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The Effect of Students' Attitude toward Research on the Intention to Conduct Research

Damianus Abun^(a) Gerson Jeremy C. Antonio^(b) Christine D. Alipio^(c) Leonilo A. Reginaldo

(a) Ph.D.: Professor, School of Business and Accountancy, School of Religious Education, Divine Word College of Vigan & St. Benedict College of Northern Luzon, Philippines

(b) Ph.D.: Master Teacher 1, Ilocos Norte College of Arts and Trade and School of Education, Divine Word College of Laoag.

(c) Ph.D.: Professor, School of Education, Divine Word College of Laoag.

(d) MAED: Faculty, School of Arts, Sciences, Divine Word College of Laoag

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ABSTRACT

This descriptive assessment and correlational study ascertained the effect of attitudes toward research and their intention to conduct research. Literature, attitude, behavior, and academic research were reviewed. The Divine Word College of Laoag students enrolled in the Master's in business administration program of Divine Word were the respondents of this study. Validated research questionnaires were gathered and interpreted using the statistical tools namely weighted mean and Pearson r. There was a correlation between cognitive and affective attitudes, both positive and negative attitudes, toward research and the intention to conduct research. Thus, the hypothesis of the study was accepted.

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Introduction

Research subject has been included as one of the core courses in the graduate programs. All students are required to produce a research output as a requirement for the degree. Additionally, research is an essential part of the curriculum, making the quality of instruction and the improvement of quality of life inseparable from research. Innovative products or services, for example, are the products of research (Mansfield, 1972). Moustaghfir & Schiuma (2013) likewise recognized this idea. Therefore, schools should be research-based because it is where innovations are discovered and research is learned (Shoemaker, 1984).

* Corresponding author. ORCID ID: 0000-0002-9693-1541

However, in the studies of Monir, and Bolderston (2009), Oguan, Bernal, and Pinca (2014), it was shown that teachers and students find it difficult to conduct research because of insufficient academic confidence in writing research (Chang, et al., 20922). The study then found out whether students were interested in research or not, and if they were willing to undertake research writing. The results served as baseline information for the decision-makers in enriching the research course.

The study is divided into several parts. The first part explains the background of the study and its significance. The second part presents theories of the study based on the existing literature. The third part elaborates on the research design, population, locale of the study, research instruments, data-gathering procedures, and the statistical treatment of data. The fourth part presents the data in the table accompanied by analysis and interpretation. The final part establishes the results and conclusion.

Literature Review

This part investigates literature that provides the theories of the current topic related to the correlation between attitude and behavior, which serve as a basis for the study's conceptual framework.

Understanding Human Attitude

Attitude is an individual's disposition to react to a certain object, behavior, person, institution, event or another discriminable aspect of the individual's world (Ajzen, 1993). Bem, 1970, Edwards, 1957, Fishbein & Ajzen, 1975 agreed attitude has its evaluative dimensions. There are three categories of responses or reactions namely, ***cognitive, affective, and conative responses*** (Allport, 1954, Hilgard, 1980, Rosenberg & Hovland, 1960). These are manifestations of salient or latent attitude which is unobservable (Ajzen, 1993). ***The cognitive component*** refers to the beliefs and thoughts about the subject, the object, the person, the institution, and the event. It is about the perception and information of the person toward the subject, object, or person. ***The affective component*** of attitude is an emotional reaction. It is how one feels when confronted with such aspects. ***A conative component*** shows how attitude affects one's behavior.

According to Ajzen (1993), a person develops such an attitude because of watching television programs or maybe another kind of exposure or experience. But Abun (2017) went deeper when he cited the ways of solving environmental problems, He contends that attitude originates from one's culture. His argument was based on the ideas of anthropologists such as Donald (2002), and Hofstede as cited by Brown (1995). Specifically, Donald (2002) claimed that culture plays an important role in the brain structure and its function. She further explained that language has the biggest impact on brain structure while culture influences brain functioning to a great extent as she writes:

The social environment includes many factors that impinge on development, from bonding and competitive stress to the social facilitation of learning. These can affect brain functioning in many ways, but usually, they have no direct influence on functional brain architecture. However, symbolizing cultures own a direct path into our brains and affect the way major parts of the executive brain become

wired up during development. This is the key idea behind the notion of deep enculturation... This process entails setting up the very complex hierarchies of cognitive demons (automatic programs) that ultimately establish the possibility of new forms of thought. Culture effectively wires up functional subsystems in the brain that would not otherwise exist.

The idea of culture and its effect on brain functioning indicates the power of culture over the formation of the mind and ideas of people about everything around them (Abun, 2018). Donald's View is like Hofstede as cited by Brown (1995) as he maintained that culture is the collective programming of the human mind that distinguishes the members of one human group from those of another. Hofstede keenly stated that culture is reflected in how thoughts and views toward an object or attitude. To elaborate on the idea of Hofstede, Amstrong (1996) emphasized that there is a relationship between cultural dimensions and ethical perceptions. In other words, an ethical attitude is formed by a particular culture.

Understanding Human Behavior

James as cited in Lawler (2006), contradicts the idea that all human behavior is shaped by experience; rather, it is shaped by the mind. It is the role of reason. Reason must create another impulse to neutralize another impulse (James as cited by Gale. 2004).

Ridley (2011) turns his attention to the nature versus nurture debate to bring the first popular account of the root of human behavior with this unique question: "What makes us who we are?" This zeroes in on the reason or the mind. However, Nohria, and Lawrence (2003), pointed out four drives or qualities that shape human behavior. Drives or qualities that shape our human behavior are first. The second one is the drive to create relations and care for others. Thirdly, the drive to gain insight including understanding oneself and one's surroundings. Fourth, drive to control and defend. In other words, human behavior is driven by purposes to be accomplished, not just like other animals.

The later argument leads to the theory of planned behavior (TPB) of Ajzen (1985, 1987, Ajzen & Madden, 1986 which is an extension of the theory of reasoned action (RAT) to explain the relationship between attitudes and behavior within human action. RAT explains that reason for action will predict how individuals will behave based on their pre-existing attitude and behavior intention. The theory argues that an individual will behave based on the expected outcome the individual expects to achieve because of performing such behavior (Fishbein & Ajzen, 1975, Ajzen & Fishbein, 1980). If RAT focuses on the reason, the central attention of TPB is the individual's intention to perform a given behavior. There are three independent determinants of intention. The first determinant is the attitude toward the behavior. The second determinant is a social factor or subjective norms. Third is the novel antecedence of intention. This refers to the perceived ease or difficulty of performing the behavior.

In short, the theory of planned behavior argues that the stronger people's intention to achieve their behavioral goals, the more likely they engage in such behavior. Ajzen (1993) cautions that the degree of success does not depend only on intention but may include opportunities and resources such as time, money skills, and other requirements to perform such behavior. These factors represent the actual control over the behavior.

The Theory of Attitude and Behavior

In psychology, an attitude is defined as a set of emotions, beliefs, and behaviors toward a particular object, person, thing, or event (Banaji & Heiphetz, 2010). The evaluation or perception of a person toward a certain object or experience is not isolated from experiential exposure or upbringing (Chaiken, 2001). Attitudes are the results of experience, upbringing/education, and social interactions (Bandura, 1977). Experience, upbringing, and education can have a powerful influence over attitude which is considered dynamic (Cherry, 2019).

Attitude is a key to understanding human behavior (Thomas & Znaniecki, 1918, Watson, 1925). Corey (1937), Freeman & Ataoev, (1960) as cited in Ajzen (1993) conducted a study on college students' attitudes at the beginning of the semester and provided multiple opportunities to cheat by allowing them to score their test. His test found that there was no correlation between students' attitude and their cheating behavior (Ajzen, 1993, p.74). Even later studies supported this claim. For example, Dean (1958) conducted a study on attitudes toward labor unions and participating in labor union meetings, and his study found no correlation. A similar study was also done by Wicker and Pomazal, (1971) on the attitude toward participating in a subject in social psychology and actual participation in social psychology class. Both studies found no correlation.

The findings of later studies, particularly the study of Wicker (1969), seem to discourage the original idea of early social psychologists that attitudes are the key to predicting behavior. The results have questioned the importance of studying personal disposition and behavior. By the 1970s most social psychologists accepted the negative verdict of the relationship between attitude and behavior. The study of social context and norms were encouraged. These were determinant factors in predicting behavior or human action (De Fleur & Westie, 1958, Deutscher, 1969). However, given those negative results, other social psychologists, particularly Ajzen and Fishbein (1977, 2000,) still maintain that attitude is still key to predicting behavior (Allport, 1968).

Hence, focusing on a single dimension did not do justice to the complexity of the attitude construct (Allport, 1935). Multidimensional construct includes cognition, affective, and conation components (Rosenberg & Hovland, 1960). Lastly, they argued that the inconsistencies are due to moderating variables. The degree of attitude-behavior consistency is assumed to be moderated by factors related to the person performing the behavior, such as self-awareness, self-efficacy, self-monitoring, experience, self-confidence, and even feeling and lack of information or knowledge. Borgia and Campbel (1982), Fazio and Zanna (1978a, 1978b), Kraus, (1995), and Schwarts (1978), explained the reasons for the variability of attitude-behavior relations. They held that people's confidence also affects attitude-behavior relations. People who hold high confidence predict behavior better and vice versa. A decisive attitude also predicts behavior. Moreover, direct experience predicts behavior (Kraus, 1995). They also pointed out the situation as moderating variable such as time pressure or circumstances surrounding the performance of the behavior (Ajzen, 1993).

The recent studies conducted by Abun (2018) and Fitzsimmons and Douglas (2005) confirmed the consistency of attitude and behavior. Abun (2018) measured the relationship between environmental attitude and environmental behavior, whereby environmental attitude predicted the environmental behavior of the students and employees toward

the environment. Further, he also conducted a study on the entrepreneurial attitude and future intention to establish a business and the finding also indicated a correlation. The study of Fitzsimmons and Douglas (2005) also found that entrepreneurial attitudes are significant in explaining career decisions in the future and their intention to go into business.

Education and Research

Research and development are interconnected and equate better life (Flanagan, 1978). Product innovation is a result of research (Mayfield, 2011). Research is what makes a difference on the economic level between one country from another, (Okokpujie, et al., 2018, Ozawa & Franco, 2007), one school to another (Cooper, 1953), one business from another (Porretta & Hartmann, 2010), one teacher from another (Austin, 2016). America, for example, is faster in terms of technological development compared to other countries because of research (Brooks, 1994) and this is also evidenced by their number one rank in terms of research publication (Scimago Journal & Country Rank, 2021). In 1965, David Novic, as cited in Godin (2003) and Lane (2010) emphasized research and development enable man to have a better life (Ariola, 2006).

In an educational context, Zarah (2019) stressed that research helps acquire knowledge and facilitate learning. It also provides an idea of how to solve a problem under study (Swindoll, 2012). Thus, research is everyone's business (Lacobucci, 2021; Ariola, 2006). Academic research aims to expand one's understanding of the world and contribute new insights to collective knowledge (Groessler, 2017). This involves teachers engaging in research activities to identify effective teaching strategies, evaluate the impact of instructional practices, and improve their teaching practices (Homewood, et al. 2011; Munna & Kalam, 2021).

Factors that affect Attitude toward Research and their Intention to Conduct Research

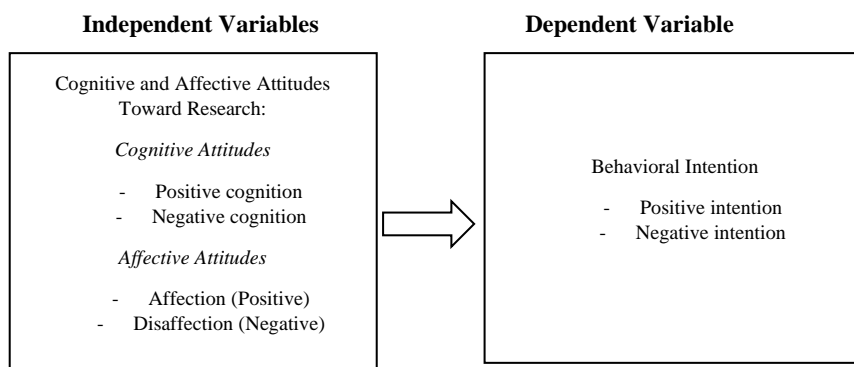
Shaukat, Siddiquah, Abdullah, and Akbar (2014) measured the attitude of postgraduate students in Pakistan toward research. The study dwelt on the hypothesis that students hold positive ideas toward the different aspects of research. In line with the hypothesis, five constructs were investigated particularly the usefulness of research for a career, research anxiety, positive attitude toward research, research's relevance to life, and research difficulty. The results were compared between males and females. The study found that males had significantly more positive attitudes towards research than females along those five constructs. The same finding was also confirmed by Oguan, Bernal, and Pinca (2014). A similar study, however, (Bibi, Iqbal, and Majid, 2012) presented that both male and female students have almost the same level of attitude toward research. Belgrave and Jules (2015) confirmed this and validated the hypothesis on the relationship between student's perceptions of the functionality of research, its meaningful application to real-life situations, and a positive attitude towards research. Such a positive attitude toward research is a result of its positive knowledge and function as claimed by Hofmeister (2007), Kakupa and Zue (2019), and Seher (2018). This was evidenced by comparing graduate and post-graduate students' attitudes toward research. The latter turned out to have a more positive attitude toward research. Knowledge of research affects self-efficacy and positive attitudes toward research (Oguan, Bernal, and Pinca, 2014). Those with high academic qualifications and academic grades display a highly positive attitude toward research (Rezaei, 2013). Therefore, Memarpour, et. Al.

(2015), and Monir and Bolderston (2009) suggested providing greater availability of information about research to address the issues related to self-efficacy and research engagement.

Monir and Bolderston's (2009) study revealed that students have a negative attitude toward research. This was also confirmed by Oguan, et al. (2014) that most students have a negative attitude toward research because they found it difficult. Though the students recognize its usefulness and importance, they were anxious about the research (Al Furaikh, et.al, 2017). Those who found research difficult were caused by their lack of knowledge (Kleinbaum & Swenson, 1984), Kumari, et.al., (2018). Such a negative attitude is one of the reasons why graduate students do not finish their studies (Kleinbaum and Swenson, 1984).

Siamian (2015) in his study found that students had a very positive attitude toward research, and believe that it is useful for their life, however, this did not correlate to their plans to conduct research in the future. The reasons why they are discouraged to go into research are the availability of resources and facilities (Arahlah, 2016). Beyond these, other reasons are pointed out, namely, lack of knowledge and a supportive environment (Soe, et.al, 2018); lack of guidance, funding, and professional training (AlGhamd, et.al, 2014, Al Furaikh (2017); lack of experience in scientific activities (Seher 2018); lack of time due to educational tasks (Abulata, et.al, 2019), and lack of documentation and maintenance of records (Basudan, et.al, 2019). Furthermore, Rezaei and Miandashti (2013) found that students who have high self-efficacy and positive attitudes toward research correlated to the number of published research papers. Likewise, Basudan, et.al (2019) ascertained that students who have high self-efficacy and positive attitudes toward research are willing to conduct and apply research outcomes. It was also suggested that research training can influence the attitude toward research and the intention to conduct it (Kumari, et.al, 2018).

Conceptual Framework



Source: Ajzen, I., & Fishbein, M. (1980).

Figure 1: The conceptual framework reflects the independent and dependent variables. It depicts one variable affects the other variable. Attitudes affect behavioral intention.

Statement of the problems

The study investigated the relationship between the attitude of students toward research and how it affects their behavioral intention to conduct research. It specifically answered the following questions:

- 1. What is the cognitive attitude of students toward research in terms of**
 - 1.1 positive cognition; and*
 - 1.2 negative cognition.*
- 2. What is the affective attitude of students toward research in terms of**
 - 2.1 affection; and*
 - 2.2 disaffection.*
- 3. What is the behavioral intention of students to conduct research in terms of**
 - 3.1 positive intention; and*
 - 3.2 negative intention.*
- 4. Is there a relationship between cognitive and affective attitudes toward the research subject and the behavioral intention of students to conduct research?**

Assumption

The study assumes that attitudes toward research affect the behavioral intention to conduct research and it can be measured. Attitude has predictive validity, and it helps explain human social behavior.

Hypothesis

Ajzen (1985, 1987), and Ajzen & Madden, (1986) have said that attitudes affect human behavior, and based on this theory, the current study hypothesizes that attitudes of students toward research affect their behavioral intention to conduct research.

Methodology

The study was carried out through appropriate research methodologies such as research design, data gathering instruments, population, the locale of the study, data gathering procedures, and statistical treatment of data.

Research Design

Since the study is quantitative research and therefore it used descriptive assessment and correlational research design. The nature of descriptive research is to describe what is found in the data collected through questionnaires and statistical treatment. It is also used to describe profiles, frequency distribution, describe characteristics of people, situations, phenomena, or related variables. In short, it describes "what is" about the data (Ariola, 2006, cited by Abun, 2019).

In line with the current study, the descriptive correlational method was deployed. The study determines the level of attitude toward research and its correlation with the plan to conduct research.

Locale of the Study

The locale of the study was Divine Word Colleges in the Ilocos Region which is composed of Divine Word College of Vigan. Divine Word College of Vigan is in the Province of Ilocos Sur within the heritage city of Vigan. Divine Word College of Laoag is in Laoag City, Ilocos Norte. Divine Word Colleges in Region I are run by the Congregation of the Divine Word Missionaries or known as the Society of the Divine Word or in Latin, *Societas Verbi Divini* (SVD).

Population

The population of the study consists of MBA graduate students of Divine Word Colleges in the Ilocos region. Since the total numbers are limited, total enumeration was the sampling design of the study.

Data Gathering Instruments.

The study utilized validated questionnaires. The questionnaires were adapted from the ATR scale or Attitude Toward Research Scale of Papanastasiou (2014).

Data Gathering Procedures

In the process of data gathering, the researcher sent letters to the Presidents of the Colleges, requesting them to allow the researcher to conduct a survey in the college. The researcher personally met the them and requested the respondents to answer the questionnaires.

The retrieval of questionnaires was arranged between the President's representative and the researcher with the help of the employees in the colleges.

Ethical Consideration

Since the study did involve vulnerable subjects, the committee of the ethical review waived its review.

Statistical Treatment of Data

In line with the study's descriptive research design, descriptive statistics were used. The weighted mean is measured by the level of attitude toward research and behavioral intention to conduct research. Pearson r determined the correlation between attitudes toward research and the behavioral intention to conduct research.

The following ranges of values with their descriptive interpretation will be used:

<i>Statistical Range</i>	<i>Descriptive Interpretation</i>	<i>Overall Descriptive Rating</i>
4.21-5.00	Strongly Agree	Very High
3.41-4.20	Agree	High
2.61-3.40	Somewhat Agree	Moderate.
1.81-2.60	Disagree	Low
1.00-1.80	Strongly Disagree	Very Low

Data Presentation and Analysis

The presentation of the findings followed the arrangement of the statement of the problem. The study investigated the relationship between the cognitive and affective attitudes of students toward research and their behavioral intention to conduct research. It specifically answered the following questions:

1. What is the cognitive attitude of students toward research in terms of

1.1 positive cognition; and

1.2 negative cognition.

Table 1. Student's cognitive Attitude toward Research as to positive and Negative Component

Indicators		Mean	DI
a. Positive Component			
1	Research is useful for my career	4.53	SA
2	Research is important for enriching my knowledge	4.65	SA
3	Research should be indispensable in my professional training	4.21	A
4	Research should be taught to all students	4.13	A
5	Research is useful for every professional	4.47	A
6	Research is very valuable for human life	4.40	A
Composite Mean		4.40	A
b. Negative Component			
1	Research is difficult because it follows a certain method of investigation	3.56	A
2	The concept of research is hard to understand	2.76	SWA
3	Research is irrelevant to my career	1.89	D
4	Research complicates my work	2.21	D
5	Research should not be part of the teaching requirement	1.93	D
Composite Mean		2.47	D

Source: Papanastasiou (2014).

Legend

4.21-5.00	<i>Strongly Agree</i>	<i>Very High</i>
3.41-4.20	<i>Agree</i>	<i>High</i>
2.61-3.40	<i>Somewhat Agree</i>	<i>Moderate</i>
1.81-2.60	<i>Disagree</i>	<i>Low</i>
1.00-1.80	<i>Strongly Disagree</i>	<i>Very Low</i>

According to the gathered data, students possess a highly positive cognitive attitude towards research, with an overall score of 4.40, indicating a consensus of agreement. This viewpoint is supported by the individual items in the survey, which demonstrate that students deem research as an essential component of professional training (4.21), a crucial subject for all students to learn (4.13), an indispensable tool for every profession (4.47), and a highly valuable aspect of human life (4.40). Furthermore, students strongly agree that research is beneficial for their future careers (4.53) and is crucial for expanding their knowledge (4.65).

In summary, the negative component of the data supports the positive component, as students have a generally low disagreement towards research with an average score of 2.47. Specifically, students do not believe that research is irrelevant to their careers (1.89) or should not be part of teaching requirements (1.93), and research does not complicate

their work (2.21). However, students find the method of investigation in research difficult (3.56), and they moderately agree that the concept of research is challenging to understand (2.76).

2. What is the affective attitude of students toward research in terms of
 2.1 affection; and
 2.2 disaffection.

Table 2. Student’s Affective Attitude toward Research as to Positive and Negative Component

Indicators		Mean	DI
a. Positive Component			
1	Research is interesting	3.92	A
2	Research is enjoyable	3.60	A
3	Research excites me	3.54	A
4	Research makes me great	3.82	A
5	Research gives me a great feeling	3.70	A
Composite Mean		3.72	A
b. Negative Component			
1	Research makes me nervous	3.12	SWA
2	Just thinking of research is stressful	3.12	SWA
3	Thinking of research makes me anxious	3.10	SWA
4	Research scares me	2.80	SWA
5	Research makes me upset	2.50	D
6	Research gives me a headache	2.70	SWA
Composite Mean		3.07	SWA

Source: Source: Papanastasiou (2014).

Overall, students' affective attitude towards research is generally positive with a score of 3.72, indicating agreement. Specifically, students find research interesting (3.92), enjoyable (3.60), and exciting (3.54), and it makes them feel great (3.70). However, in terms of negative affect, the data reveals that students somewhat agree with a score of 3.07, indicating moderate agreement. They feel nervous (3.12), stressed (3.12), anxious (3.10), and scared (2.80) when conducting research, but they do not feel upset (2.50). These results suggest that although students are interested in research, they still have some anxieties surrounding it.

3. What is the behavioral intention of students to conduct research in terms of
 3.1 positive intention
 3.2 negative intention

Table 3. Student’s Behavioral Intention to Conduct Research

Indicators		Mean	DI
a. Positive Behavioral Component			
1	I will employ a research approach in my profession.	3.99	A
2	I have the skills to write and I will conduct research.	3.70	A
3	I will theories of research in writing my thesis	3.90	A
4	I am inclined to study the details of my research and will apply them in the future.	3.91	A
5	I will conduct research.	3.85	A
Composite Mean		3.87	A
b. Negative Component			
1	Research is difficult and I cannot make it.		

2	I have no skills in research and I have no plan to do it.	2.21	D
3	I find it hard to understand the concept of research and I can't apply it.	2.06	D
4	I do have not enough knowledge in research and I will never do it.	2.17	D
5	Even if I am promised of promotion for conducting research, I will not do it.	2.12	D
Composite Mean		2.11	D

Source: Source: Papanastasiou (2014).

Regarding the behavioral component, students' intention to conduct research is high with an overall score of 3.87, indicating agreement. Even when analyzed individually, the data shows that students plan to employ research approaches in their profession (3.99), conduct research (3.85), apply research theories in their thesis (3.90), and study the details of research to apply it (3.91). However, in terms of negative behavioral components, the data reveals that students disagree with a score of 2.11, indicating low intention. Specifically, students do not believe that research is too difficult for them (2.21), lack skills or a plan to conduct research (2.06), find it hard to understand and conduct research (2.17), or are unwilling to conduct research even if promised promotion (2.12). Overall, these findings suggest that students have a high intention to conduct research in the future.

4. Is there a relationship between cognitive and affective attitudes toward the research subject and the behavioral intention of students to conduct research?

Table 4. Relationship between Cognitive and affective attitudes toward research subject, and behavioral intention of students to conduct research.

		Behavioral Intention	
		Positive Intention	Negative Intention
Positive Cognition	Pearson Correlation	.455**	-.245**
	Sig. (2-tailed)	.000	.006
	N	122	122
Negative Cognition	Pearson Correlation	-.350**	.503**
	Sig. (2-tailed)	.000	.000
	N	122	122
Affection	Pearson Correlation	-.293**	.386**
	Sig. (2-tailed)	.001	.000
	N	122	122
Disaffection	Pearson Correlation	.517**	-.180*
	Sig. (2-tailed)	.000	.048
	N	122	122

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

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

The correlation analysis shows a significant correlation between students' positive and negative cognition toward research and their intention to conduct research in the future, with a significance level of 0.01 (2-tailed). Similarly, there is a significant correlation between positive and negative affect on research and their intention to conduct

research, with significance levels of 0.01 (2-tailed) and 0.05 (2-tailed). These findings suggest that both cognitive and affective attitudes significantly influence students' intention to conduct research in the future.

Results and Discussion

The study investigated the relationship between attitude toward research and the intention to conduct research. The results revealed that students have a positive attitude and a high intention to conduct research in the future. The Pearson r correlation showed a significant positive relationship between attitude and intention. Similar findings were reported in previous studies by Chatzisarantis et al. (2005), Kasilingam (2020), and Abun et al. (2018, 2020, 2021). Although attitude is not the only predictor of intention, a positive attitude is crucial to maintain the intention to conduct research. To improve their attitude, students need to acquire knowledge and skills through both theory and practice. This will sustain their excitement and intention to conduct research in the future.

Conclusion

In conclusion, the study found that students have a positive cognition and affection toward research, as well as a high intention to conduct research. The hypothesis that there is a relationship between students' attitudes toward research and their intention to conduct research is supported by significant correlations between these variables. Specifically, students' positive cognition and affection toward research influence their intention to conduct research. These results emphasize the importance of promoting positive attitudes toward research among students, as it can sustain their intention to conduct research in the future.

Author Contributions:

Author Contributions: Conceptualization, D.A. G.J.A., C. D.A., L.A.R., Methodology, D.A., G.J.A., C. D.A., L.A.R. Data Collection: D.A., G.J.A., C. D.A., L.A.R. Formal analysis: D.A., G.J.A., C. D.A., L.A.R. Writing—original draft preparation: D.A., G.J.A., C. D.A., L.A.R. Writing—review, and editing D.A., G.J.A., C. D.A., L.A.R.

All authors have read and agreed to the published final version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study, and the research does not deal with vulnerable groups or sensitive issues.

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