THE ATTITUDE OF NON-BOARD COURSES STUDENTS TOWARDS RESEARCH SUBJECT IN THE SELECTED SUC IN REGION III

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Abstract

The primary purpose of this study was to investigate non-board courses students' attitudes towards research and to explore the factors (Usefulness of Research, Anxiety about Research, and Positive Research Disposition). A total of one-hundred seventy-six (N=176) non-board courses college students enrolled in selected State University and Colleges in Region III were purposively sampled. The participants are in their late adolescent age, female, mostly were third year college level students in AB Economics. The Revised Attitude towards Research (R-ATR) scale was used to measure the respondent's attitude towards research and significant differences among its demographics were also identified. However, among the three subscales, the Anxiety about Research subscale had established its influence on it. In this case, 18 to 21 years old had significantly higher levels of anxiety. While in terms of the significant difference between respondents' gender, different non-board courses and year level, it shows no effect on students' attitudes towards research and its subscales. As a result, evidence on the attitudes of non-board course college students attending selected state universities and colleges in Region III, highlighting that their positive predispositions toward research have a moderately positive significant relationship to the usefulness of research to their courses, implying that the more positive predispositions toward research, the more they tend to perceive the usefulness of research to their courses.

INTRODUCTION

In today's fast-changing world, research has become one of the most important activities significant rational assets for all humans to change their way of life. It reveals new destinations in a variety of disciplines such as education, commerce, trade, industry, economics, science, and technology. In fact, man's enormous rise is dependent on research, which has become an important function in and of itself. Moreover, research is important in our daily lives because it is one of the most important intellectual assets a person can have in order to manage change in his way of life in response to the needs and demands of society (Oguan et.al, 2014).

As the demand for research grows, most students in higher education are required to write a research paper on a problem, issue, or theme related to their field of study (Hussain, et al., 2016). Thus, student's attitude which includes beliefs, emotions, behaviors and the interaction that could have a positive or a negative effect on it (Gallos, 2008). Thus, in the study of Papanastasiou (2005), it stated that students at the undergraduate level generally inclined to view research methods courses negatively. However, it also directly influences how they mentally approach research including all the work related to research subject (Miandashti & Rezaei, 2013). The thinking, feeling and person's behavior towards research is imperative to determine the attitudes towards research in order to enhance the optimistic view of research among students and the pessimistic view should be avoided (Papanastasiou, 2005).

The purpose of the current study was to investigate non-board courses students' attitudes towards research and to explore the factors associated with such attitudes. Specifically, it sought to answer;

1. What are the demographic profiles of the Non-Board Courses students?
2. What is the extent of attitude of non-board courses college students towards research?
3. Is there a significant difference between the level of attitude towards research and the profiles of respondents in terms of;
    a. Age
    b. Gender
    c. Non-Board Courses
    d. Year level
4. Is there a significant relationship between the three-factor attitude of the non-board courses students towards research?

MATERIALS AND METHOD

To reach the objectives of this paper, a survey design was made to provide a quantitative or numeric description on the attitude of non-board courses college students towards research (Creswell, 2014).

A total of one-hundred seventy-six (N=176) non-board courses college students enrolled in selected State University and Colleges in Region III were purposively sampled. All of the participants in the study were either enrolled in, or had completed the compulsory Research Methods course offered in their curriculum. The participants' ages 18 to 21 years old (n = 123, 69.49%) with a mean of 20.86 years old. The variable "Age" was, however, later categorized into three groups: 18-21, 22-25 and 26-28 (see Table 1). Females constituted the majority of the respondents (n = 115, 64.97%). In addition, mostly were studying AB Economics (n=90, 50.85%) and a third year college level (96, 54.24%). The study gathered a total of one hundred seventy-six (176) respondents from different State Universities and Colleges in Region III.

Table 1.

Demographic Information of the participants (N=177)

		N	%
Gender	Male	55	31.64
	Female	115	64.97
	LGBQ	6	3.39
Age	18 to 21 years old	120	69.49
	22 to 25 years old	47	26.55
	26 to 28 years old	72	3.96
Non-board Courses	AB Economics	90	50.85
	BS Biology Major in Microbiology	4	2.26
	BS Computer Engineering	17	9.60
	BS Hospitality Management	38	21.47
	BS Mathematics	8	4.52
	BSIT Major in Automotive Technology	4	2.26
	BSIT Major in Computer Technology	1	0.56
	BSIT Major in Electronics	2	1.13
	BSIT Major in Food Technology	9	5.08
	BSIT Major in Machine Shop	1	0.56
	BSIT Major in Mechanical Technology	2	1.13
Year Level	1st year	18	10.17
	2nd year	10	5.65
	3rd year	95	54.24
	4th year	52	29.38
	5th year	1	0.56

Instrument

In order to measure the dependent variable (Attitude towards Research), the study adopted Papanastasiou's (2014) revised Attitudes Toward Research (R-ATR) scale. It consisted of 13 items listed on a 7-point Likert scale. The score 1 represented the option "strongly disagree" while option 7 on the scale representing the

category "strongly agree". The revised version of the scale includes three (3) subscales which have been reported to have the following reliability coefficients: Usefulness of Research (α = .90); Anxiety about Research (α = .86); and, Positive Research Predisposition (α = .92). The information collected was coded and each respondent was allocated a code. After the entry of data negative statements were upturned. The summation of every statement of all students illustrated his score on the attitude towards research scale. Therefore, the minimum possible score on the attitude scale was 1 and the maximum was 7. It indicates that lower scores on the scale a reflect the less encouraging attitude towards research and vice versa.

Usefulness of Research for Professional Practice measures the student's perceptions in reference to how useful they perceived that research would be in their professional lives. Anxiety about the Research factor measures the negative feelings of stress and anxiety felt by the students in relation to research and a Positive predisposition towards measures the existence of positive feelings and interest toward research (Papanastasiou, 2014). Meanwhile, for the purpose of capturing the independent variables relevant to this study, the ATR scale was modified to include a demographic section, with questions about age, gender, non-board courses, and year level.

Ethical Considerations

Constrained by the current restriction due to the pandemic, the researchers transferred the survey questionnaire through a Google Form to be answered online. Students were provided with the consent forms and completed the surveys at their own convenience.

Data Analysis

To analyze the data, the researchers utilized a free trial version of the SPSS (IBM® SPSS®, New York, USA) application in order to identify the attitude towards research of the non-board college courses. Moreover, in describing students' overall ATR scores, descriptive statistics (range, mean, and standard deviation) were used. Mean scores and standard deviations were determined for each of the ATR scale's three dimensions. Analysis of variance (ANOVA) was used to compare the students' attitude scores across all of the independent variables in the study. While independent sample t-tests could be performed when comparing demographic variables with only two levels (e.g., gender), the fact that several such analyses were required on the same dataset would have resulted in multiple t-tests being performed - a situation that is widely known to increase the risk of committing type one error (Bryman, 2008; Creswell, 2013; and Johnson & Christensen, 2017). As a result, ANOVA was deemed appropriate.

Results

The results of the study reveal a marked variation in the non-board courses students' attitudes towards research. The non-board courses students' overall attitude mean scores were 5.05 and a standard deviation of 0.67. Table 2 provides a descriptive summary of the mean and standard deviation of the ATR values. A closer look at the attitude scores across the three subscales reveals that students tend to be more positive with regard to the usefulness of research (M=5.34, SD=.47), but less positive about the research predisposition (M=4.53, SD=.31).

Table 2.

Mean and Standard Deviation of Subscales of ATR Scale (N=177)

	Mean	SD
Usefulness of Research for Professional Practice Research is useful for my career Research is connected to my field of study The skills I have acquired in research will be helpful to me in the future Research should be compulsory in my professional training	5.34	.47
Anxiety about Research (recoded) Research courses make me anxious Research courses scare me Research courses are stressful Research courses make me nervous Research courses are difficult	5.25	.53
Positive Research Predisposition I enjoy my research course(s) I love research courses I find research courses interesting Research courses are pleasant	4.53	.31
Overall Attitude towards Research	5.05	.67

Age and Attitude Towards Research

In order to establish whether or not there was a relationship between different age groups and attitudes towards research, a one-way analysis of variance was conducted. The results showed that there was no significant difference found among the different age groups, (F (10,166) =.181, p> .05).

Table 3
Age Differences in Attitudes Towards Research

Factors	Age (years)						F	P
	18-21		22-25		26-28			
	M	SD	M	SD	M	SD		
Usefulness of Research	5.36	0.89	5.73	0.79	5.22	0.80	1.57	0.12
Anxiety about Research	4.93	1.35	5.10	0.84	5.58	0.80	2.41	0.01
Positive Research Disposition	4.61	1.08	4.77	1.14	4.83	1.23	1.05	0.40
Overall Attitude	4.98	.62	5.30	.58	5.24	.79	1.81	0.06

However, as seen in Table 3, among the three subscales, Anxiety about Research subscale had established the influence of it to age groups. It can be deduced that there was a significant difference in the research anxiety levels of the three age groups (18 to 21 years old, 22 to 25 years old, and 26 to 28 years old), since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 18 to 21 years old (M=4.93, SD=1.35) had significantly higher levels of anxiety than 22 to 25 years old and 26 to 28 years old toward research, (F (10, 166) =2.41, p<.05).

Gender and Attitude Towards Research

Meanwhile, in terms of the relationship between gender and attitudes toward research, a one-way analysis of variance was conducted. The results showed that there was no significant difference found in terms of gender, *(F (2, 174) =.88, p> .05).* Moreover, as seen in Table 4, the influence of gender on each of the three subscales was not established.

Table 4
Gender differences in Attitudes towards Research

Factors	Male		Female		LGBQ		F	P
	M	SD	M	SD	M	SD		
Usefulness of Research	5.36	.87	5.34	.96	5.13	.72	.18	0.84
Anxiety about Research	5.39	.90	5.17	.84	5.40	.84	.95	0.39
Positive Research Disposition	4.63	1.18	4.51	1.04	4.00	.79	.96	0.39
Overall Attitude	5.15	.67	5.02	.68	4.88	.42	.88	0.42

Non-board Courses and Attitude Towards Research

Analysis was also conducted to see if different non-board courses had any effect on students' attitudes toward research. The results showed that there was no significant difference found between the non-board courses and the students' attitudes towards research, $(F (11,165) =.68, p> .05)$. Moreover, as seen in Table 5, non-board courses had no effect on each of the three subscales.

Table 5
Non-Board Course Differences in Attitudes Towards Research

Non-Board Course	Usefulness of Research		Anxiety about Research		Positive Research Disposition		Overall Attitude	
	M	SD	M	SD	M	SD	M	SD
AB Economics	5.31	.94	5.15	1.16	4.51	1.09	5.00	.71
BS Biology Major in Microbiology	5.19	.85	5.70	1.25	3.69	1.71	4.92	.31
BS Computer Engineering	5.15	.95	5.38	.77	4.32	1.06	4.98	.62
BS Hospitality Management	5.39	.97	5.35	.85	4.74	1.03	5.17	.66
BS Mathematics	5.13	.71	5.30	.92	4.25	.92	4.92	.43
BSIT Major in Automotive Technology	5.88	.85	5.70	.68	5.38	1.45	5.66	.32
BSIT Major in Computer Technology	5.50	0	5.00	0	5.75	0	0	0
BSIT Major in Electronics	5.38	1.24	5.30	1.56	5.13	1.24	5.27	1.36
BSIT Major in Food Technology	5.47	.85	5.27	.91	3.89	.73	4.91	.71
BSIT Major in Machine Shop	6.50	0	5.60	0	5.00	0	0	0
BSIT Major in Mechanical Technology	5.38	.88	4.70	.14	5.13	.18	5.04	.27
BTVTE Major in Automotive	6.25	0	4.80	0	5.25	0	5.38	.67
df	11, 165		11, 165		11, 165		11, 165	
MS	.87		1.06		1.47		.46	
F	.50		.36		1.28		.678	
P	0.90		0.97		0.24		0.76	

Year Level and Attitude Towards Research

Meanwhile, in terms of the relationship between year level and attitudes toward research, a one-way

analysis of variance was conducted. The results showed that there was no significant difference found in terms of the year level, $(F(4, 172) = .767, p > .05)$. However, as seen in Table 6, among the three subscales, Anxiety about Research subscale had established the influence of it to year level. It can be deduced that there was a significant difference in the research anxiety levels of the five-year level (1st year college, 2nd year college, 3rd year college, 4th year college and 5th year college), since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 1st year college $(M=4.34, SD=.90)$ had significantly higher levels of anxiety than the other year levels towards research, $(F(4,172) = 4.93, p < .05)$.

Table 6
Year Level Differences in Attitudes Towards Research

Factors	Year Level										F	P
	1st Year		2nd Year		3rd Year		4th Year		5th Year			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Usefulness of Research	5.33	.87	5.45	1.01	5.38	.89	5.25	.99	5.00	.0	.231	.921
Anxiety about Research	4.34	.90	5.32	.85	5.27	1.06	5.51	.80	4.80	.0	4.925	.001
Positive Research Disposition	4.95	1.02	4.42	.93	4.45	1.04	4.55	1.19	4.00	.0	.917	.455
Overall Attitude	4.83	.62	5.08	.64	5.05	.68	5.14	.67	4.62	.0	.767	.548

*Note: **Correlation is significant at the 0.01 level (2-tailed).*
Relationship of the Attitude of Non-Board Courses towards Research

In addition, to examine the relationship of each subscale of the attitude of non-board courses college students toward research, a Pearson correlation coefficient was employed. The results were computed and shown in Table 7.

Table 7.

Relationship of the of Attitude of Non-board Courses towards Research (N=177)

ATR Subscales	ResUse	ResAnx	PosResPredis
Research Usefulness	1		
Research Anxiety	.138	1	
Positive Research Predispositions	.506**	-.076	1

Table 7 shows that Non-Board Courses college students' positive predispositions towards research has a moderately positive significant relationship $(r = .506)$ to the usefulness of research to their courses, meaning the more positive predispositions towards research, the more they tend to perceived the usefulness of the research to their courses.

This study sought to understand non-board course students' attitudes toward research at State Universities and Colleges in the Philippine region. The study examined students' scores on the individual dimensions of the Revised Attitude towards Research (R-ATR) scale, including Usefulness of Research, Anxiety about Research, and Positive Research Disposition, in addition to overall attitude scores (Papanastasiou, 2014). In uncovering the students' research attitudes, the study sought to understand the role of selected demographic variables in influencing these attitudes. In general, the study established that the attitudes of students were moderately positive. However, there were a number of variations observed, both within the dimensions of the attitude scale and between subject groups. A closer look at the attitude scores across the three subscales reveals that students tend to be more positive with regards to the usefulness of research for professional practice compared to the anxiety about research subscale and positive research predisposition. In contrast with the study of Papanastasiou (2005), which stated that students at the undergraduate level are generally inclined to view research methods courses negatively.

The demographic profile of the participants was mostly age 18 to 21 years old (n = 123, 69.49%) with a mean of 20.86 years old. The variable "Age" was, however, categorized into three groups: 18-21, 22-25 and 26-28 (see Table 1). Females constituted the majority of the respondents (n = 115, 64.97%). In addition, most were studying AB Economics (n=90, 50.85%) and a third year college level (96, 54.24%). The study gathered a total of one hundred seventy-six (176) respondents from different State Universities and Colleges in Region III.

Moreover, the results showed that there was no significant difference found among the different age groups. However, among the three subscales, the Anxiety about Research subscale had established the influence of it on age groups. It can be deduced that there was a significant difference in the research anxiety levels of the three age groups since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 18 to 21 years old had significantly higher levels of anxiety than 22 to 25 years old and 26 to 28 years old towards research. In the study of Conley et.al., (2018 as cited in an article of LeBlanc & Marques, 2019). The most noticeable increase in anxiety occurs during the initial transition to college. It revealed that psychological distress among college students – that is, their levels of anxiety, depression, and stress – rise steadily during the first semester and remain elevated throughout the second semester. This suggests that the first year of college is an especially high-risk period for anxiety onset or worsening. It can be presumed that the participants of this study in the age group 18-21 years old may have experienced increased anxiety from transitioning to college during the conduct of the survey.

Meanwhile, in terms of the relationship between gender and attitudes toward research, a one-way analysis of variance was conducted. The results showed that there was no significant difference found in terms of gender. Moreover, the influence of gender on each of the three subscales was not established. Analysis was also conducted to see if different non-board courses had any effect on students' attitudes toward research. The results showed that there was no significant difference found between the non-board courses and the students' attitudes toward research. Consequently, the non-board courses had no effect on each of the three subscales.

Furthermore, in terms of the relationship between year level and attitudes toward research, a one-way analysis of variance was conducted. The results showed that there was no significant difference found in terms of the year level. However, among the three subscales, the Anxiety about Research subscale had established the influence of it to the year level. It can be deduced that there was a significant difference in the research anxiety levels of the five-year levels, since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 1st year college had significantly higher levels of anxiety than the other year levels towards research. According to Ashrafi-rizi et.al. (2014), one of the most common anxieties in higher education is research anxiety. The result of the study is in contrast with the study of Johnson et.al, (2000) wherein the doctoral students, who have the ability to understand and produce research, had for all reasons, many of them surrendered after several years of struggle and a substantial savings of time and money during their time of dissertation (Cesari, Bowen & Rudenstine 2014).

Lastly, to examine the relationship of each subscale of the attitude of non-board courses college students toward research, a Pearson correlation coefficient was employed. The results were computed and showed that Non-Board Courses college students' positive predispositions towards research have a moderately positive significant relationship to the usefulness of research to their courses, meaning the more positive predispositions towards research, the more they tend to perceive the usefulness of the research to their courses. Similarly, in the study of Madan (2013), discussed that research experience allows undergraduate students to better understand published works, learn to balance collaborative and individual work, determine an area of interest, and jump start their careers as researchers. With this, many students would discover their passion for research and continue on to graduate studies and faculty positions as their exposure to research progressed.

CONCLUSION

The study shows evidence on the attitudes of non-board course college students attending selected state universities and colleges in Region III, highlighting that their positive predispositions toward research have a moderately positive significant relationship to the usefulness of research to their courses, implying that the more positive predispositions towards research, the more they tend to perceive the usefulness of research to their courses.

Furthermore, the importance also of identifying the significant differences of its demographic profiles (age, gender, year level, and non-board courses) to the individual dimensions of the Revised Attitude towards Research (R-ATR) scale, including Usefulness of Research, Anxiety about Research, and Positive Research Disposition, in addition to overall attitude scores (Papanastasiou, 2014) was computed and analyzed to further determine the purpose of the study. Initially, it revealed that there was no significant difference found among the different age-groups. However, among the three subscales, Anxiety about Research subscale had established the influence of it to age groups. It can be deduced that there was a significant difference in the research anxiety levels of the three age-groups since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 18 to 21 years old had significantly higher levels of anxiety than 22 to 25 years old and 26 to 28 years old towards research. Secondly, in terms of the significant difference between gender and attitudes towards research, it showed that there was no significant difference found each of the three subscales in terms of gender. Thirdly, to see if different non-board courses had any effect on students' attitudes towards research, the results showed that there was no significant difference found and had no effect on each of the three subscales. Lastly, in terms of the significant difference between year level and attitudes towards research, it showed that there was no significant difference found. However, among the three subscales, Anxiety about Research subscale had established the influence of it to year levels. It can be deduced that there was a significant difference in the research anxiety levels and of the five-year college levels, since all of the items in this subscale were reverse-coded, higher mean scores represent lower anxiety levels. In this case, 1st year college had significantly higher levels of anxiety than the other year levels towards research.
 Consequently, regardless of the students' chosen course, with or without board examinations, the students understood the significance and usefulness of research in their academic endeavor.

RECOMMENDATION

By identifying the factors that comprise students' attitudes towards research, instructors may strengthen their discussion about the importance of learning research and its relevance on making academic and professional career choices. They may also modify students' attitude by asking them to attend research forums and conferences, skills and behavior to facilitate the learning of research and foster a deeper appreciation of this subject and thereby lessen their anxiety to the course. Students' research papers may be started even in their introductory research classes to lessen their works during the final construction of their papers so they will not find the subject stressful and difficult. Finally, replication of this research is recommended using other demographic description of the participants to further identify what other factors contribute to the students' attitudes and anxiety to research.

COMPETING INTERESTS
The authors have no compting interest to declare.

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REFERENCES

1. Abun, Damianus, et al. (2019). The Attitude of Graduate students toward Research and their Intention to Conduct Research in the Future. https://hal.archives-ouvertes.fr/hal-02388128/document
2. Ashrafi-rizi H, Zarmehr F, Bahrami S, Ghazavi-Khorasgani Z, Kazempour Z, Shahrzadi L (2014), Study on Research Anxiety Among Faculty Members of Isfahan University of Medical Sciences. Mater Sociomed. 2014;26(6):356–9.
3. Bowen WG and Rudenstine NL (2014) "In pursuit of the PhD". Princeton University Press
4. Cesari JP. Thesis and Dissertation Support Groups - A Unique Service for Graduate-Students. Amer College Personnel Assn C/O Richard Caple Counseling Ctr-220 Parker Hall Univ Missouri, Columbia, Mo 6 5211. 1990:375-6.
5. Conley, C. S., Shapiro, J. B., Huguenel, B. M., & Kirsch, A. C. (2020). Navigating the College Years: Developmental Trajectories and Gender Differences in Psychological Functioning, Cognitive-Affective Strategies, and Social Well-Being. Emerging Adulthood, 8(2), 103–117. https://doi.org/10.1177/2167696818791603
6. Desai, K. V., Gatson, S. N., Stiles, T. W., Stewart, R. H., Laine, G. A., & Quick, C. M. (2008). Integratingresearch and education at research-extensive universities with research-intensivecommunities. Advances in Physiology Education, 32, 136–141.

7. Hussain, T., & Ch, Q. (2016). A Study on Attitude towards Research among Technology Education Students in Pakistan. *Bulletin of Education and Research*, *38*(2), 113-122.
8. Johnson EM, Green KE, Kluever RC. Psychometric characteristics of the revised procrastination inventory. Research in Higher Education. 2000;41(2):269–79
9. Kakupa, P. (2019). Students' Attitudes towards Research: A Study of Graduate Education Students at a Chinese Normal University. Educational Process: International Journal, 8(2), 97 110.
    https://www.edupij.com/files/1/articles/article_156/EDUPIJ_156_article_5c7429655d640.pdf
10. LeBlanc N. and Marques L, (2019) "Anxiety in College: What we know and How to cope?".
    https://www.health.harvard.edu/blog/anxiety-in-college-what-we-know-and-how-to-cope-2019052816729_
11. Miandshti, N., & Rezaei, M. (2013). The relationship between research self-efficacy, research anxiety and attitude toward research: A study of agricultural graduate students. Journal of Educational and Instructional Studies in the World, 3(4), 69-76.
12. Madan, Cristopher R. (2013). The Benefits of Undergraduate Research: The Student's Perspective.
    https://www.researchgate.net/publication/256269033_The_Benefits_of_Undergraduate_Research_The_Student's_Perspective/link/00b7d5220d62626534000000/download