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EXPLORING THE ATTITUDES OF UNDERGRADATE STUDENTS TOWARDS RESEARCH COURSE AT THE INSTITUTE OF ADULT EDUCATION, TANZANIA

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ABSTRACT

This study explored the students' attitude towards research. The participants of the study were undergraduate students at the Institute of Adult Education Tanzania. This cross sectional study was done in April-July 2018. The sample comprised of 120 students selected through simple random sampling technique. The study population were all undergraduate students at the Institute. Cochran equation formula was used to determine the sample size. The Attitude Towards Research scale (ATR) was adapted for data collection. A self-administered questionnaire was used to collect data from students. Data were analyzed using descriptive and inferential statistics. Independent T- test and ANOVA test were used to assess differences between the groups. A p-value of <0.05 was considered significant. 84.2 % of the students love research course, 69.2% of respondents think it as a necessary and important course and useful in everyday life and 88.3 % of respondents said research course is helpful in future. Student's attitudes towards research in terms of the usefulness in their career, and relationship with everyday life was positive. Students' attitudes towards research course did not have a meaningful variation according to gender [t (118)= 0.768, p>.05]. The findings also showed that there was insignificant difference between the variables of age [F(3, 116) = 6.7299; p>0.05] and year of study [F(2, 117) = 1.6383; p>0.05] and the attitude of students towards research. It was concluded that there is no significant different between male and female students attitude towards research course. This study concludes that research orientation and research anxiety should be considered and addressed by teachers when conceptualizing research courses.

INTRODUCTION

Background to the study: Research is important to the scientific progress (Marczyk *et al*, 2005) and it is also crucial to the understanding of problems which affects the communities (Amar-Singh *et al* 2008). Research involves systematic investigation or experimentation to discover the new knowledge (Amar-Singh *et al* 2008) and revision of current knowledge (Hickson, 2008). Nowadays, swift varying globe, research has turned into one of the most significant rational assets for all human being to transform his way life. It unwrap novel destinations to several disciplines like education, commerce, trade, industry, economics, science and technology. In fact, man's huge rise depends upon research which had made an important function in itself. Since research demand rises, most students in higher learning institution have to come

up with a research article fixing on troubles, issues or theme related to their concern. Papanastasiou (2005) stated that students at the undergraduate level generally inclined to view research methods courses negatively. Numerous studies showed indication of negative attitudes of students towards research regarding research course (Adams & Holcomb, 1986). There are difficulties which are supposed to be associated with the negative attitudes of the students towards research such as the problems of research, the quantity of workloads given to the students and their concerns towards the area under discussion. Usually, those individuals who come across research complex and nerve-racking increase greater research anxiety. In the same way, previous studies considered attitude as chief forecaster of individuals' educational attainment. Reynolds and Walberg (1992) acknowledged as attitude had a significant force on educational attainment of students. Though, contradictory to this argument, there were other researchers disagreeing that attitude of students might not be consistent to educational attainment (Hung, 2005).

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In an educational setting carrying out research should be an imperative facet of all educators' specialized field of life. Best and Kahn (1993; p.27) define research as "the systematic and objective analysis and recording of controlled explanations that may indicate to the development of generalizations, principles, or theories, resulting in guess and possibly final control of events". According to Best & Kahn (1993) education in a research situation is completed to get better performance of school and at the same time to advance those students who thrash about to progress those practices. A number of studies document negative attitude of students and practitioners of education toward educational research (Levine, 2007). The students' negative attitudes not only affect their education but also their performance in the subject they learn (Elmore & Lewis, 1991, Zaidner, 1991). Studies show that a significant association exists between attitude and achievement (German, 1988). While some other researches' (Keeves & Morgenstern, 1992) mentioned that achievement affects attitude and attitude affects achievement. This situation calls for a comprehensive study to be conducted to calculate the attitude of future students towards research course. Research as a course is considered an important element of students' education curriculum throughout the world. Research is mandatory and it is one part of the core curriculum in the Bachelor of Adult and Continuing Education (BACE) and Bachelor of Adult Education and Community Development (BAECD) course at the Institute. The aim of the course is to introduce principles of scientific research using various problem-solving exercises and to provide the skills that can effectively contribute in various institutional research projects. In the final year, students are required to perform a research projects which is mentored by their supervisors. While conducting research projects, students can learn how to identify the research question, generate research hypotheses, critically appraise literature, design the study, collect and analyze the data, and write a detailed project report. Although it is not compulsory, students are also encouraged to publish their researches in adult journals (JAET) and other journals and do presentations in conferences. This study aims to explore the attitudes of undergraduate students towards research course at the Institute of Adult Education.

Statement of the problem: Attitude is an imperative facet of education in general and particular in research. It is obligation of the time to make sure its wide-ranging understanding for the augmentation of students' attitude towards research course. This study aims at to explore the attitudes of undergraduate students at The Institute of Adult Education towards research course and to discover implications for the teaching and learning process.

Study objectives, Research questions and Hypothesis

General Objective: To explore the attitudes of undergraduate students towards research course and to find out whether there is significant differences based on gender, age and year of study.

Specific Objective: To examine the relationship between individual characteristics such as age, gender, year of study and attitudes towards research course.

Research Questions: This study will answer the possible questions regarding the attitudes of students in research course.

i. What are the attitudes of undergraduate students towards research course and what are their overall attitudes towards research course?
ii. Is there any significant difference between individual characteristics such as age, gender, year of study and attitudes towards research course?

Research Hypothesis

$H0_1$: There is no significant difference in ATR of male and female students towards research course at the institute of adult education.

Significance of the Study: This research may enrich attitude of students towards research which might be supportive in their professional improvement. Also, the outcomes of this research might be useful to accept or reject several prevailing theories. Additionally, this research might be noteworthy for the institute in reshaping students' attitude towards research course. Lastly, the study also may be beneficial for teachers to deliver additional facility to the students to expand their achievement in research area.

Literature Review

Attitudes toward research can be concerned an effective feeling and reply toward research. Fear of failure, negativity, stress, feeling ineffectively prepared or unable to do, and disinterest are described in the studies. In a research conducted by Rubin & Babbie (2011) found that students of social work have negative attitudes toward research. Anecdotally, social work educators know that students do not entirely hold on research. Wainstock (1994) mentioned that students have not interest in taking a research classes. According to Wells *et al.* (2009) interest of students in research cannot be realized entirely until he or she can apply it to practical life. Fraser's (2009) expression on her own studies that work faltered was low while her interest in research study was low. She also distinguished that students who juggle numerous aspects of living are particularly susceptible to deteriorating interest and lower confidence in undertaking study efforts. Emphasizing the importance of research, encouraging students, and providing a research friendly and supportive environment have been identified as increasing the research interest of students (Pan & Tang, 2005; Secret *et al.*, 2003).

MATERIALS AND METHODS

The study utilizes an exploratory quantitative (numerical) cross sectional (i.e. measurements are taken at one point in time) research design. The research used quantitative methods to collect and analyse the data. Hence, questionnaires were administered to collect quantitative data. With the primary focus on quantitative data which measured the study sample's attitude, Attitudes Toward Research (ATR) scale developed by Papanastasiou in 2002 was adapted. The ATR scale consisted of 20 items which were divided into three factors: research usefulness, research anxiety and positive predisposition as indicated in Table 1.

Instrumentation: A structured questionnaire that employed a 5-point Likert scale from strongly Agree (5), Agree (4), Neutral (3), Disagree (2) and strongly Disagree (1) was used in the study for data collection. Before administration, the questionnaire was subjected to reliability and validity testing.

With regards to reliability, the structured questionnaire was tested for internal consistency reliability using the Cronbach alpha coefficient, α. Reliability results test showed α = 0.84 which showed that the questionnaire was reliable enough to be used in the study. With regards to validity testing, the questionnaire was tested for content validity by being subjected to expected opinion. Responses of the respondents were incorporated into the final questionnaire. With regards to the administration, the questionnaire was hand-delivered to students during lecture times with the concurrence of respective lectures. A questionnaire was developed and piloted before administering. The questionnaire was used because data collected were easily be quantifiable and allowed participants time to respond freely while remaining anonymous.

Study sample: As the study sample was restricted to a very specific population of students of year 1, 2 and 3 at The institute of adult education, it was categorized as a purposive sample. Therefore, the participants were selected based on these criteria and they were assessed to be "information-rich" cases for analysis of the variables. The data from the purposive sample was collected at the institute during the second semester of the academic year 2017-2018. Simple random sampling techniques was used to select the sample. Participation was voluntary and confidential. First, Second and third year students were considered, of which 120 out of 450 students comprised the sample. The Cochran (1977) formula was used to calculate the sample size. The formula is shown in Equation 1.

Equation 1: $$n_0 = \frac{Z^2 pq}{e^2}$$

- where no is the sample size
- Z^2 is the abscissa of the normal curve that cuts off an area at the tails (1 - equals the desired confidence level, e.g., 95%)
- e is the desired level of precision, p is the estimated proportion of an attribute that is present in the population, q is 1-p
- The value for Z is found in statistical tables which contain the area under the normal curve

Data Collection and Statistical analyses of Data: The questionnaire was distributed to the participants in class and the directions were explained for them. The researcher left the class for 25 minutes to allow the participants to fill out the questionnaire. All analyses were performed with IBM SPSS Statistics version 22. Descriptive statistics were used to determine the frequencies, the means and standard deviation of the data. Moreover, Inferential statistics namely Independent T-test was applied to measure the difference in attitudes of male and female students, and the One-way ANOVA test was used to compare the attitudes of the students towards research course attributed to age and year of study.

Findings and Interpretation of Data: Findings and interpretations gathered from the research were handled according to the sub-problems of the research.

Demographic Characteristics: The demographic characteristic illustrates the distribution of respondents' categories in relation to age, gender and year of study as described in Table 2. Results in Table 2 shows that the institute has more female students 77(64.2%) than male students 43(35.8%). This scenario is associated with the fact that, in the area where this study was conducted, the number of male students is still low and this was clearly translating in their enrolment at the institute level. From Table 2, it can also be noted that majority of the respondents 54 (45%) were aged between 31-45 years. This is associated with the fact that the greater sections of the institute population are in-service entrants having Diploma level. About 43(35.8%) and 12(10%) were aged between 24-30 years and less than 24 years respectively. Respondents with above 45 years were 11(9.2%) of the total student population. With regards to year of studies, a total of 42 (35%) respondents were in second year, 41(34.2%) in third year and about 37(30.8%) in first year. This shows that the majority of the respondents were either in the middle or final year of their studies a stage which is crucial in the preparation for the employment world and also expected to have had sufficient exposure to research work at the institute.

Description of respondents' opinions in relation to the independent variables: In this section, descriptions of respondents' opinions per the items of the questionnaire relating to the objectives of the study are presented. Respondents were requested to react to the items by ticking (checking) the option that best described their opinions on a Likert-scale ranging from Strongly Disagree to Strongly Agree.

What are the students' attitudes towards research course at the institute of adult education?

This research question was aimed to examine the attitudes of undergraduate students towards research. In order to explore students' attitudes towards research course attitude, the ATR scale was applied. The ATRI consists of 20 items designed to measure students' attitudes towards research. The instrument contains three subscales i.e. usefulness, anxiety and positive predisposition. The items were developed using a Likert-format scale of five alternatives for the responses with anchors from "strongly disagree to ''Strongly agree'. The data were analyzed using SPSS package by using statistical measures accordingly. Distribution of students' answers according to the answer choices in the attitude scale, their frequency and percentages is presented in Table 3. Results in Table 3 indicates that 84.2 % of the students love research course, 69.2% think it as a necessary and important course and useful in everyday life, 88.3 % research course is helpful in future. The replies given to negative attitude statements and positive attitude statements were not similar. For example 27.5 % agree with the statement "Research is irrelevant to my life" whereas 58.3 % do not agree. 5.8 % of the students strongly agree with "Undertaking research is burden" statement while 64.1 % of them do not. 24.1 % of the students agree with the idea "Research scares me" while 58.3 % do agree. The most agreed positive attitude statement among the statements is "research course is interesting". 67.5% of the students agree with this idea whereas only 18.3 % of them do not agree. The most agreed negative attitude statement by the students is "I become stressful in research examination course."30% and 63.3 % of the students do not agree with this idea.

Are there significant statistical differences among students' attitudes towards research course attributed to gender?

Research question two was aimed to examine the relationship between individual characteristics such as age, gender, year of study and attitudes towards research.

Table 1. The ATR scale showing the Three (3) factors

Factor 1	Factor 2	Factor 3
Research Usefulness	Research Anxiety	Positive Attitudes
1. Research is useful for my career	10. Research is irrelevant to my life	17. I enjoy my research course
2. Research is connected to my field of study	11. Research courses make me anxious	18. I love research courses
3. The skills I have acquired in research will be helpful to me in the future	12. Research courses scare me	19. I find research course interesting
4. Research should be indispensable in my professional training	13. Research courses are stressful	20. I am inclined to study the details of research
5. Research is useful to every profession	14. Research courses are difficult	
6. I will employ research in my profession	15. I find difficult to understand the concepts of research	
7. Research-oriented thinking lays an important role in my everyday life	16. Research course is a burden to me	
8. Research is enjoyable		
9. Research is very valuable in my training as a teacher		

Table 2. Background information of respondents (N=120)

Attributes	Category	Frequency	Percentage (%)
Gender	Male	43	35.8
	Female	77	64.2
Year of study	First year	37	30.8
	Second year	42	35.0
	Third year	41	34.2
Age	<24 years	12	10.0
	24-30 years	43	35.8
	31-45 years	54	45.0
	> 45 years	11	9.2

Table 3. Students' Attitudes towards research course

	SA		A		N		D		SD	
Statements in the Scale	f	%	f	%	f	%	f	%	f	%
Research is connected to my field of study	53	44.167	35	29.167	21	17.500	6	5.000	5	4.167
Research is helpful in future	61	50.833	45	37.500	6	5.000	3	2.500	5	4.167
Indispensable in my professional training	35	29.167	56	46.667	12	10.000	8	6.667	9	7.500
Useful to every profession	56	46.667	44	36.667	11	9.167	6	5.000	3	2.500
Employ research in my professional	40	33.333	55	45.833	16	13.333	6	5.000	3	2.500
Interested in research	29	24.167	57	47.500	24	20.000	2	1.667	8	6.667
Research is enjoyable	32	26.667	42	35.000	23	19.167	14	11.667	9	7.500
Important role in my everyday life	39	32.500	44	36.667	19	15.833	11	9.1670	7	5.833
Research is usefulness	36	30.000	38	31.667	21	17.500	13	10.833	12	10.000
Research is irrelevant to my life	10	8.3330	23	19.167	17	14.167	28	23.333	42	35.000
Research courses make me anxious	12	10.000	30	25.000	15	12.500	27	22.500	36	30.000
Undertaking research is burden	7	5.833	23	19.167	13	10.833	31	25.833	46	38.333
Research scares me	9	7.500	20	16.667	21	17.500	36	30.000	34	28.333
Concepts of research is complex	11	9.167	26	21.667	16	13.333	30	25.000	37	30.833
Research is a difficult subject	9	7.500	28	23.333	6	5.000	41	34.167	36	30.000
I become stressful in research course examination	11	9.167	25	20.833	20	16.667	30	25.000	34	28.333
I enjoy research	36	30.000	52	43.333	16	13.333	9	7.5000	7	5.833
I love research subject	47	39.167	54	45.000	14	11.667	3	2.5000	2	1.667
Research course is interesting	37	30.833	44	36.667	17	14.167	12	10.000	10	8.333
I am inclined to study the details of research	33	27.500	44	36.667	25	20.833	8	6.667	10	8.333

SA=Strongly Agree; A=Agree; N=Neutral; D=Disagree; SD=Strongly Disagree

Table 4. Independent t-test for comparison of Mean scores of Males and Females students' attitudes dis-aggregated by Factors and by Gender

Gender	N	Research Usefulness		Research Anxiety		Positive Attitudes	
		Mean	SD	Mean	SD	Mean	SD
Male	43	2.6305	1.1646	2.9360	1.1315	2.7209	1.2050
Female	77	2.6623	1.1279	2.8993	1.1533	2.7630	1.2082
Total	120	2.6464	1.146268	2.917688	1.1423945	2.7420	1.206583
	t-value	0.654		0.612		0.768	
	p-value	0.98		0.257		0.152	

Data were collected on the scale from 120 respondents. This data were analyzed through SPSS by applying statistical measures accordingly. To answer this question, the mean and independent t-test at p<0.05, level of significance were used to identify the attitudes of the students at towards research attributed to gender.

T-test results of attitude scale points towards research course according to gender is shown in Table 4. With respect to scores of students on ATRI, Table 4 reveals that, on average female students reported to have scored slightly higher (M=2.6623; SD=1.1279) as compared to male (M=2.6305; SD=1.1646) on the subscale "Usefulness" of research.

Table 5. One-way ANOVA analysis on the students' attitudes towards research attributed to year of study

Source of Variation	Sum of Squares	Degrees of freedom	Mean of squares	F- value	P-value
Between Groups	1843.462	2	921.731	1.6383	0.841*
Within Groups	65824.161	117	562.5997		
Total	67667.623	119			

*p> 0.05

Table 6. One-way ANOVA analysis on the students' attitudes towards research attributed to age

Source of Variation	Sum of Squares	Degrees of freedom	Mean of squares	F- value	P-value
Between Groups	843.162	3	281.054	6.7299	0.571*
Within Groups	4844.364	116	41.76176		
Total	5687.526	119			

As presented earlier in Table 4, the results depict that, on an average male students scored slightly higher (M=2.9360; SD=1.1315) as compared to female (M=2.8993; SD=1.1533) on the subscale "Anxiety". On the subscale ''positive predisposition'' Table 4 reveals that, on average female students slightly scored higher (M=2.7630; SD=1.2082) than males (M=2.7209; SD=1.2050). The results of the study further demonstrates that female students claims to have a slightly more positive attitudes towards research than males but the difference was not found to be statistically significant. The t-value (0.654) for research usefulness for professional is not significant at p<0.05, therefore, the null hypothesis that there is no significant difference in ATR of male and female students towards research is accepted at 0.05 level of significance. The t-values (0.612) for research anxiety and t-values (0.768) for positive attitudes towards research are not significant at P<0.05 level of significance (t=0.768, df=118, p>0.05). In other words, students' attitudes towards research course do not have a meaningful variation according to gender [t (118)= 0.768, p>.05]. This finding can be interpreted as there is no meaningful relation between attitudes towards research course and gender. In other words there is no difference in attitudes according to gender.

Year of Study: Are there significant statistical differences among students' attitudes towards research attributed to year of study?

To answer this question, the One-way ANOVA test was used to compare the means of the attitudes of the students towards research attributed to year of study. The results were interpreted by comparing the means using the One-way ANOVA, at p<0.05, level of significance. Results of the analysis were given in Table 5. Table 5 shows that Students' attitudes towards research course do not show a meaningful difference according to years of study [F (2, 117) = 1.6383; p>0.05]. In other words there is no difference in attitudes according year of study variant.

Age: Are there significant statistical differences among students' attitudes at the institute of adult education towards research attributed to age?

To answer this question, the One-way ANOVA test was used to identify the attitudes of the students at the institute towards research attributed to year of study. Table 6 shows the results. Table 6 shows that students' attitudes towards research course do not show a meaningful difference according to age [F (3, 116) = 6.7299; p>0.05]. In other words there is no difference in attitudes according to age variable.

DISCUSSIONS

The findings of the study indicated that, gender, year of study and age of the students had insignificant effect on their attitude to research course. The first factor we assessed was research usefulness. Most of the students considered it useful and helpful similar to other findings (Alghamdi *et al.* 2014). Almost similar findings were reported by a study where 44% said research will significantly play a role in their future career (Siemens *et al* 2010). The most agreed negative attitude statement by the students "I become stressful in research examination course, concurs to the findings by Secret *et al.* (2003) regarding undergraduate students enrolled in an introductory research course at a university in a south-eastern state of the USA confirm the noteworthy prevalence of worries, concerns and strain in relation to research courses. Measuring students' attitudes towards research is necessary as it can have an impact on how teachers of research methodology course, supervisors of undergraduate course can adjust their modus operandi to improve the research productivity of their students. The present study sought to conclude this discussion by advising that Teachers at the institute continue assisting students to increase their attitudes' levels towards research course. For this to happen, there is a great need to envisage strategies to reduce students' anxiety towards research and avoid that research course makes them bored, scared and regretting at the level of willing leaving the course if they were given an opportunity (Bandele & Adebule, 2013). In connection with the "positive attitude to research "which is one of the effective variables of the present study corresponds with the Mehrdad, *et al.* (2007) findings. It could be said that, the students know the impact of research in their professional activities.

Conclusion

From the findings of the study, the following conclusions were drawn:

Undergraduate students believe that knowledge of research is valuable in their daily activities. Therefore, the study concludes that more elements of best practice needs to be incorporated into teaching about research and into the practice of research in courses to encourage transfer of knowledge to their everyday life activities. With regard to gender, females were more anxious than males. However, despite these differences, the t-test revealed that there is no statistically significant gender-based difference. It could be concluded that, attitude of the students towards research course is partial, therefore, gender, age and class level have no effect on the attitude of the students to research. It also seems to be

important to address students' fear of research courses although students might declare such a feeling less frankly than disinterest or disregard for research. As Baird (2016) highlights, anxiety does not always have a debilitating effect on the learning processes and outcomes. However, research teachers should support students in managing their anxiety so that it reaches a level that instigates their growth and does not hinder the development of their skills. There is evidence that, among other things, fear of research courses can be addressed, for instance, by acknowledging these feelings openly and repeatedly (Einbinder, 2014). It may open ways to further develop and improve our research teaching in accordance with current students' needs. Generally, the study concludes that, there was no diversity in the students' attitudes towards research course and although the students considered research useful and related to their daily life, they considered it stressful at the same time.

Recommendations: Based on the research findings and conclusions, the following recommendations are made:

- Lecturers should engage students with material and ideas which are real and based on the level of complexity with which situations can occur in real life.
- Students should be provided with the knowledge to apply the relevant skills to facilitate their optimum learning

Research limitations and Implication for future Studies: The limitation in this study is on the design of the study which was of the type of a cross-sectional study where data are collected at one given time only. This was a cross-sectional study; therefore, we could neither observe the changes over time nor inference of causality. A longitudinal study would be more advisable as it would allow the observation of the process of students' attitudes change over time. Also, such longitudinal study should include a qualitative approach to find out various ways on how students could be better assisted in order to reduce their anxiety and increase their attitudes' levels while learning research courses. The response rate of the final year students was lowest because they were given a task of conducting a field practice at the time of data collection. This study was conducted in one public institution; therefore, the findings cannot be applicable to other institutions with the different environment to generalize the findings.

Implications of the Findings

Specifically, the following areas should be considered:

- A qualitative approach should be conducted to offer a better understanding of obstacles towards research participation of undergraduate students.
- As the academic members are the most important resources, the attitudes of academic members towards research courses to undergraduate students should also be studied.

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