

## Research Article

# Assessing Pre-service Teachers' Attitudes Towards Research Courses in Colleges of Education

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**Abstract:** Research plays a critical role in the building of knowledge and the solving of societal problems. This study seeks to assess pre-service teachers for research courses in the Colleges of Education in the Oti Region of Ghana. The study aims to assess pre-service teachers' attitudes towards research courses in the Colleges of Education in the Oti Region of Ghana. The study adopted a quantitative design. The survey research method was, however, used because it helps to collect data on attitudes. Simple random sampling was used to select 200 respondents. The data collection instrument used was a questionnaire. The data were analysed using descriptive and correlational statistical analyses. It was found that pre-service teachers have negative attitudes toward studying research methods and writing research project work. They see both research methods and the writing of research project work as complex and difficult; hence, they have high anxiety about research and dislike the research courses. It was concluded that general attitudes toward studying research methods are directly linked to the perceived challenges of research. It is recommended that the challenges pre-service teachers face in learning research courses should be addressed to improve their attitudes towards research.

**Keywords:** attitudes, research methods, project work, research courses, student teachers

## 1. Introduction

The public Colleges of Education in Ghana were upgraded to tertiary education by the Colleges of Education Act 2012 (Act 847). A key component of education at this level is research, which often culminates in research project works. Research is very essential because it helps in the development of students' mental faculties to gather, analyse and utilise information (Emsen et al., 2011). The expectation, therefore, is that students in the Colleges of Education would be grounded in research skills as other tertiary institutions such as the universities.

Research, in general, is an integral part of human life in modern times. Our daily life benefits directly or indirectly from research works. Research has been promoted by the government and many funding agencies to promote quality research. The basic purpose of research is the advancement of human knowledge to address societal problems. It is a means through which individuals contribute toward the building of knowledge and solving of societal problems. Research is a course that focuses on assisting students to acquire and develop knowledge and competencies which can be used in describing, explaining, analyzing, evaluating, correlating, comparing and predicting situations and other

observations (Walliman, 2011).

Pre-service teachers in the Colleges of Education are required to be equipped with the relevant knowledge, skills and other competencies to write their research project work. However, the ability to write project work is not driven by the acquisition of knowledge and skills alone; the affective domain is equally important in this process. The zeal to acquire knowledge and skills in a particular discipline largely depends on the attitudes towards that discipline (Ozturk, 2010).

Attitude is a driving factor in any endeavor and a major factor in successful research work. It must be noted that attitudes such as the feeling of anxiety, dislikes and low interest can make students develop negative attitudes towards research (Landicho, 2020). Barriers such as lack of teaching and learning resources and access to reading materials and relevant literature could make people develop negative attitudes towards research (Landicho, 2020). These negative attitudes can make students develop a dislike for the research process, and unable to fulfill the research requirements of their degree programmes. Because of these negative views about research, there is the tendency to consider research including the study of research methods difficult (Hongisto & Sormunen, 2010).

Many studies have been conducted on students' attitudes towards research. Hongisto and Sormunen (2010) in their study found out that certain barriers such as poor pedagogies, lack of resources, poor access to data, scarce funding, and lack of time could make students develop negative attitudes towards research. Hongisto and Sormunen (2010) also indicated that an individual's feelings of anxiety and negativity about performing research can negatively affect the whole process of research. However, their study did not look at the relationship between attitudes towards studying research methods and project work writing.

Several studies have found that attitudes towards a particular course (such as research), can have serious implications on the learning process (Onwuegbuzie et al., 2000; Papanastasiou & Zembylas, 2006). Research has also revealed that many students transfer their negative attitudes and feelings about courses to the study of such courses (Papanastasiou, 2005). This might affect the effort, time, and commitment they put into the learning of such courses (Papanastasiou, 2005). Other studies have found that negative attitudes toward research in particular are usually associated with negative attitudes toward statistics or mathematics courses (Butt & Shams, 2013). These studies left the gap in relating attitudes towards research to research project work writing. One of the reasons for studying research methods in colleges is to equip the students to write their research projects with ease. This is why this research seeks to find out how students' attitudes towards research impact their abilities to write research project work.

Attitudes towards research could be positive or negative depending on interest or feelings about research. If negative, these feelings are often characterized by anxiety, fear, low levels of self-efficacy, dislike or lack of interest and low-performance levels. As observed by researchers, many students have negative feelings about research (Celik et al., 2012; Siddiqui & Ahmad, 2015; Ozturk, 2010). These poor attitudes might be influenced by their perception of the relevance of research. Even though research is very important to any professional development, not all student teachers see it important to their personal and professional development (Habineza, 2018).

Most students do not see the relevance of studying research methods as a course. They do not relate the study of research methods to conducting research that is relevant to life. Students who have negative attitudes towards research may not see the value of research courses (Butt & Shams, 2013). Such students may not appreciate the value of research and apply research to real life. This ultimately influences their overall research attitudes. When students see the importance of research in their daily life, they will develop more positive attitudes towards it. Butt and Shams (2013) indicated that if research instructors only focus on teaching abstract and highly philosophical concepts in research methods, then their students may not easily see the usefulness of research.

Another factor that could make students develop a negative attitude toward research is anxiety. Many studies have reported that a number of students exhibit negative attitudes toward research, as they are often fearful, anxious and stressed about research (Hosseini & Khazali, 2013; Papanastasiou, 2005; Papanastasiou & Zembylas, 2006) and statistics (Murtonen et al., 2008; Onwuegbuzie et al., 2000). Hosseini and Khazali (2013) argued that anxiety can potentially prevent students from effectively acquiring research knowledge and skills. It may also prevent them from taking an interest in studying and applying research evidence in their practice. A study by Oguan et al. (2014) found that people had experienced high anxiety, completely lost interest in carrying out research projects of their own. Such people were neither interested in pursuing further courses on research.

Research interest is another indicator of attitude towards research. Interest is very important in achieving any

endeavor. Studies have revealed that a lack of research interest is common among students, especially when they cannot see how it applies directly to their practice and daily lives (Hosseini & Khazali, 2013). Lack of research interest may also be caused by research instructors especially when they adopt poor pedagogies and do not stress the necessity of research in all spheres of human endeavor.

Fear as a form of feeling is one of the key variables of attitude towards the study or research. Research has shown that students' fear of failure can lead them to have poor attitudes towards research (Ketelhut, 2007). Fear leads to low self-confidence in the performance of a task. Therefore, fears also lead to high anxiety and low self-efficacy. Ketelhut (2007) observed that those students who had low research self-efficacy developed negative attitudes towards research methods.

As supervisors of pre-service teachers' project work, our observations from vetting of the project work have revealed that a large percentage of the student teachers experience challenges in understanding certain basic concepts and procedures in research. It is acknowledged by most tutors in the Colleges informally that the deficiencies of students to comprehend the research process might have a negative influence on their ability to apply this knowledge to write the required final-year research project. Indeed, the challenges that these students experience with research instruction frequently result in their frustration.

Research plays an important role in all academic disciplines. Therefore, to produce the ideal graduate, students need to develop the skills to conduct research using the accepted concepts and methodologies. Based on this realisation, research methods courses were introduced to the Colleges of Education in order to expose students to the skills needed to conduct research in general and, in particular, to write their final research projects. As a result, tutors who vet students' project work were of the view that there is a need to restructure the teaching of research methods as a course.

However, most tutors acknowledged that over the years, a large percentage of prospective pre-service teachers attempted to reproduce the already existing project works which they referred to as "grandfathers". Any efforts to make them produce original work meet strong opposition. The attitudes exhibited by most student teachers towards research work seem to suggest that much has not been done to equip them to write their research project work. It also seems to suggest that the pre-service teachers find it difficult to apply knowledge gained when they write their research projects.

It seems to be perceived by most college tutors that the students' attitude to research in turn influences their ability to write their project work. This situation is undesirable, especially as it affects students' ability to apply their research skills and knowledge of research to real-life events. This means that tutors' instructional methods and strategies should be re-examined. Ideally, this instruction should equip students with skills to utilise in future research. Accordingly, it seems this deficiency tends to impact negatively on students' attitudes to research. However, there is no empirical data on the influence of pre-service teachers' attitudes towards research methods and their ability to write research project work. This research was, therefore, conducted to assess the influence of pre-service teachers' attitudes towards research on their ability to write research project work.

Despite a number of studies highlighting the key role of the affective domain in students' learning, no research has been conducted to see the influence of pre-service teachers' attitudes towards research on the writing of research project work. It is, therefore, considered necessary to investigate the relationship between pre-service teachers' attitudes towards research methods and their reactions toward research project work.

## **1.1 Theoretical framework**

The ABC model of attitude by Spooncer (1992) was adopted by the study. This model is known as Tripartite Model. This theory is a useful theoretical framework for studying attitudes towards research. The ABC model of attitude is based on three components: affect (A), behaviour (B) and cognition (C).

Affect (A) is the emotional component consisting of feelings and emotions that are associated with an attitude object. The affective component is the emotional response (liking/disliking) towards an attitude object. Most research studies place emphasis on the importance of effective components. An individual's attitude towards an object cannot be determined by simply identifying his/her beliefs in it because emotion works simultaneously with the cognitive process about an attitude object (Spooncer, 1992).

The behavior (B) is the active component consisting of predispositions to act in a particular way towards the attitude object. The behavioral component is a verbal or nonverbal behavioral tendency by an individual and it consists of actions or observable responses that are the result of an attitude object. It involves a person's response (favorable/

unfavorable) to do something regarding the attitude object (Jain, 2014).

Cognition (C) is a mental component that consists of beliefs and perceptions people hold about the attitude object. The cognitive component is an evaluation of the entity that constitutes an individual's opinion (belief/disbelief) about the object. Cognitive refers to the thoughts and beliefs an individual has about an attitude object (Jain, 2014).

These three components must be present before we say that an attitude exists. A particular attitude may consist of a positive emotion that is, feeling happy in learning research (affect), intending to learn research methods more (behaviour) and belief that research methods are easy to learn (cognition). Students may form a favourable or an unfavourable attitude towards mathematics. Students acquire attitudes over time through direct experience of learning a subject. Students use the attitudes as a guide to their behaviour with respect to studying research, resulting in consistently favourable or unfavourable patterns of reactions towards the subject.

## **1.2 Objectives of the study**

The study seeks to:

1. Assess the attitudes of pre-service teachers towards research methods and research project work in Colleges.
2. Examine challenges facing pre-service teachers in the Colleges of Education in carrying out research.
3. Determine the relationship between pre-service teachers' perception of challenges of research and their attitudes towards research methods and research project work.

## **1.3 Research questions**

1. What are the attitudes of pre-service teachers towards writing research methods and research project work?
2. What challenges do pre-service teachers face in carrying out research?
3. What relationship exists between the attitudes of pre-service teachers towards research methods as a course and their ability to undertake research projects?

## **2. Methods**

The study adopted a quantitative design. The quantitative approach is seen as a deductive approach to research in which the researchers see the world as being outside of themselves and that there is an objective reality independent of any observations (Rovai et al., 2014). Quantitative research relies primarily on the collection of quantitative data (Issaka et al., 2021). This design was used because the study intended to objectively assess the relationship between attitudes of pre-service teachers towards research and their attitudes towards writing project work. Specifically, the survey method was adopted by the study. According to Whyte (2006), survey is where the researcher collects information from knowledgeable people to explain social problems or phenomena. The researchers adopted survey research because it helps to collect data on feelings and attitudes from large samples of subjects to draw conclusions (Weiten, 2001).

The population for the study consisted of all level 400 pre-service teachers in the Colleges of Education in the Oti Regions of Ghana with a total population of 483. The study adopted the sample size determination table by Krejcie and Morgan (1970). They proposed required sample size for a given population and the level of confidence and margin of error (degree of accuracy) that comes with it. Based on the recommendations of Krejcie and Morgan (1970) and considering the total population which was 483, the researcher chose a sample size of 200 at a confidence level of 95% and a margin of error of 5% using the table for determining sample size from a given population (Krejcie & Morgan, 1970). Simple random sampling was used to select 200 respondents.

The questionnaire was the main data collection instrument used by the researchers under the quantitative. Kumar (2005) states that a questionnaire is a written list of questions, the answers to which are recorded by respondents. The questionnaire was used because it helps to obtain reliable information, and eliminate biases (Fraenkel & Wallen, 2003; Kwabia, 2006). It must be noted that to design a valid and reliable questionnaire, the researcher must consider the purpose of the study and the research questions. The researchers adapted the questionnaire by van Aalderen-Smeets and van der Molen (2013) on Dimensions of Attitude toward Science (DAS) instrument. Most of the questions were, however, re-crafted to meet the purpose of the research.

The questionnaire comprised five sections. These include the demographic information, attitudes towards the study of research methods, attitudes towards writing project work, the challenges pre-service teachers encounter during the entire research experience and ways to improve students' attitudes towards research methods. The items were carefully crafted to obtain the attitudes of pre-service teachers towards research. The questionnaire used mostly a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). The questionnaire was given to experts in research who vetted the questions and this helped to achieve the validity of the instrument.

### 3. Results

In all, 200 pre-service teachers were involved in the study. On gender, it was realized that 122 (61%) were males while 78 (39%) were females. The programmes of study of the respondents are shown in Table 1.

**Table 1.** Programme of study of pre-service teachers

Programme	Frequency	Percent
B.Ed. Early Childhood Education	28	14
B.Ed. Primary Education	132	66
B.Ed. Junior High School (JHS) Education	40	20
Total	200	100

Source: Field data, 2021

It could be seen from Table 1 that 132 of the respondents (66%) were offering B.Ed. Primary Education programme, 40 of them (20%) were offering B.Ed. JHS Education programme and 28 (14%) were offering B.Ed. Early Childhood Education programme. The table shows that majority of them were offering B.Ed. Primary Education programme.

#### 3.1 The attitudes of pre-service teachers towards educational research methods

Generally, the attitude of a person towards something, to a large extent, influences the commitment to that thing. (Ozturk, 2010). The affective domain which comprises attitudes and feelings plays a vital role in the performance of students in a course. This is the reason why high weighting is normally given to the affective domain in modern curricula. The study, therefore, intended to assess the pre-service teachers' attitudes towards research methods. The respondents were asked to assess the attitudes of pre-service teachers towards research methods as a course using a Likert scale of 1-5 where 1 stands for strongly disagree, 2 for disagree, 3 for somehow agree, 4 for agree and 5 for strongly agree and their responses are summarized in Table 2.

From Table 2, it could be seen that the mean scores range from 3.73 to 4.28 which show that they agreed to all the items. Specifically, Table 2 shows that the lack of background knowledge of pre-service teachers about research methods records the highest mean of 4.28 with a standard deviation of 0.815, skewness of -1.568 and kurtosis of 1.797. The concepts in research methods were very difficult having the lowest mean of 3.73 with a standard deviation of 1.115, skewness of -0.943 and kurtosis of 0.393. Table 2 shows that the general attitudes of the students towards research record a mean of 3.97 which shows that they agreed that their general attitudes towards research are negative. The standard deviation of the various items ranges from 0.724 for general attitudes of students towards research to 1.115 for research concepts being difficult. The standard deviation shows the closeness of the responses.

It could be seen from Table 2 that, the values of the skewness for all the items fall between -3 and +3 while the kurtosis also for the various items fall between -10 and +10. This shows that the data is normally distributed and could

be subjected to parametric statistical analysis (Kim, 2013). The acceptable values of skewness are between -3 and +3, and kurtosis is appropriate from a range of -10 to + 10 for normality distribution (Brown, 2006). Byrne (2010) argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.

**Table 2.** Descriptive statistics on attitudes of pre-service teachers towards research methods

Item	N	Mean	Std. dev.	Skewness	Kurtosis
Research methods was too abstract	200	4.07	1.015	-1.365	1.710
I felt tense whenever we had research methods	200	4.08	1.039	-1.466	1.969
Research methods as a course is a complex course	200	3.98	0.972	-1.088	1.158
I did not like research methods	200	3.66	0.888	-0.668	0.481
The concepts in research methods were very difficult	200	3.73	1.115	-0.943	0.393
I didn't have interest in research	200	3.83	0.993	-0.897	0.546
I didn't have background knowledge on research methods	200	4.28	0.815	-1.568	1.797
I couldn't see the relationship between research methods and project work	200	4.16	0.990	-1.395	1.773
Mean attitudes of students towards research methods	200	3.97	0.724	-1.613	1.837

Source: Field data, 2021

Table 2 also shows that the skewness for all the items is in negative. A negative skew value indicates that the tail on the left side of the distribution is longer than the right side and the bulk of the values lie to the right of the mean. The kurtoses of all the variables are positive. Kurtosis is a measure of the peakedness of a distribution. A positive kurtosis (leptokurtic distribution) means a high peak (Kim, 2013).

### **3.2 The attitudes of pre-service teachers towards writing research project work**

One of the objectives of the study is to assess the attitudes of pre-service teachers towards the writing of project work. The respondents were asked to assess the attitudes of pre-service teachers toward writing research project work using a Likert scale of 1-5 where 1 stands for strongly disagree, 2 for disagree, 3 for somehow agree, 4 for agree and 5 for strongly agree. Table 3 presents their responses.

Table 3 shows that the variable 'research project work is too involving' records the highest mean of 4.24 with a standard deviation of 1.297, skewness of -0.245 and kurtosis of -0.990. It could also be noted from Table 3 the mean of the various variables in descending order include project work is too involving (4.24), lack of background knowledge on project work (4.16), the complexity of project work (4.12), project work is very difficult (4.11) and fear of project work (4.08). Others in descending order include dislike for project work, high anxiety towards project work and lack of understanding of project work. Table 3 shows that the general attitudes of pre-service teachers towards the writing of project work record a mean of 3.86 with a standard deviation of 0.614, skewness of -1.275 and kurtosis of 2.916.

It could also be observed from Table 3 that the skewness for all the items is in the negative indicating that the bulk of the values lies to the right of the mean. The kurtosis of most of the items is positive showing a high peak distribution curve (Kim, 2013). The skewness and kurtosis show that the data is normally distributed and could be subjected to parametric statistical analysis (Kim, 2013).

**Table 3.** Descriptive statistics on attitudes of pre-service teachers towards project work

Item	N	Min	Max	Mean	Std. dev.	Skewness	Kurtosis
Research project work is too involving	200	1	5	4.24	1.297	-0.245	-0.990
I don't understand the whole research project work	200	1	5	3.65	1.092	-0.857	0.155
Research project as a course is a complex	200	1	5	4.12	0.919	-1.520	2.803
I did not like research project work	200	1	5	3.82	0.934	-0.830	0.893
Research project work is very difficult	200	1	5	4.11	1.001	-1.436	2.023
I didn't have background knowledge on research project work	200	1	5	4.16	0.927	-1.243	1.578
I fear research project work	200	1	5	4.08	0.926	-1.003	1.005
I have very high anxiety about project work	200	1	5	3.69	0.882	-0.681	0.590
Mean attitudes towards writing research project work	200	1.50	4.88	3.86	0.614	-1.275	2.916

Source: Field data, 2021

### 3.3 The challenges pre-service teachers face in relation to research

Another important objective of the study is to find out the challenges pre-service teachers face in relation to research. The respondents were asked to indicate their level of agreement with certain items as challenges in carrying out research using a Likert scale of 1-5 where 1 stands for strongly disagree, 2 for disagree, 3 for somehow agree, 4 for agree and 5 for strongly agree. Their responses are summarized in Table 4.

**Table 4.** The challenges pre-service teachers face in relation to research

Item	N	Min	Max	Mean	Std. dev.	Skewness	Kurtosis
Poor linkage between research methods and real life	200	1	5	3.98	0.874	-0.692	0.370
Lack of funds for research activities	200	1	5	4.34	0.899	-1.899	4.241
Difficulty in obtaining relevant literature	200	1	5	4.02	1.051	-1.141	0.925
Research process is complex and time-consuming	200	1	5	4.30	0.956	-1.818	3.319
Poor accessibility to resources on research	200	1	5	4.33	0.839	-1.407	2.175
Lack of ICT tools such as laptops, internet etc.	200	1	5	4.18	0.807	-0.919	1.198
I have problems with mathematics and statistics	200	1	5	3.56	0.954	-0.559	0.409
Research is too difficult	200	1	5	3.54	1.017	-0.486	-0.095
Difficulty to understand the concepts in research	200	1	5	3.79	1.045	-1.065	0.359
Mean challenges of research	200	1.89	4.89	4.00	0.555	-1.528	3.177
Valid N (listwise)	200						

Table 4 shows pre-service teachers' perceptions of challenges in conducting research. It could be observed from Table 4 that the challenges in conducting research according to the respondents in descending order include lack of funds for research activities (4.34), poor accessibility to resources for research (4.33), complex nature of research (4.30), lack of ICT tools such as laptops, internet etc. (4.18) and difficulty in obtaining relevant literature (4.02). Other challenges of research as observed in Table 4 include poor linkage between research methods and real life, difficulty to understand the concepts in research, problems with mathematics and statistics and research being too difficult. It could also be deduced from Table 4 that in all the general challenges of research records a mean of 4.00 with a standard deviation of 0.555, skewness of -1.528 and kurtosis of 3.177. Table 4 shows normality in the distribution which could further be subjected to parametric statistics analysis. The skewness of all the variable is negative.

### **3.4 The relationship between pre-service teachers' perception of challenges of research and their attitudes towards research methods and research project work**

One of the aims of the research is to find the relationship between students' perception of challenges of research and their attitudes towards research methods and research project work. Pearson correlation analysis was conducted to see whether students' perception of challenges of research influences their attitudes towards research methods and research project work. The research also intended to see whether the attitudes of pre-service teachers towards research methods as a course influence their attitudes towards writing research project work.

**Table 5.** Correlation analysis

Variables		Students' general attitudes towards research methods	Students' general attitudes towards project work	Students' perception about challenges of research
Students' general attitudes towards research methods	Pearson Correlation	1	0.699**	0.637**
	Sig. (2-tailed)		0.000	0.000
	N	200	200	200
Students' general attitudes towards project work	Pearson Correlation	0.699**	1	0.680**
	Sig. (2-tailed)	0.000		0.000
	N	200	200	200
Students' perception about challenges of research	Pearson Correlation	0.637**	0.680**	1
	Sig. (2-tailed)	0.000	0.000	
	N	200	200	200

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

The correlation between pre-service teachers' general attitudes towards research methods and their general attitudes towards writing research project work is 0.699 and this correlation is significant at a one-percent significance level. This means there is a positive correlation between pre-service teachers' general attitudes towards research methods and their general attitudes towards writing research project work. This implies that if pre-service teachers' attitude towards research methods is negative, their attitudes towards research project work will be negative and vice versa. In addition, it could be observed from Table 5 that there is a positive correlation between students' perception of challenges of research and their attitudes towards research methods and the correlation is 0.637. This correlation is significant at a one-percent significance level. The table also shows a positive correlation between pre-service teachers' perception of the challenges of research and their general attitudes towards research project work. In addition, the correlation between pre-service teachers' perception of challenges of research and their general attitudes towards research project work is

0.680 and this correlation is significant at a one-percent significance level. There is, therefore, a positive correlation between pre-service teachers' perception of the challenges of research and their general attitudes towards research methods and the writing of research project work.

## 4. Discussions

The results from Table 1 show that pre-service teachers have certain attitudes towards research methods. They see research method courses as abstract, complex and difficult. In addition, they do not have background knowledge about research methods and tend to feel tense whenever they have research methods. Their general attitudes towards research make them dislike research methods as a course. It must be noted that attitudes such as lack of interest, fear, discomfort, and anxiety can lead to negative attitudes towards research (Landicho, 2020). Research has shown that negative attitudes towards research can make students develop a dislike for the research process, and unable to fulfill the research requirements of their degree programmes. In addition, because of negative attitudes towards research, they are likely to regard the entire research process including the study of research methods as very difficult (Barmby et al., 2008; Hongisto & Sormunen, 2010).

It could also be seen in Table 2 that the pre-service teachers did not see the relationship between research methods and project work writing. One of the essences of research methods is to equip students to apply the knowledge to write their project work. It is not surprising that they have negative attitudes toward research because they did not know that they are supposed to apply the knowledge from research methods to write their project work.

The findings from Table 3 indicate that pre-service teachers exhibit certain attitudes towards writing research project work. It could be observed from Table 3 that the pre-service teachers see research project work as too involving, complex and difficult. These experiences might be gained through the small-scale action research they have been engaging in. In addition, they did not have background knowledge about research project work and they had very high anxiety about research project work. The results show that the pre-service teachers have negative attitudes toward research project work (Celik et al., 2012; Siddiqui & Ahmad, 2015; Ozturk, 2010). Acquisition of knowledge and skills in a particular subject largely depends on the attitudes towards that subject (Ozturk, 2010). Studies have shown that dislike for research is common among students, especially when they cannot see how it applies directly to their practice and daily lives (Hosseini & Khazali, 2013). Obermeier (2019), in her studies on students' attitudes towards research, concluded that students have a low attitude toward research and she indicated that the teachers and the institutions did not encourage them to conduct research. The negative attitudes towards research project work might be linked with the pedagogies used during the research methods.

It was observed that generally, pre-service teachers encounter many challenges in relation to research. They face challenges such as lack of funds for research, the poor linkage between research methods and real life, poor accessibility to resources on research, lack of ICT tools such as laptops, internet etc. and difficulty in obtaining relevant literature. Other challenges of research, according to the respondents, include too much time for research, difficulty to understand the concepts in research, problems with mathematics and statistics (Butt & Shams, 2013), and research being too difficult. Many studies have found that negative attitudes towards research are usually associated with certain challenges. Landicho (2020), for instance, was of the view that challenges such as lack of resources and access to relevant literature as well as poor pedagogies of teaching could make students develop negative attitudes towards research (Landicho, 2020).

## 5. Conclusions

Pre-service teachers have negative attitudes towards research methods and writing research project work. They see both research method and writing of research project work as complex and difficult, hence, they have high anxiety about research and dislike the research courses. Challenges such as lack of funds for research, poor accessibility to research resources, lack of ICT tools, difficulty in obtaining relevant literature, and poor pedagogies of teaching make the pre-service teachers have negative attitudes towards studying research methods and writing research projects work. There

is, therefore, a positive correlation between challenges confronting pre-service teachers in relation to research and their general attitudes towards studying research methods and writing research project work. It could be concluded that the general attitudes toward research methods are directly linked to the perceived challenges of research. It could also be concluded that the general attitudes of student-teacher towards writing research project work are influenced by their general attitudes towards studying research methods.

## 6. Recommendations

It is recommended that to improve the general attitudes of students towards research, their attitudes towards studying research methods as a course should be improved. The attitudes of students towards research methods could be improved by addressing the challenges in relation to research. Specifically, the followings are recommended to improve the general attitudes of students towards research:

1. Teaching research methods should be practical.
2. Teaching research methods should be linked to real-life situations.
3. Pre-service teachers should be given funds and ICT tools.
4. Pre-service teachers should be provided with reliable internet.
5. Pre-service teachers should be encouraged to undertake small-scale action research.
6. Research methods should be linked to project work writing.
7. Seminars should be organized for pre-service teachers on research methods.
8. Students should be assisted to access relevant literature.

## Conflict of interest

The authors declare no conflict of interest.

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