufficient knowledge in scientific/research procedures	173	0.07
Attitude towards research and appropriate skills in research	173	-0.14

Correlation between teacher education students' attitude towards research and research-related factors are presented in Table 7. As shown in this table, teacher education students insufficient background in *research* $r(173) = 0.10, \rho > 0.05$, insufficient knowledge in scientific/research procedures awareness $r(173) = 0.07, \rho > 0.05$, and appropriate skills in research $r(173) = -0.14, \rho > 0.05$ are not related to their attitude towards research.

These results indicate that insufficient background in research, insufficient knowledge in scientific/research procedures, and appropriate skills in research are not related to teacher education students' attitude towards research as a subject. This means that developing one's attitude towards research does not imply that you need to have a background in research, you know the research procedures, and you have appropriate skills in research. Attitudes can be developed, and it can be learned.

Table 8. Correlation between Attitude towards Research and Statistics Related Factors

Variables Correlated	n	r
Attitude towards research and difficulty in analyzing and interpreting data	173	-0.05
Attitude towards research and Prior knowledge in statistics	173	0.06

Likewise, no significant correlations were observed between teacher education students difficulties in analyzing and interpreting data $r(173) = -0.05, \rho > 0.05$ and prior knowledge in statistics $r(173) = -0.05, \rho > 0.05$ and their attitude towards research as a subject.

Teacher education students' responses along this line indicate that difficulty in analyzing and interpreting data and prior knowledge in statistics do not influence their attitude towards research. Analysis and interpretation of the data can be learned. These only require time, effort, and practice. Likewise, knowledge of statistics and skills in statistics can be done using a statistical package. This statistical package makes researchers work easier.

Table 9. Correlation between Attitude towards Research and Other Related Factors

Variables Correlated	n	r
Attitude towards research and teacher factor	173	0.20*
Attitude towards research and time management	173	-0.10
Attitude towards research and too much workload/school work	173	-0.02
Attitude towards research and problems on finances	173	-0.01
Attitude towards research and lack of interest in research	173	0.22**
Attitude towards research and anxiety in conducting research	173	-0.20**
Attitude towards research and relevance of research to life/studies	173	-0.24**
Attitude towards research and family concerns	173	0.05

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

On the other hand, teacher factor $r(173) = 0.20, \rho < 0.05$, lack of interests in research $r(173) = 0.22, \rho < 0.01$, anxiety in conducting research $r(173) = -0.20, \rho < 0.01$, and relevance of research to life/studies $r(173) = -0.23, \rho < 0.01$ are correlates of teacher education students attitude towards research. This means that these variables are related to teacher education students' attitude towards research. Research as a subject in the curriculum may not be a boring one if the teacher only knows how to make the subject interesting and lively to the students. Likewise, if the teacher has the mastery of the content, then students towards the subject will be developed.

Furthermore, it can be taken to mean that if a teacher knows about research, the content and the strategies as well as the techniques on how to teach it, then teacher education students will develop a positive attitude towards the subject. However, no matter how their responses are towards research as a subject in the curriculum, teacher education students still believe that research as a subject bears much relevance to life and studies.

However, teacher education students' attitude towards research is negatively related to anxiety in conducting research. This result indicates that teacher education student's tension, stress, fear, and difficulties in understanding research" (Papanastasiou, 2005) do not hinder them from liking the subject. Likewise, no matter what their attitudes may be their firm belief of research relevance to life is still there. They believe that research as a subject is essential to one's life.

8. Conclusions

It has been an observation not only by the researchers but almost all of the instructors and professors who handled research as a subject that college students feel uneasy towards research as a subject in the teacher education curriculum. As reflected in this study, education students were moderately negative towards research even when they were grouped according to sex and curriculum. This indicated that they were not able to engage themselves in research. However, they are more positive towards the use of research in the profession. They believed that the comfort that humankind has experienced today is a product of research.

However, no matter how they reflected on the significance of the research, yet their attitudes were not outstanding or even very satisfactory. There are still factors behind what they project as their attitudes towards the subject. These factors were research-related, statistics-related, and other related factors. Some of these factors influence teacher education student attitude towards research. Pre-service teachers' insufficient background in research and insufficient knowledge in scientific research procedures as well as difficulty in analyzing and interpreting data were among research and statistics-related factors such as difficulty in analyzing and interpreting data and prior knowledge in statistics that influences pre-service teachers' attitude towards the subject. However, the influence of these factors was only minimal. They also cited teacher factor, lack of interest in research, and time management as other related factors which have a significant influence in their attitude towards research.

Along this line, this research suggests that instructors/professor handling the subject research should update and enhance their skills in research and in conducting research. The knowledge gained from actual practice is a big help in teaching the subject. Likewise, instructors and professors are encouraged to motivate their students to develop a positive attitude towards research. Furthermore, it is also suggested that students taking up the subject should be encouraged and trained to use statistical packages such as SPSS and other quantitative and qualitative statistical package so that they will develop positive response towards statistics and research in general.

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