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Journal of Educational Research and Development

Editorial

The Editorial Board is pleased to present Vol. 11 Number 2, December, 2017, Journal of Educational Research and Development. The journal was established to transmit to the world research findings and high quality review reports relevant to educational theory and practice aimed at broadening the knowledge of the readers.

The current journal contains Ten (10) articles for researchers and scholars in various disciples critical to understanding and improving education. The articles have been thoroughly assessed within the guideline of world class academic rating for which the faculty desires.

I am particularly grateful to all our editors and well-wishers whose constructive assessments and suggestions assisted us greatly in our decision making that they will find the articles in this journal quite interesting, educative and valuable.

Prof. (Mrs) E. F. Adeniyi
Chairperson / Editor-in-Chief

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ADEQUACY AND UTILIZATION OF HUMAN RESOURCES IN NIGERIAN UNIVERSITIES

Dr (Mrs) F. E. Iwerebor &Prof V.O. Ibadin

Abstract

The study assessed the adequacy in quantity and quality, and utilization of human resources in universities in Edo State. The following research questions were specifically raised and answered. Are lecturers adequate in the various programmes in federal, state and private universities in Edo State in terms of students: teacher ratio? What is the quality of manpower resources in the various programmes in federal, state and private universities in Edo State? What is the utilization rate of lecturers in each of the programmes in the universities under study in Edo State? The ex-post factor design was adopted been that the data obtained already existed in the universities. For each of the stratified and purposively selected university, 10% of programmes that cut across them were randomly selected. The data were collected using checklist, analysed and the findings revealed that there was shortage of lecturers, most lecturers do not have a Ph.D degree and they were over utilized. It was therefore recommended that, lecturers should be employed strictly in areas of need with the right qualification with Ph.D and they should adhere to the minimum teaching hours recommended by NUC.

Introduction

Resources are important tools needed for the development of qualitative education. The success of any educational system is dependent on the adequate availability and utilization of educational resources such as students, staff and infrastructural facilities. Adeogun (1999) posited that the success or failure of any educational system is dependent on the quality and quantity of resources made available to it and the use to which the resources are put. The quantity, quality and utilization of educational resources vary among institutions (Durosaro 1990 and Obadara 2012). Resources for university education in terms of staff need, funds, physical facilities and equipment have continuously been in a state of acute shortage in Nigeria (Utulu 2001; Nwadiani and Akpotu 2003; Sule-Kano 2007; Okojie 2008; Amawhule 2004 and Okwuanaso 2004). The manpower resources are more prominent among the educational inputs.

The university system needs adequate human (academic and non-academic staff), financial, time and material resources to produce effective and efficient outputs (i.e, graduates). Manpower resources in Nigerian universities refer to the teaching (academic) and non-teaching (non-academic) personnel. The academic staff are referred to as lecturers. The lecturers are greatly involved in the input-transformation-output process. The goals and objectives of education cannot be achieved without the availability of adequate human resources, especially the lecturers. In any educational programme, academic staff (lecturers) are needed to harness and control other resources so as to achieve the national goals and objectives of education. In the same vein, Afolabi (2005) pointed out that no matter how beautiful the programme and assets of an institution, without the academic staff, attainment of the institutional goals and objectives would prove abortive.

The demand for university education has been on the increase and this has led to increase in student enrolment as the total number of students that enrolled in 2009/2010 session was 1,182,381 (JAMB, 2009). The increase in the demand for university education has led to an increase in students: teacher ratios (STR). The STR in all the universities was between 1:19, 1:24, 1:28, 1:30, 1:33 and 1:19 for 2000 - 2006 sessions (Agboola & Adeyemi, 2009). Abdulkareem, Fasasi & Akinnubi (2011) asserted that during the admission process, candidates usually give preference to university education as a source of high-level manpower while other tertiary institution such as polytechnics and colleges of education are less patronized. According to NUC (2007) benchmark, teaching workload of academic staff in the universities should be a minimum of 8 credit units which are equivalent to 8 hours a week per lecturer. The adequacy of manpower is not the same as its utilization. There is therefore need to know how the available manpower is utilized. Adequate availability of physical and material resources without corresponding utilization of manpower resources in the educational system will lead to an ineffective teaching/learning process.

Academic staff of universities in Nigeria have complained of over utilization which has resulted to demand for pay for excess workload by lecturers. Senior academic staff in the Professorial cadre are made to teach in the undergraduate programmes instead of concentrating on post – graduate programmes, thereby increasing their work load. These students: teacher ratios reveal, to some extent, the aspect of lecturers' utilization. Over utilization of academic staff would probably have adverse affect on students and staff productivity as the academic staff perhaps could be over stretched and may result to an increase in students: teacher ratio, which in turn could affect the quality of teaching, research and supervision.

Mason and New Comb (2001) asserted that utilization is the proportion of the time (expressed usually as a percentage) that a piece of equipment is operating. Equipment, in this study, refers to the manpower resource (lecturers). Ajayi (2005) defined utilization as the extent to which a given group uses a particular service in a specified period. Manpower utilization refers to how the developed manpower of an organization is used in the performance of the functions for which it has been developed. It is the extent to which the available adequate resources are being put to use. Organizational goals and objectives can be attained if human resources are well developed and utilized. Taire (1992) in Ugolo (2010) stated that the area in which developed manpower can be utilized determines the nature, form, timing and funds invested in developing it. When something is good enough in quantity for a particular purpose or need, it is said to be adequate. Adequacy of manpower resources is the availability of manpower in a required quantity and quality (Adebayo, 2005). For an educational system to be productive there is the need for adequate availability and effective utilization of resources.

To guide this study, the CIPP (context, input, process and product) evaluation model propounded by Stufflebeam (2003) was used. The CIPP model aid educators in making useful decisions. The model showed how evaluation can contribute to a decision making process in programme development. Assessment or education situation was viewed by the developers of the model as a process of delineating, obtaining and providing useful information for judging decision alternatives. The model was relevant to this study as it assessed the adequacy and

utilization of manpower resource in order to generate dependable information to facilitate the decision process in the universities.

For a system to work effectively and efficiently, the needed resources must be known, provided and utilized. According to Tarpeh (1994) as cited in Adeyemi and Uko-Aviomoh (2003) teachers are the mainstay of any school system and supplying them sufficiently in quantity and quality affects the efficiency of the system as they are the crucial inputs that transform students into graduates.

Statement of problem

In universities in Nigeria and Edo State in particular, manpower situation and utilization are suspected to be problems as students: teacher ratio seems to be too high. The adequacy and utilization of manpower resources would, to a large extent, determine the success or failure of university education in the state. This may be determined by using the students: teacher ratio, qualifications and hours taught per lecturer. There are allegations that Nigerian universities seem to be inadequately staffed in terms of the quantity (looking at the students: teacher ratio) and quality (looking at lecturers with a Ph.D degree) of lecturers, and that the existing ones are perhaps over used. Does this translate to under or over utilization? This is the crux of this study.

Besides the teaching functions of lecturers, they also engage in researches and supervisions, which have led to over utilization and perhaps affected lecturers' productivity, hence, students' outcome. Over utilization of lecturers has perhaps resulted to excess workload by the few lecturers who have the Ph.D degree as they possibly teach above the recommended NUC staff workload and most times are not remunerated. There is therefore need, to investigate the adequacy and utilization of manpower resources in universities in Edo State during the period under study, whether academic staff in the various programmes are adequate in quantity and quality in terms of students: teacher ratio in line with the NUC minimum benchmark. Do lecturers in the various programmes comply with the minimum workload recommended by NUC?

Research Questions

1. Are lecturers adequate in the various programmes in federal, state and private universities in Edo State in terms of students: teacher ratio?
2. What is the quality of manpower resources in the various programmes in federal, state and private universities in Edo State?
3. What is the utilization rate of lecturers in each of the programmes in the universities under study in Edo State?

Purpose of study

To investigate the adequacy of manpower resources and their utilization rate in universities in Edo State. The specific objectives were to find out:

a. whether lecturers' adequacy in terms of students: teacher ratio in various programmes in the universities was adequate and if it complied with the NUC set standard;
b. whether the quality of manpower resources in the various programmes is in line with the approved NUC set standard in terms of staff mix and percentage

of lecturers with a Ph.D degree in the federal, state and private universities in Edo State and

c. the rate of utilization of academic staff in the various programmes in federal, state and private universities in Edo State

Methodology

This study adopted the descriptive survey using the *ex-post-facto* design. The population of the study comprised all the six universities and the fifty-two academic programmes that cut across the various departments/ faculties/schools/colleges in Edo State.

Sample and Sampling Procedure

The sample was made up of eighteen respondents comprising three directors of Academic Planning Division from the three selected universities as well as five heads of departments of the five programmes in each of the three universities in Edo State. A multistage sampling technique was used to select the universities and the programmes. The universities were stratified into three groups and then 50% were purposively selected along the variables of ownership and age. Finally, 10% of programmes that cut across the universities were randomly selected. They were Computer Science, Mechanical Engineering, Chemistry, Theatre Arts and Medical Laboratory Science Programmes.

Three research instruments were used to collect data for the study: Manpower Utilization Checklist (MUC), Academic Staff Data Checklist (ASDC) and Student Enrolment Checklist (SEC). The checklists were divided into sections A and B. Section A elicited information on the institutions' code, name of faculty, departments and programmes, hours taught per week by a lecturer in a semester/ session, qualification and status of lecturers, while Section B elicited information on staff statistics and student enrolment. The data were analysed using Percentages, frequency counts, mean, bar charts, other graphs and NUC Benchmark Minimum Academic Standard (BMAS, 2007).

Results

Research Question One: *Are lecturers adequate in the various programmes in federal, state and private universities in Edo State in terms of students: teacher ratio?*

This question was answered using the average students: teacher ratio (number of students per lecturer) for 2010/2011 to 2014/2015 sessions which was computed using academic staff statistics and student enrolment in the sampled programmes in federal, state and private universities in Edo State. Table 1 summarised the average students: teacher ratio from the sampled programmes in the various institutions for 2010/2011 – 2014/2015 academic sessions. Figure 1 further showed a bar graph of the average students: teacher ratio of the sampled programmes in federal, state and private universities in Edo State for 2010/2011-2014/2015 academic sessions.

Table 1: Average Students: teacher ratio of the sampled programmes in the various institutions in Edo State (2010/2011 – 2014/2015 academic sessions)

Programmes	Institutions			NUC BMAS
	1	**2**	**3**	
Mechanical Engineering	1:35	1:53	1:17	1:15
Medical Laboratory Science	1:23	1:49	1:9	1:10
Chemistry	1:23	1:36	1:5	1:20
Computer Science	1:27	1:55	1:17	1:20
Theatre Arts	1:15	1:28	1:3	1:30

Note: Institution 1: represents Federal University, Institution 2: represents State University, Institution 3: represents Private University

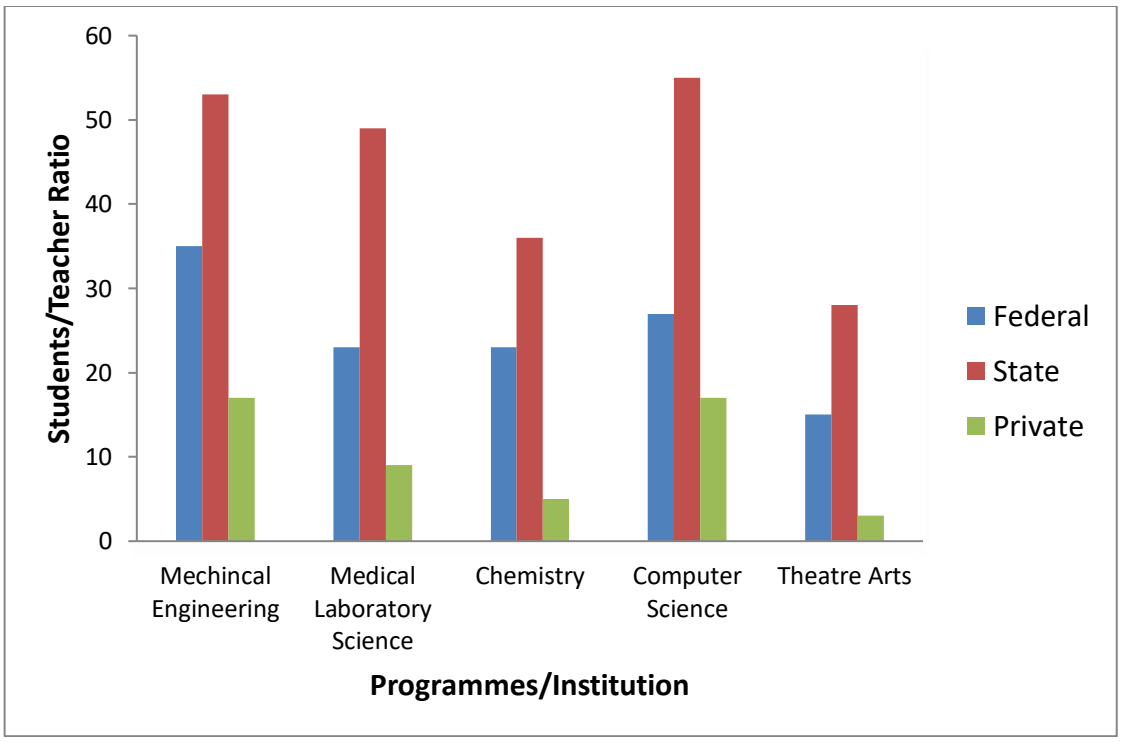

Figure 1: Average students: teacher ratio of sampled programmes in federal, state and private universities in Edo State for 2010/2011 to 2014/2015 academic sessions**.**

From the information in Table 1, there were variations in students: teacher ratios in the sampled programmes in the sampled universities in Edo State (i.e., federal, state and private). In Mechanical Engineering programmes, the average student: teacher (STR) in the federal university was 1:35, that of state university was 1:53 while that of private university was1:17. In Medical Laboratory Science programmes, the average STR was 1:23, state university had 1:49 while private university had 1:9. The average STR in Chemistry programmes was 1:23 in federal university, that of state university was 1:36, while that of private university was 1:5. Computer Science programme in federal, state and private universities in Edo state

had an average STR of 1:27, 1:55 and 1:17 respectively. Finally, in Theatre Arts programmes, the average STR in the federal university was 1:15, that of state university was 1:28 while private university was 1:3.

From the Table (1), the analysed data revealed that private university in Edo State had a better STR as it was lower than those of federal and state universities in Edo State. The situation was worse in the state University as the number of students to a teacher was very high (i.e., higher students: teacher ratio). The bar graph in Figure 1 further revealed the difference in the average STR for the years under study (2010/2011-2014/2015 Sessions) at a glance.

Question Two: *What is the quality of manpower resources in the various programmes in federal, state and private universities in Edo State?*

This question was answered using the qualifications of lecturers (those with Ph.D., Masters and below Masters Degrees) and comparing them with the NUC recommendation of 70% (seventy percent) and above for lecturers with a Ph.D degree as shown in the Programme Evaluation forms by the NUC. Table 2 summarised the qualifications of lecturers showing the percentages with Ph.D., Masters and below Masters degrees for 2014/2015 session and this was further presented in a bar graph (Figure 2).

Table 2: Total number of lecturers with Ph.D., Masters and below Masters degrees in the federal, state and private universities in Edo State (2014/2015)

Institutions	Qualification	Frequency	Percentage
1	Below masters	10	8.4
	Masters	52	43.7
	Ph.D.	57	47.9
	Total	119	100
2	Below masters	0	0
	Masters	28	45.9
	Ph.D.	33	54.1
	Total	61	100
3	Below masters	0	0
	Masters	21	46.7
	Ph.D.	24	53.3
	Total	45	100

Table 2 showed the total number of staff with a Ph.D. degree in the sampled programmes in federal, state and private universities in Edo State which were 57 (47.9%), 33 (54.1%) and 24 (53.3%) respectively. Those with Masters degree was 52 (43.7%), 28 (45.9%) and 21 (46.7%) for federal, state and private universities respectively. Lecturers below Masters degree were 10 (8.4%) in the federal university and none in state and private universities in Edo State. The data was further presented in a bar graph in Figure 2.

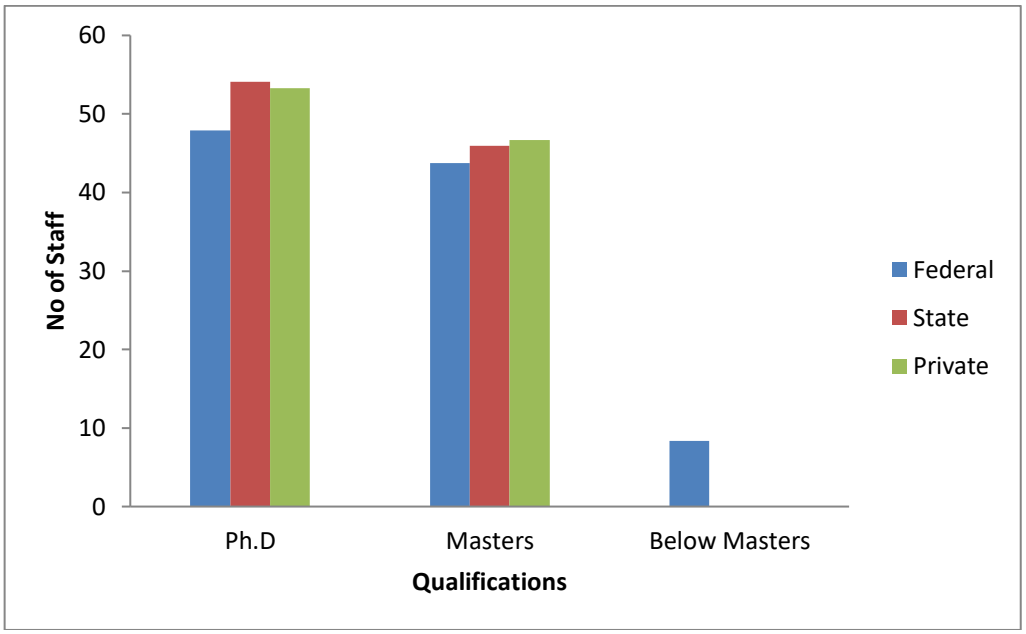

Figure 2: Number of lecturers with Ph.D., Masters and below Masters degrees in federal, state and private universities in Edo State (2014/2015).

Question Four: *What is the utilization rate of lecturers in each of the programmes in the universities under study in Edo State?*

The hours taught by lecturers for 2014/2015 session was used to compute utilization rate of lecturers and this was shown at a glance on a bar chart. Table 3 summarised utilization category of hours taught by lecturers which were categorized as underutilized, well utilized and over utilized. Figure 3 also showed the utilization category based on the above outlined categories.

Table 5: Utilization category of lecturers in sampled programmes in federal, state and private universities in Edo State (2014/2015 session)

Level of utilization	Hours taught by Lecturers per session		Mechanical Engineering Institutions			Medical Laboratory Science Institutions			Chemistry Institutions			Computer Science Institutions			Theatre Arts Institutions		
			1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Well utilized	16 hours (1)	Frequency	5	2	1	0	10	1	3	6	2	10	0	1	5	2	0
		percentage	33.3	22.2	10.0	0	50.0	4.8	12.5	40.0	50.0	37.0	0	16.7	33.3	25.0	0
Under utilized	Below 16 hours	Frequency	4	0	7	2	4	9	7	2	0	7	1	0	4	0	0
	(below 1)	percentage	26.7	0	70.0	11.8	20.0	42.9	29.2	13.3	0	25.9	11.1	0	26.7	0	0
Over utilized	Above 16 hours	Frequency	6	7	2	15	6	11	14	7	2	10	8	5	6	6	4
	(above 1)	percentage	40	77.8	20.0	88.2	30.0	52.3	58.3	46.7	50.0	37.0	88.9	83.3	40.0	75.0	100.0
Total		Frequency	15	9	10	17	20	21	24	15	4	27	9	6	15	8	4
		percentage	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Note: Institution 1: represents Federal University, Institution 2: represents State University, Institution 3: represents Private University

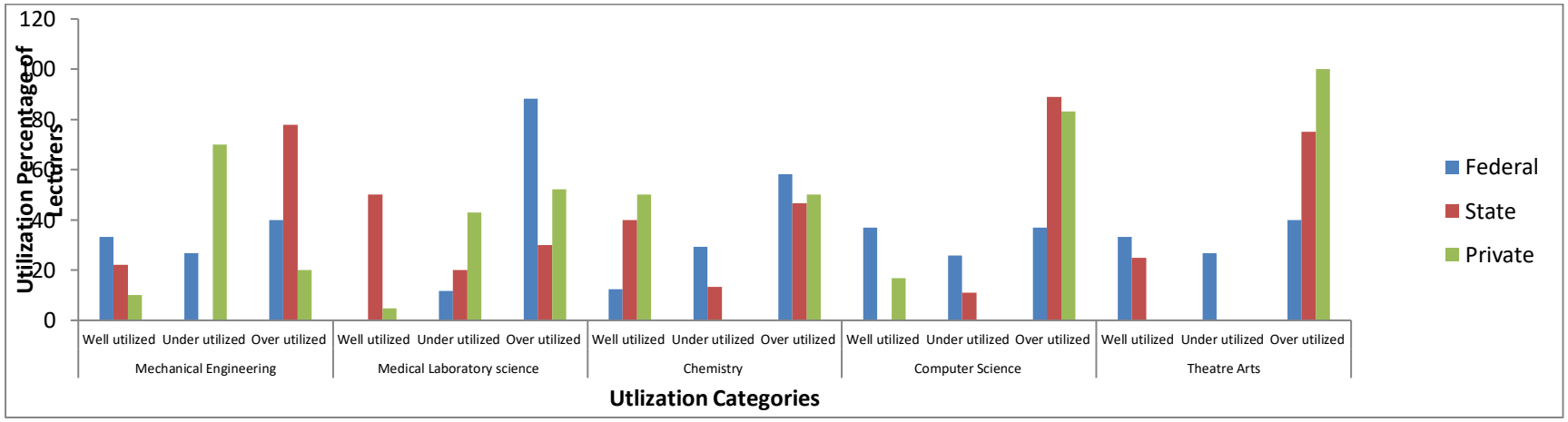

Figure 3: Utilization categories of lecturers in the sampled programmes in federal, state and private universities in Edo State (2014/2015 Session)

From Table 3, Mechanical Engineering programmes in federal university in the state, had 33.3%, 26.7% and 40% of their lecturers well, under and over utilized respectively. In the state university, 22.2% and 77.8% were well and over utilized respectively and none was under utilized while, 10%, 70% and 20% was well, under and over utilized respectively. In Medical Laboratory Science programmes in the federal university, none was well utilized, 11.8% and 88.2% were under and over utilized. In the state university, 50%, 20% and 30% were well, under and over utilized. But in the private university, 4.8%, 42.9% and 52.4% were well, under and over utilized.

In Chemistry programmes in federal university, 12.5%, 29.2% and 58.3% were well, under and over utilized while in the state university, 40%, 13.3% and 46.7% were well, under and over utilized. However, in the private university 50% were both well and over utilized while none was under utilized. In Computer Science programmes, federal university had 37%, 25.9% and 37% that were well, under and over utilized. In the state, none was well utilized, 11.1% and 88.9% were under and over utilized respectively. While in the private university, 16.7% and 83.3% were well and over utilized, none was under utilized. Finally, Theatre Arts programmes in federal university 33.3%, 26.7% and 40% well, under, and over utilized. In the state university, 25% and 75% were well and over utilized, none was under utilized, but in private university, none was well and under utilized but rather 100% were over utilized.

Among the sampled programmes in federal, state and private universities in Edo State, lecturers were greatly over utilized ranging as high as 50% to 88%. The percentage of under utilization was not so high in most of the programmes. Figure 3 equally showed at a glance the level of utilization categories of lecturers (well, under and over utilized) in the sampled programmes in the federal, state and private universities in Edo State. The figure further explained the utilization category on Table 3.

Discussion of Findings

The findings of the study revealed that majority of the programmes in the private universities met the NUC recommended benchmarks as regard the students: teacher ratio (STR). Theatre Arts programmes, in most of institutions met the approved NUC ratio. However, the state university was the worst hit as all the sampled programmes had STR that was far above the NUC approved benchmark. It was not surprising because they lacked adequate funding from the state government and so may want to get more revenue by admitting more students. The State government might not employ enough lecturers in order to cut cost and this may result to an increase in STR. The private universities which met the NUC recommended benchmark may have succeeded due to the fact that they charge high fees which are not affordable for majority of people. Only few wealthy individuals can afford them. Also, because of the high school fees, parents may not want to send their children to read courses like Theatre Arts and Chemistry. This may bring about a decrease in STR. High STR will likely bring

about inefficiency and wastage which will affect the quality of the output as the pressure on the teachers will be unbearable and most likely will not be able to cope teaching alongside other administrative functions.

These findings are in line with those of Oyebanji (2012), which revealed an increase in STR. The shortage in manpower requirement was also seen in the study carried out by Onyeson (2013). The acute shortage in manpower was also corroborated by Utulu 2001, Nwadiani and Akpotu 2003, Sule-kano 2007, Okojie 2008, Amawhule 2004, Okwuanaso 2004 and Obadara 2012. Another factor that may have contributed to the increase in STR was students' preference for university education as a source of high level manpower training (other tertiary institutions were less patronized) (Abdulkareem, Fasasi and Akinnubi 2011). This will further have an effect on supervision and continuous assessment as the class becomes too large to be managed. In the science based disciplines, practicals may become ineffective due to the large classes which may result to poor supervision, then output.

On the number of persons with Ph.D, the findings revealed that most of the sampled programmes did not meet the NUC approved benchmark of 70% and above of lecturers in every programme in the university having a Ph.D. degree. By implication, universities in Edo State had inadequate manpower with a Ph.D. Inadequacy of Ph.D holders may be as a result of the universities not adhering to NUC entry policy of employing lecturers with a Ph.D to lecture. In the private university, due to the financial implication, the management may employ lecturers in the junior cadre, many of whom do not have a Ph.D. degree. Lack of and improper staff development policies in schools to help improve staff quality can also affect the number of Ph.D holders in the programmes. The inadequacy in the number of Ph.D holders in the universities is corroborated by Akinrinade (2009) who asserted that Nigerian universities need the services of over 8,000 Ph.D holders. Jatula (2010), in his study affirmed that for universities to be great and good, experts in chosen fields with a Ph.D degree should be employed to attract and retain the faculties as this will help to build confidence in the students who are the beneficiaries. Shortage of Ph.D holders will affect the quality of the products graduated into the labour market resulting in a decline in the standard of education and also affecting the development of the nation at large. With few lecturers having a Ph.D. degree in a department, programmes may likely be given interim or denied accreditation. Where this is the case, students cannot be admitted into such programmes there by resulting to wastage in terms of finance, time and resources on the part of the management, government, individuals and organizations. The cases of over utilization in the various programmes were very high as they ranged between 50% and 100% in federal, state and private universities in Edo State. Most of the academic staff were over utilized, attested to by Okonkwo (1992), Arubayi (2009) and Kordzadze (2013). However, cases of over utilization were averagely highest in state university compared to private and federal universities in the State. This contradicted the findings of Durosaro (1990), which posited that lecturers in state universities were under utilized compared to federal universities. The variation in utilization is as a result of the

variation in STR. The over utilization rate in federal and state universities may likely be as a result of most professors teaching above the minimum 8 hours approved by NUC because they also teach actively in both undergraduate and post graduate programmes. Cost, in terms of staff remuneration, may perhaps lead to the employment of fewer lecturers which also may be the reason for over utilization in the private university.

Conclusion

In conclusion, lecturers in state and federal universities in Edo State were not adequate as the STR was very high, they taught above the recommended hours and as such were over-utilized. However, those in private university met the NUC approved benchmarks. There was shortage of lecturers with a Ph.D degree, none met the recommended standard, though, no lecturer's qualification was below Masters degree in the state and private universities in the State.

Recommendations

Since lecturers in the state are in adequate and are over utilized, the study therefore recommends that university management in Edo State should:

1. Make effort to attain the recommended NUC benchmark in terms of the STR in the sampled programmes by employing more lecturers in areas of need. Lecturers with the right academic and professional qualifications with Ph.D. should be employed in the universities.
2. Promote staff development by encouraging and supporting lecturers to go for further studies, workshops, seminars and conferences. In fact, lecturers without a Ph.D. degree in the various universities presently should be given a time frame to acquire it so as to meet the 70% and above recommended by the NUC.
3. Ensure that the minimum teaching hours of 8hrs per week per lecturer as recommended by the NUC is adhered to, where this is not the case, more lecturers should be employed.

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INFLUENCE OF AEROBIC DANCE ON THE ANTHROPOMETRIC INDICES OF OVERWEIGHT AND OBESE WOMEN: A REVIEW

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Abstract

The aim of this paper is to unveil the need for theassessment of aerobic dance on the anthropometric indices of overweight and obese women. On the basis of analyzed papers published betweenthe early2000- 2018. The literature search was limited to Google Scholar and Google Search engines using overweight, obesity and anthropometric parameters as search terms. The review included 4 empirical studies between 2013 - 2018 which met all the criteria for this topic and the results all shows that aerobic dance actually have positive effect on body anthropometric indices of women. The body anthropometrics of women could be influenced by genetic potential, eating behaviour, sedentary lifestyle, health status, as well as geographic region and ethnic group affiliation. Aging is associated with a higher percentage of body fat and body fat redistribution. Based on the literature, it was concluded that; aerobic dance programme is a popular mode of exercise especially among women due to its fun nature with a motivating music background, joyful dance steps and have a positive effect on anthropometrics indices of overweight and obese individuals. Therefore, aerobic dance may be used as an alternative for people who want to prevent or combat overweight and obesity and its health complications. It is therefore recommended that individuals, exercise physiologist and general healthcare providers, should apply aerobic dance programmefor the management of excess anthropometric values and its health complications on patients.

Keywords: Aerobic dance, anthropometrics,overweight, andobesity.

Introduction

Sedentary lifestyle resulting from the technological or modern way of life and work is threatening the health of every individual in every moment of life, youths, middle-aged and elderly people.One of the major problems of a quiescent or sedentary lifestyle is obesity. Such lifestyle encourages and poses increased threat to the development of myriads of disabling medical conditions like muscle weakness, compromised aerobic capacities, hypertension and coronary heart diseases(Ativie, Aigbiremolen, Ohwin, Okemuo *et al.*, 2018).Exercise is an important component of our lives; it has the ability to prevent and help to combat certain diseases(Centers for Disease Control and Prevention, 2018). A person who engages in any form ofvigorous physical activities will experience less prevalence of obesity related diseases such as hypertension, atherosclerosis, type-II diabetes and angina pectoris in relation to sizable anthropometric indices.Anthropometry and value of fine and sizable measures of body anthropometric indices on health especially for women cannot be over emphasized; these body fittings are modified and maintained by engagement in

exercises.Anthropometry is a simple reliable method for quantifying body size and proportions by measuring body length, width, circumference (C), weight and skinfold thickness (SF); it is the study of the measurement of the human body in terms of the dimensions of bone, muscle, and adipose (fat) tissue(Wang, Thornton, Kolesnik, & Pierson, 2000). Anthropometrics are often used to assess growth, development, body fat distribution and other health parameters (Flora, Mascie-Taylor, & Rahman, 2009). Anthropometric indices like length or height, weight, and body circumferences among others, helps to determine if an individual is growing properly and can indicate when the person's health and well-being are at risk (California Department of Health Care Services, 2016; Erikson, Lindstrom, & Tuomiletho, 2001).The American College of Sports Medicine (ACSM) 2012 defined aerobic exercise as "any activity that uses large muscle groups and can be maintained continuously, and is rhythmic in nature." It is a type of exercise that overloads the heart and lungs and causes them to work harder than at rest, common aerobic exercise includes walking, jogging, cycling, running, skipping, dancing, and swimming.Aerobic dance as one of the forms of aerobic exercise is a popular means of exercise regimen, performed especially in a group exercise setting to music; aerobic dance has its foundation in dance inspired movements. Each participant does aerobic dance for personal reasons such as to improve health, lose weight, tone muscles, burn fat and improve quality of their meaningful life, the fun, pleasurable, non-requirement of costly equipment or space especially have made dance aerobics very popular in recent time. Aerobic dance exercises have typically been developed as an aerobic exercise to reduce body compositions, refine body anthropometric indices as well as improve physical fitness and performance(Jaywant, 2013; Kimura & Hozumi, 2012).A large number of people especially obese individuals need exercises to burn excess fat and modify their anthropometric indices and these exercises most at times seems to be more stressful to them. Apart from walking and running as an aerobic exercise used to decrease body weight and change body composition which have effect on anthropometric indices, there is a need to figure out intervention programmes that are easy, interesting, motivating and pleasurable that test alternative bases for exercise prescription and focus exclusively on the benefits of aerobic dance on body anthropometric indices. In this context, this paper stands to unveil the need for assessment of aerobic dance on the anthropometric indices of overweight and obese women. This paper will prove that aerobic dance activity is impacting the same or better than other types of aerobic exercise such as jogging and cycling in improving the ability of the heart and act as a tool for weight loss. The goal is to show that aerobic dancing has significant changes in anthropometric indices.

Physical activity is a vital part of a weight control programme and comprehensive weight loss (Arslan, 2011). The positive effect of various aerobic physical activities on the changes in body composition and anthropometric characteristics of a person has been confirmed in many studies (Osei-Tutu & Campagna, 2005; Rahimi, 2006). Aerobic training activities are used to decrease

body weight and body fat, and thus to change body anthropometric measurements(Jorgić, Pantelić, Milanović, & Kostić, 2011; Milanović, Pantelić, Trajković, & Sporiš, 2011; Milanović, Pantelić, Trajković, Sporiš, & Aleksandrović, 2012).

Aerobic dance

Aerobic dance refers to either of Ballet, Jazz, Belly, Zumba, Reggae, Galala, Suo, Alanta, Makossa, Azonto, Etigi, Skelewu, Shoki, Sekem, Shakati-bobo and lots more dance moves being modified for the health benefits**.** Aerobic exercise to music or dance aerobics was especially popular during the last few years of the 20th century, primarily among women. A characteristic of this kind of exercise is that all of the people who are participating in the exercise to music programme realize certain movements in the same rhythm and tempo, activating different muscle groups at the same time. Aerobic dance exercises have typically been developed as an exercise to reduce body compositions as well as improve physical fitness and performance (Kimura & Hozumi, 2012).

Aerobic dance activities have normally been created as a vigorous activity to diminish body compositions and also enhance physical wellness and performance (Pantelić, Milanović, Sporiš, & Stojanović-Tošić, 2013). Aerobic dance programmeisone of the ideal types of exercise especially for those people who are beginners and want to develop fitness level gradually and safe. This exercise is safer and has less risk of injury because it requires only moderate and steady state exertion(Arena, Riebe, Thompson, Linda, & Pescatello, 2013). Therefore, the possibility of getting injuries is smaller for inactive or untrained people, as well suited to those who have sedentary lifestyle and older people. This test also has low intensity and less duration compared to others.

Obesity

Obesity is a condition in which body fat stores are enlarged to an extent that impairs health. Adults with a BMI of 18.5 to 24.9 kg/m^2 are categorized as being of normal weight, on the basis of international analyses of the health impact of different BMIs in men and women. However, the risk of comorbidities tends to raise beginning at a BMI of 20 kg/m^2. Thus, the specifications of overweight BMI > 25 kg/m^2 and obesity BMI 30 kg/m^2 and above) are arbitrary.

According to the 2010 WHO survey data on Nigeria, the prevalence of overweight was37% in women, while the prevalence of obesity was 8.1% women, based on individuals aged 30 years and above, shows that the prevalence of overweight and obesity together increased 18% in women, while the prevalence of obesity alone increased 39% in women, between 2002 and 2010 (Ono, Guthold, & Strong, 2012). Supporting byRampal, Rampal, Khor, Zain *et al.* (2007)obesity is recognised as a major determinant of many other non-communicable diseases such as cancers, gallbladder diseases, respiratory problems and musculoskeletal disorders. Rampal *et al.* (2007)further stated that, obesity is a well-established risk factor for cardiovascular disease in the general population that lead the cause of mortality and morbidity in developed and

developing countries including Africa. Obesity affects every aspect of an individual's life and has deleterious effects, not only on health and self-esteem but also on the socio-economic status of the patient(Polikandrioti & Stefanou, 2009). Hence there is every need to manage this chronic disorder termed "obesity.

Anthropometric measurements give the researcheran assessment of the patient's fatness or leanness and body fat distribution.There are so many anthropometric indices that indicate different risk factors of diseases.Basic anthropometric indices (weight, height, body fat, body parts circumference) and their derived indices of body mass index, waist-height ratio and waist-hip ratio among others are used as indicators for the presence of certain diseases and their assessment in clinical practice(Erikson *et al.*, 2001). Anthropometric indices like length or height, weight, and body circumferencesamong others, helps to determine if an individual is growing properly and can indicate when the person's health and well-being are at risk (California Department of Health Care Services, 2016; Erikson *et al.*, 2001).

Research efforts have developed many anthropometric indices to specifically describe obesity and fat distribution in humans. These include body mass index (BMI), ponderal index (PI), waist circumference (WC), hip circumference (HC), waist–hip ratio (WHR), waist–height ratio (WHtR), body adiposity index (BAI) and conicity index (CI)(Ativie *et al.*, 2018).

It is also acknowledged that BMI provides no information about the distribution of fat in the body. The health risks related to obesity, including its effects on respiratory function, are linked not only to the magnitude of obesity but also to the presence of abdominal fat,waist- hip and thigh circumference are highly correlated with visceral adipose tissue,and thus is used in combination with BMI to further refine the assessment of the level of risk associated with obesity (Magali, Marième, Geneviève, Vicky *et al.*, 2016).

The risk of cardiovascular events rises with increasing body mass index (BMI). The World Health Organization (WHO) therefore recommends measurement of the BMI as a universal criterion of overweight and obesity. Measures of abdominal fat distribution such as waist circumference (WC) or waist height ratio (WHtR) and body fat or body weight are also encouraged, prospective epidemiological studies have shown increased abdominal fat accumulation to be an independent risk factor for hypertension (Czernichow, Kengne, Stamatakis, Hamer, & Batty, 2011; Ho, Chen, Woo, Leung *et al.*, 2001; Schneider, Glaesmer, Klotsche, Bohler *et al.*, 2006).

Researches on the effect of aerobic dance on overweight and obesity

Ofiaeli, Egwuonwu, Nwankwo, Ihegihu, and Okonkwo (2017)conducted a study on the relationship between selected anthropometric indices and cardiorespiratory fitness in apparently healthy young adults in a Nigerian community.Using a descriptive correlational research design, 325 participants (160males, 165 females) with mean age of 21.87±2.41 years were sampled. Tape measure, stopwatch, metronome, sphygmomanometer, stethoscope, height meter,

bathroom weighing scale,modified Borg's exertion scale and step benches were used to obtain the blood pressure, heart rate, respiratory rate, rate of perceived exertion, height, weight, waist circumference andcardiorespiratory fitness was estimated using the mean heart rate responses of the participants. The data was summarized using frequency count, percentages, range, mean, standard deviation, Independent t-test and Pearson's Product Moment Correlation at alpha level of 0.05. Results shows that cardiorespiratory fitness significantly correlated with post-test systolic blood pressure (p= 0.004), post-test diastolic blood pressure (p= 0.010) and resting heart rate (p= <0.0001) but not with BMI (p= 0.133), waist circumference (p= 0.098), pre-test systolic blood pressure (p= 0.155), pre-test diastolic blood pressure (p= 0.121), resting respiratory rate (p= 0.631), and respiratory rate recovery (p= 0.478). They concluded thatcardiorespiratory fitness could be used as an index to quantify in apparently healthy participants, level of cardiovascular and respiratory related disease risks. It is necessary to emphasize the importance of physical activity in order to improve one's cardiorespiratory fitnessand minimize the risk of cardiorespiratory associated diseases.Physical activity is a vital part of a weight control programme and comprehensive weight loss (Arslan, 2011). The positive effect of various aerobic physical activities on the changes in body composition and anthropometric characteristics of a person has been confirmed in many studies (Osei-Tutu & Campagna, 2005; Rahimi, 2006). Aerobic training activities are used to decrease body weight and body fat, and thus to change body composition and affects the anthropometric indices(Jorgić *et al.*, 2011; Milanović *et al.*, 2011; Milanović *et al.*, 2012)

Ativie *et al.* (2018)conducted a study in University of Nigeria, Enugu Campus, to investigate in overweight and obese women, the effect of an 8-week aerobic dance exercise on selected anthropometric indicators including weight, waist circumference (WC), hip circumference (HC), Waist-Hip ratio (WHR) and body mass index (BMI), a total of 61 participants (32 experimental and 39 control groups) with age ranging between 18 and 30 years were ethically recruited for the exercise. While experimental group underwent 8 weeks (4 times/week) of supervised aerobic dance session, control group never partook in any structured physical activity. Aerobic capacities [VO2max and HR] and body anthropometrics [Weight, WC, HC, WHR, percentage of body fat (BF) and muscle mass (MM)] of participants were measured at pre, mid and post interventions. Analysis of variance (ANOVA) returned a significant decrease ($p < .05$) for Weight, body fat, WC, HC, WHR and BMI. A significant increase ($p < .05$) was however observed for MM in experimental group, proving to be insignificant in aerobic capacity and body anthropometric indices of control group. They concludedthat aerobic dance exercise has a significant positive effect on selected body anthropometric indices among women. Hence, aerobic dance programmes are recommended for everyday use as a programme of choice for weight reduction, weight maintenance and aerobic capacity improvements.

Another study conducted byPantelić *et al.* (2013)to determine the effects of a twelve-week aerobic dance-training programme on the body composition parameters of young women. The sample of 59 young women belonged to one of

two groups, an experimental (EXP) or a control (CON) group. The experimental group consisted of 29 female subjects (age 23.1±1.9 years, body height 164.4±6.1 cm, body weight 62.1±5.6 kg, BMI 23.0±2.2 kg/m2), while the control group was made up of 30 subjects (age 22.7±1.8 years, body height 165.3±6.2 cm, body weight 59.4±6.3 kg, BMI 21.7±1.7 kg/m^2). To assess body compositions, the following measures were used: the overall sum of the upper body skinfolds, the overall sum of the lower body skinfolds, the overall sum of skinfolds of the upper and lower body, the percentage of body fat, the percentage of muscle mass in the body, body height and body weight. For all of the sums of skinfolds for the subjects of the EXP group, we noted a statistically significant decrease ($p<0.05$) at the final measuring in relation to the initial measuring (ΣSFUPPER - 39.35 mm compared to 42.87 mm; Σ SFLOWER - 39.35mm compared to 49.88 mm; ΣTOTAL SF - 76.97 mm compared to 92.75 mm). In the case of %BF, a decrease was noted at the final measuring in relation to the initial one (20.37% compared to 22.66%), which was statistically significant ($p< 0.05$). On the basis of our results, we can conclude that aerobic dance decreases subcutaneous fatty tissue and body composition of the young women.

Ononamadu, Ihegboro, Ezekwesili, Onyeukwu *et al.* (2017)compared the performance of eight anthropometric indices of obesity: body mass index (BMI), ponderal index (PI), waist circumference (WC), hip circumference (HC), waist–hip ratio (WHR), waist–height ratio (WHtR), body adiposity index (BAI) and conicity index (CI) as correlates and potential predictors of risk of hypertension and prehypertension in a Nigerian population, and also the possible effect of combining two or more indices in that regard.A cross-sectional study was conducted in Anambra state, south-eastern Nigeria from 2012 to 2013. A total of 912 persons (436 males and 476 female) drawn randomly from three major cities (Awka, Onitsha and Nnewi) in the state participated in the study. Information on demography, medical history and lifestyle were obtained using a well-structured and validated questionnaire. Well-trained personnel took the systolic/diastolic blood pressure and anthropometric measurements. The resulting data were analysed using descriptive statistics, logistic regression, Poisson regression and receiver operating characteristic curve analysis. The results showed that mean values of all the anthropometric indices studied increased from normotension, through prehypertension to hypertension in both genders. BMI, WC, HC and CI were significantly higher ($p < 0.05$) in females than males. All the anthropometric indices studied were significantly ($p < 0.001$ except for CI) correlated with systolic and diastolic blood pressure. BMI, WHtR, WC and PI (with higher correlation coefficients for blood pressure) showed the best potential to predict hypertension and prehypertension in the study: BMI (cut-off = 24.49, AUC = 0.698; cut-off = 23.62, AUC = 0.659), WHtR (cut-off = 0.55, AUC = 0.682; cut-off = 0.5, AUC = 0.636), WC (cut-off = 91.44, AUC = 0.692; cut-off = 82.55, AUC = 0.645), PI (cut-off = 14.45, AUC = 0.670; cut-off = 13.69, AUC = 0.639), in males; and BMI (cut-off = 24.44, AUC = 0.622; cut-off = 28.01, AUC = 0.609), WHtR (cut-off = 0.51, AUC = 0.624; cut-off = 0.6, AUC = 0.572), WC

(cut-off = 96.62, AUC = 0.616; cut-off = 96.52, AUC = 0.584), PI (cut-off = 16.38, AUC = 0.619; cut-off = 17.65, AUC = 0.599), in females for hypertension and prehypertension, respectively. In predicting hypertension risk, WC and WHtR did not significantly improve the performance of BMI in the models when included using our decision rule. Overall, CI had a very poor discriminatory power for both conditions in this study. They concluded that BMI, WHtR, WC and PI emerged the best predictors of hypertension risk, and BMI, WC and PI of prehypertension risk in this study. The combination of high-performing anthropometric indices in a model did not improve their performance. Therefore, we recommend the simultaneous but independent use of BMI and either WC or WHtR for predicting hypertension, and BMI and WC for prehypertension risk, bearing in mind that both types of index (abdominal and general obesity) account for different forms of obesity.

Çakmakçi, Arslan, Taşkin, and Çakmakçi (2011) carried out astudy to assess the effects of aerobic dance exercise on bodycomposition in sedentaryoverweight women. In this study, Total 55 adult sedentary women participated as volunteers. The age, height and weight averages of the subjects' exercise and control group were respectively 35.10±9.12 years, 1.60±5.22 m and 68.55±6.73 kg (N =29) and 30.27±10.85 years, 1.59±5.53 cm and 61.25±8.38 kg (N=26). Body composition (via skinfolds caliper), waist-hip ratio, waist circumference was measured and body fat percentage, Basal Metabolic Rate and Lean Body Mass were calculated at sedentary women. The measurements were taken twice as before and after aerobic-dance exercise being applied an eight-week series of one-hour exercise three days per week. The control group did not participate in any physical activity during the six-week period. There were significant differences between pretest and posttest for weight, body mass index, waist circumference, waist hip ratio, metabolic and body composition parameters in exercise group ($p<0,05$). Besides there were significantly decreased body weight, Lean Body Mass, Basal Metabolic Rate and fat percentage ($p<0.05$). Furthermore, there were not significant differences between pretest and posttest for waist circumference, waist hip ratio, body composition parameters, Lean Body Mass, Basal Metabolic Rate, body weight and body fat percentage in controlgroup($p>0,05$). As a result, itcan be say that aerobic dance exercise at a moderate intensity and duration can improve physical fitness and can decrease body fat percentage, Lean Body Mass and Basal Metabolic Rate during weight loss.Grant, Todd, Aitchison, Kelly, and Stoddart (2004).Have concluded the utilized exercise programme does have an effect on the increase in functional abilities and the change in the body anthropometric of obese women after the aerobic dance programme. Kostić, Đurašković, Miletić, and Mikalački (2006)mentioned that dance aerobic training provides sufficient cardio-respiratory demand to promote weight loss in female.

Conclusion

In conclusion, aerobic dance programme is a popular mode of exercise especially among women due to its fun nature with a motivating music

background, joyful dance steps and have a positive effect on anthropometrics indices of overweight and obese individuals. Therefore, aerobic dance may be used as an alternative for people who wantto prevent or combat overweight or obesity and obesity related health complications.

Recommendations

1. Exercise physiologist and physiotherapist should incorporate aerobic dancing into physical therapy plans for the effective reduction of anthropometric variables in obese/overweight individuals.
2. Awareness of dancing as an aerobic exercise should be increased by physical and health educators to encourage the elderly, overweight, obese and even pregnant women to exercise with fun out of stress in at least low- moderate impact of aerobic dance.
3. The general public should ensure family aerobic dance exercise to music even in their sitting rooms if they can't go out to the gym to keep fit.

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FACTORS INFLUENCING TEACHERS' EFFECTIVENESS IN PUBLIC SECONDARY SCHOOLS IN ONDO STATE, NIGERIA

Dr. M.A. Ige & Dr. H.O. Alonge

Abstract

The study investigated the factors influencing teachers' effectiveness in public secondary schools in Ondo State, Nigeria. In an attempt to achieve this, I research question was raised while 3 hypotheses were formulated. Descriptive survey design was also adopted. The population consisted of the 304 public secondary schools in the state while all teachers in the 305 public secondary schools constituted the target population. Sample consisted of 19 public secondary schools and 114 teachers, drawn from Akure South and Akure North LGAs of the state, through multi-stage, sampling techniques. Instrument for data collection consisted of 30 items and titled: "Factors Influencing Teachers' Effectiveness Questionnaire" (FITEQ). This was personally administered on the selected teachers while data collected were analyzed using mean, while hypotheses were tested using t-test statistics. Findings revealed that: motivations, availability of teaching and learning materials, principals' leadership and among others are factors that affect teachers' effectiveness in schools. In addition, there was no significant difference in the perception of teachers on factors influencing teachers' effectiveness in schools based on age and gender of teacher. Therefore, it was recommended among others that Government should provide necessary incentives to arouse the interest of teachers in the teaching profession, such as promotion, increment in salary, opportunity for professional advancement, just to mention a few.

Keywords: Teacher, effectiveness, factors, public secondary school.

Introduction

Teachers' role in any educational system cannot be over-emphasized. Teachers are the implementers of the educational policies and curriculum and as such, when there are loopholes in the educational processes and outcome, teachers do receive more blame than any other agent connected with education activities. Teachers are therefore the body and soul of any educational system at all levels.

The revised National Policy on Education affirms that `no education system can rise above the quality of its teacher. This implies that teachers are the major determinants in the effectiveness of any educational system. Their quality and quantity, experience, gender, pedagogical competency and level of motivation could be of great influence in assessing school effectiveness and efficiency.

Teachers' performance and effectiveness can therefore be evaluated based on how he carries out the following responsibilities;

- Maintenance of students' discipline;
- Keeping of academic records;

- Mentoring of students;
- Lesson delivery;
- Classroom management;
- Evaluation of students (Wachira, 2013: 26)

Issue of teacher's effectiveness is important in the educational system. Apart from the availability of teacher in the right quality in the educational system, teacher must be effective so as to achieve the objective of effective lesson delivery. Teacher's effectiveness could however be affected by inadequate facilities, high teacher-student ratio, inadequate facilities, equipment and material, etc. An unconducive school climate could also reduce the performance level expected of a teacher. Therefore, the learners will directly or indirectly feel the inconveniences experienced by the teachers. In a situation of unconducive school climate, a teacher may find it difficult to function effectively as it deals with the sum total of the values and attitudes held by those in the school.

Statement of the Problem

There are comments about the falling standard of education in Nigeria in literature. From all indications, every commentator on the issue points accusing fingers at teachers. It is being argued that many teachers are not effective in teaching in Nigeria, evidenced by the use of inappropriate method in teaching, poor students' performance in public examination and high rate of students' disciplinary problems just to mention a few. It is even worthy to note that the issue of ineffectiveness of teachers in the educational system is having negative effects on the educational system. The issue of poor academic performance of students, apart from being a nightmare to government, amounts to a waste of the resources of government and parents/guardians on the education of a child. In addition, poor academic performance affects the standard of education. unfortunately, less attention is paid to the factors that could make or mar teachers' effectiveness, hence the study.

Purpose of the Study

The main purpose of this study is to investigate the factors responsible for teachers' effectiveness in schools, as perceived by the teachers. Specifically, the study sought to ascertain if the factors influencing teachers' effectiveness vary by gender and age of the teacher. It also established if there is significant difference in perceived factors influencing teachers' effectiveness in large and small schools. The difference in the perception of teachers on factors influencing teachers' effectiveness based on their age was also determined.

Research Question

- What re the factors influencing teacher's effectiveness in schools in public secondary schools in Ondo State?

Hypotheses

Ho_1: There is no significant difference between male and female teacher's perception of factors influencing teacher's effectiveness in schools.

Ho_2: There is no significant difference in the perception of teachers on factors influencing teacher's effectiveness in large and small schools.

Ho3: There is no significant difference in the perception of teachers on factors influencing teacher's effectiveness in schools based on age of teacher.

Literature

Teachers' efficiency and effectiveness is very germane to the successful attainment of school goals and objectives. The teacher's personal traits such as intelligence, emotional stability, self concept and professional background are strong determinants of teachers' effectiveness or ineffectiveness.

A study of Arora (1998) on the difference between effective and ineffective revealed the determinants of teacher's effectiveness as:

- age of teacher when he/she enters the profession;
- distance between school and living place;
- degree of satisfaction derived from job; and
- interest in in-service education.

A study of teaching effectiveness of secondary school teachers in Emohua Local Government Area of Rivers State, Nigeria by Onyekuru, et al (2013), found that effectiveness of teachers from secondary schools in Emohua Local Government Area was below average; while out of the variables investigated, teaching experience and teacher's qualification had significant influence on teaching effectiveness of the teachers. Gender had no significant influence. Singh (1980) also revealed that highly effective teachers possess their intellectual capacity, high creativity, ability to foster desirable attitudes in pupils and concern for development of school, etc. Studies of O'Conner (1998) also highlighted positive relationship between teachers' effectiveness and span of teaching experiences, while Smith (2000) reported that there is no significant relationship between teaching experience and effective teaching.

A study conducted by Martin, Mullis, Gregory, Hoyle and Shen (2000) found that there is a significant relationship between experience and effectiveness of the teacher. Aiken (1991) also corroborated this finding.

Moreover, Wachira (2013) studied the socio-economic factors influencing teachers in productivity in public primary schools in Gaturi Division, Murang, Kenya using the head-teachers and teachers in all primary schools in the Gaturi division and the District Quality Assurance and Standard Officer, as well as 271 subjects. He found that teacher's effectiveness was impaired and affected by remuneration levels, school facilities, head-teachers' training, and large classes which hindered the capacity of the teachers to be effective in terms of delivering their professional obligations and mandates to the letter. Besides this, teachers' effectiveness can be measured by his ability to show warm and friendly relationship with students' ability to explain complex ideas a simple manner;

effectiveness in his pedagogy especially the use of instruction materials (Kammati, 2001).

Ofoegbu (2001) reported that problems caused by delays, inconsistencies and errors in paying teacher salaries and other remuneration has seriously conflicted with teacher classroom activities in terms of students evaluation and management. The issue of poor financial motivation all in the name of non-availability of funds has led some teachers into seeking other sources of money thus abandoning their primary assignments. She further reported that motivational resources in schools should preferentially target the teachers in terms of salary, welfare packages, school teaching facilities cum infrastructure, numbers of students in the classroom and the prevailing style of leadership are motivational factors which should be designed to enable teachers produce the desired results.

Ololube (2004) cited in Oluwadailare (2012) also pointed out that increased motivation of teachers leads to increased teacher's effectiveness that boosts the educational system. Haiyble (2001), also cited in Ilunor (2010) noted that working environment of the school teacher has significant impact on their job motivation and that adequacy of teacher motivation significantly influences the level of his job efficiency and effectiveness.

Methodology

Research Design

Descriptive-survey design was adopted for the study. The study was a survey because it involved systematic collection of data from part of a population, to determine the distribution of attributes, characteristics of people and description of the present state of affairs. The fact that the study involved the collection of extensive and cross-sectional data for the purpose of describing and interpreting an existing situation makes it to be a descriptive study.

Population of the Study

The three hundred and four (304) public secondary schools in Ondo State constituted the main population of the study. All the teachers in the 304 public secondary schools in the state constituted the target population.

Sample and Sampling Technique(s)

The researcher used nineteen (19) public secondary schools and one hundred and fourteen (114) teachers for the study. The sampling techniques used include multi-stage and sampling techniques. The sampling process was divided into stages:

Stage I: Ondo Central Senatorial District was selected from the three senatorial districts in the state (i.e Ondo South, Ondo North and Ondo Central).

Stage II: Out of the six LGAs in Ondo Central district, Akure South and Akure North Local Governments were selected.

Stage III: Out of the 28 public secondary schools in Akure South LGA, fourteen schools (i.e 50%) were selected while out of the 10 public secondary schools in Akure North LGA, five schools (i.e 50%) were selected.

Stage IV: Three male and three female teachers were selected randomly from each of the nineteen selected schools thus making a total of one hundred and fourteen teachers (114) as the sample for the study.

Instrument

The instrument for the study was questionnaire. The questionnaire was tagged: "Factors Influencing Teachers' Effectiveness Questionnaire (FITEQ)". The questionnaire was in two section. Section `A' was designed to seek biographic information of the teachers while section `B' was a four point Likert Scale type, designed to elicit teachers' opinion on factors that affect their effectiveness. A total of 30 times were generated with five each for each factor of interest been considered.

Validity of the Instrument

Copy of the draft questionnaire was given to fellow researchers (lecturers from University of Benin) and some experienced school principals and teachers for suggestions and comments. After taking into cognizance the suggestions/comments, the final draft of the questionnaire was prepared for administration.

Reliability of Instrument

The questionnaire was pilot-tested in five (5) public secondary schools that were not used for the study, within an interval of two weeks. Responses to the items in the questionnaire in two attempts were correlated using Pearson's Product Moment Correlation Coefficient. A reliable coefficient of 0.95 was obtained in each case.

Administration of Instrument and Method of Data Collection

The researchers visited the selected schools personally, to collect the data and information needed for the study. Based on the authority of each principal, copies of the questionnaire were administered on the selected teachers in each school. To give room for proper attention to items in the questionnaire, two weeks were allowed for the completion of these by the selected teachers. The assistance of a teacher (i.e research assistance) was however sought, to assist in ensuring retrieval of the completed questionnaire.

Method of Data Analysis

Data gathered were sorted and prepared in tables for easy comprehension. The researcher adopted mean statistics to analyse the research question while the hypotheses were tested using t-test statistics.

Answer to Research Question

Question 1: What are the factors that influence teachers' effectiveness in public secondary schools in Ondo State?

Table 1: Mean Analysis of Perceived Factors that Influence Teachers Effectiveness

S/N	Factors	N	Mean	Rank Order
1	Societal value	114	1.22	6
2	Principal's leadership	114	2.56	3
3	Career development	114	1.64	4
4	Availability of teaching and learning materials	114	1.36	5
5	Motivation	114	3.15	1

As indicated in Table 1, the six factors that influence teachers effectiveness in Ondo State public secondary schools are; societal value, principal's leadership, career development, availability of teaching and learning materials, work environment and motivation. Among the factors, motivation, availability of teaching and learning materials and principal's leadership were ranked 1,2 and 3 respectively. This implies that they were regarded as the most perceived factors that determine teachers effectiveness. Societal value, that is level of recognition and regard of the society in appreciation of the worth of teachers in nation building was considered least as what could influence teachers' level of commitment and faithfulness to his professional responsibilities.

Hypotheses Testing

Ho_1: There is no significant difference between male and female teachers' perception of factors influencing teacher's effectiveness in public secondary schools in Ondo State.

Table 2: t-test of teachers perception of factors that influence teachers' effectiveness

Variables	N	$\bar{X}$	SD	df	t.value	p.value	Remark
Male	75	3.33	5.36				
Female	39	11.89	4.86	112	1.94	0.26	Accepted

($\alpha = 0.05$)

In table 2, the mean value for male responses was 3.33 while that of female was 11.89 with a standard deviation of 5.36 and 4.86 respectively. The t value was 1.94 and the p value was 0.26. Since the p value of 0.26 is greater than the 0.05 thus the null hypothesis is accepted. It therefore implies that there is no significant difference in the perception of male and female teachers on factors that influence teachers' effectiveness.

Ho_2: There is no significant difference in the perception of teachers in large and small schools on factors influencing teachers' effectiveness in public secondary schools in Ondo State.

Table 3: t-test Analysis on Perceived Factors that Influence Teachers Effectiveness based on school size

Variables	N	$\bar{X}$	SD	df	t.value	p.value	Remark
Large schools	56	21.13	2.43				
Small schools	58	19.31	1.97	112	1.86	1.20	Accepted

($\alpha = 0.05$)

Testing at $\alpha = 0.05$, df = 112, Table 3 shows that a t value of 1.86 and p. value of 1.20 were obtained since the p. value of 1.20 was greater than 0.05 alpha level, the hypothesis is accepted. This suggests that there is no significant difference in the perception of teachers from large and small schools on factors influencing teachers effectiveness in Ondo State.

Ho_3: There is no significant difference in the perception of teachers on factors influencing teachers' effectiveness based on age of teachers.

Table 4: t-test analysis on perceived factors that influence teachers' effectiveness between young and old teachers.

Variables	N	$\bar{X}$	SD	df	t.value	p.value	Remark
Young	72	14.78	1.74				
Old	42	12.36	1.30	112	1.99	2.03	Accepted

($\alpha = 0.05$)

As shown in Table 4, young teachers were 72 with a mean value of 14.78 and a standard deviation of 1.74. The old teachers sampled were 42 with a mean responses of 12.36 and a standard deviation of 1.30. The computed t-value was 1.99 while the p-value obtained was 2.03. Since the p.value of 2.03 was greater than 0.05 level of significance, it can therefore be concluded that the hypothesis is accepted. This implies that there is no significant difference in the perceived factors that influence teachers' effectiveness between young and old teachers.

Discussion of Findings

From the research question, it was revealed that a lot of factors such as; career development, motivation, societal value, principal leadership style, work environment and availability of working materials do influence teacher's effectiveness in terms of job performance. This findings confirms the fact that several multi-dimensional factors work together to influence the effectiveness of teachers in school. The result confirmed the findings of Arora (1998). Also, it was revealed in the study that there was no significant difference in the perception of male and female teachers on factors influencing teachers' effectiveness. The findings thus corroborated the earlier findings of the studies by Onyekuru, et al (2013); Babu and Shelvary (1997).

The study disclosed that there was no significant difference in the perception of teachers in large and small schools on factors influencing teacher's effectiveness in schools. The findings revealed that irrespective of the size of an organization workers in any organization will strive to achieve the goals of the system provided all the basic factors required to galvanized the system towards its goals attainment are available. The finding this agreed with Wachira (2013).

It was also found that there was no significant difference in the perception of teachers on factors influencing teacher's effectiveness in schools based on age of teacher. This indicates that both young and old teachers in Ondo State public secondary schools have a similar perception on factors that influence their effectiveness.

Conclusion

Based on the findings of this study, it can be concluded that teacher's effectiveness is determined by several factors but effectiveness of teachers is not significantly affected by gender and size of school. However, for Ondo State Government in particular and Nigeria in general to improve on teachers' effectiveness and raise the standard of education to its desired level.

Recommendations

1. Encouragement and motivation should be given to teachers in terms of sponsorship to attend workshop and training programmes as many as possible as this will go a long way to improving and imparting better knowledge in their subject areas.

2. School administrators, especially principals should improve on both the aesthetic value and the interpersonal relationship between and among staff. A convivial school climate will stimulate effective job performance.
3. Government should provide adequate school plants such as school buildings, classrooms, laboratories, vocational workshop, libraries instructional materials, play ground, etc to meet the ever-growing students' population.
4. School leadership should be more responsible to their instructional supervisory roles and should always provide career guidance to staff.

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A COMPARATIVE STUDY OF REASONING AND PSYCHOSOCIAL ABILITIES ON EARLY CHILDHOOD AND NON EARLY CHILDHOOD EDUCATION CHILDREN IN KADUNA STATE, NIGERIA: IMPLICATION FOR EDUCATIONAL EMPOWERMENT

Ibrahim Zubairu (PhD) & Prof Khadija Mahmoud

Abstract

This study investigated the influence of early childhood education from the perspective of educational psychology, on reasoning and psychosocial abilities among children in Kaduna state, Nigeria. Two hypotheses aimed at establishing the differences between reasoning and psychosocial abilities of Early Childhood Education (ECE) and Non Early Childhood Education (NECE) pupils were formulated to guide the study. The study was an ex-post factor in which two instruments; Reasoning Ability and psychosocial Ability Tests were administered to 393 pupils drawn from ten (10) schools in ten (10) local government areas of the state, with a population of 248,801. The hypotheses were tested at 0.05 significant level using independent t-test.Results revealed that significant difference exists between children who received early childhood education and those who did not receive early childhood education in their reasoning abilities (t = 5.758, p = 0.000). The study also shows that significant difference exists between children who received early childhood education and those who did not in their psychosocial abilities (t = 10.784, p = 0.000). Based on the findings, it is recommended among others that early childhood education should be made compulsory to all children.

INTRODUCTION

Early years of children's lives are very important for their future living because they are periods of remarkable brain development that lays the foundation for later learning (Education For All, 2007). These early years are the foundation of growth and development, during which potentials are realized through some activities at home and more importantly in school. During this time, young children learn by manipulating objects and materials, exploring the world around them and experimenting, using trial and error. Furthermore according to Berk (2008), during the early years, children develop their sense of personal and physical security, and strengthen bonds with family and community as a result of emotional support from parents and teachers leading to both emotional development and learning. From the foregoing therefore, as pointed out by Aidoo (2008), it could be concluded that a focus on the young children is best achieved through a holistic early childhood care and education which provides an opportunity for sustainable future development, growth, social change and transformation for school success.

Statement of the Problem

This study was prompted due to the reported cases of low reasoning and psychosocial abilities of some children in our primary schools as contained in (EFA, 2007), which made Pence and Nsamenang (2008) to conclude that many developing countries around the world have paid more attention to children's learning needs at secondary and tertiary institutions particularly university education program than they do for early childhood education. Although record has it that in Kaduna state concerted effort is being made by authorities in order to realize the objective of early childhood education with regards to reasoning and psychosocial abilities among pupils, little attempt have been made to investigate into the influence of early childhood on issues such as reasoning abilities and psychosocial abilities among children in the area of study.

The study therefore intends to identify the extent to which early childhood education influence both the children's reasoning and psychosocial abilities.

Objectives of the Study

This study was conducted with the following objectives:

1. To determine the influence of early childhood education on reasoning abilities between ECE and non-ECE children.
2. To determine the influence of early childhood education on psychosocial abilities between ECE and non-ECE children.

Hypotheses

In line with the objectives of the study and the research questions raised for this study, the following hypotheses were formulated:

1. There is no significant difference between ECE and non-ECE pupils in their reasoning abilities.
2. There is no significant difference between ECE and non-ECE pupils in their psychosocial abilities.

Significance of the Study

The findings of the study will enhance parents to understand the importance of early childhood education by means of theoretical and empirical findings with intervention strategies in order to properly promote the reasoning and psychosocial abilities of children. It will also be significant to teachers to implement the recommendations based on the empirical findings in order to help the children they handle in classroom regardless of their individual differences.

Scope and Delimitation of the Study

The scope of the study is the entire primary one children in public Primary schools in Kaduna State, admitted at the beginning of 2015 session including those received early childhood education as well as those who did not, reported to be 248,801, according to office of research and statistics, Kaduna State Ministry of education(2015).

Concept of Reasoning Ability

This is the process of capacity for consciously making sense of things, applying logic, establishing and verifying facts and changing or justifying practices, institutions and beliefs based on new or existing information. Reasoning is closely associated with such characteristically human activities as philosophy, science, language, mathematics and arts and is normally considered to be definitive characteristics of human nature. Reasoning is associated with thinking, cognition and intellect. Like habit or intuition, reasoning is one of the ways by which thinking comes from one idea to related idea. For example, it is the means by which rational beings understand themselves to thinking about causes and effects, truth and falsehood, and what is good or bad. It is also closely identified with the ability to self-consciously change beliefs, attitudes, traditions and institutions, therefore, with the capacity for freedom and self-esteem. Reasoning could therefore refer to the processes by which people use their memories in adaptive ways (Nsamenang, 2008).

Concept of Psychosocial Ability

As inNsamenang (2008), Psychosocial refers to one's psychological development in, and interaction with, a social environment. It was first commonly used by Erik Erikson (1956) in his stages of social development, contrasted with social psychology, which attempt to explain social patterns within the individual. It is usually used in the context of "psychological intervention" which commonly used alongside psycho-educational or psycho-pharmacological interventions and points toward solutions for individual challenges in interaction with an element of the social environment. Also according to Jane and Monica (2015), for a concept to be psychosocial means it relates to one's psychological development in, and interaction with, a social environment. The individual needs not be fully aware of this relationship with his or her environment which attempts to explain social patterns within the individual. Problems that occur in one's psychosocial functioning can be referred to as "psychosocial dysfunction" or "psychosocial morbidity." This refers to the lack of development or atrophy of the psychosocial self, often occurring alongside other dysfunctions that may be physical, emotional, or cognitive in nature.

Theory of Psychosocial Development

As contained in Zubairu (2016), it was reported that several of Sigmund Freud's followers took what was useful from his theory and improved on his vision. The most important of these Neo-Freudians is Erik Erikson (1902 – 1994), who expanded the picture of development at each stage in his "Psychosocial theory" Erikson emphasized that in addition to mediating between id impulses and superego demands, the ego acquires attitudes and skills that make the individual an active, contributing member of society. A basic psychological conflict, which is resolved along a continuum from positive to negative, determines healthy or maladaptive outcomes at each stage. Erickson's first five

stages (oral, Anal, Phallic, Latency and genital), parallel Freud's stages, but Erikson added three adult stages. He was one of the first to recognize the life span nature of development. The three adult stages added by Erikson are "intimacy versus isolation, generatively versus stagnation and integrity versus despair (Berk, 2008).

Erikson's psychosocial third stage

Initiative vs. guilt period of development: three (3) to six (6) years

Description: Through make believe play "children experiment with the kind of person they can become. Initiative a senses of ambition and responsibility develops when parents support their children's new sense of purpose. The danger is that parents will demand too much self-control which leads to over control, meaning too much guilt.

Theory of Developmental Psychology

The description in his theory of development and learning has brought about the concept of the so-called zone of proximal development. He named the process of internalization as the central mechanism of development and learning, on this he later based his cultural development genetic law. Vygotsky also introduced into psychology the term ´activities´ and laid foundations for the theory of psychological activities. The central issue in Vygotsky´s theoretical thinking is the development of qualitatively new (´higher´) psychological functions in the history of cultures and ontogeny of children in the process of organisms. (i.e. culture or child) goal-directed acting upon their environments. Vygotsky underlines the social roots of development. He makes difference between two types of social factors: 1) cultural-historical and 2) interaction of individuals. Consciousness, responsibility and action are important in education and in life. Adults must also create an image of the ecological future by the force of thinking. Children can learn together with adults, if only the adults and the grown-ups are ahead of children in the zone of proximal development. Bare psychological analysis of development, learning and teaching is not enough. It is absolutely necessary to focus on the subject matter and action content of these processes. In order to outline the educational and didactic process, a theory for outlining these phenomena is needed.

Review of Empirical Studies

This study was conducted to investigate whether or not early childhood and non- early childhood education children are the same in terms of reasoning and psychosocial abilities. It is against this reason that the following empirical studies were reviewed.

First,the study ofMurray on children's natural behaviors aged 4 to 5 as well study conducted byBulotsky- Shearer's Rebecca, J. Bell, Elizabeth, R and Dominguez, X (2012) urban cohort study and a host of others that are having considerable evidence to prove whether children's reasoning and psychosocial

abilities are influenced by early childhood education or not. Murray (2011) focused on observing natural research behaviors of children aged 4-5 years, having been exposed to early childhood activities prior to entry into primary one, eliciting evidence to reinforce the view that children who attended early childhood programs have capabilities to reason and construct knowledge which may result in problem-solving than those who did not. In the final analysis, it was found out from the results that there was correlation between early childhood education and the children's ability to reason. ($r = .19$, $p < 0.040$). This suggests that children who attended early childhood education often engaged in thinking that leads to problem-solving in environments that are characteristics of the social pedagogical tradition. The implication of this is that children's current needs should be provided in order to try and secure their future. In the study of Bulotsky-Shearer (2012) conducted with (N=3,861) enrolled in 299 urban head start classrooms of cohort of low income children to examine associations among children's individual problem behavior, the classroom behavioral context and school readiness outcomes. Of these children, sex was split evenly, with girls accounting for 51% of the sample. Children ranged in age up to 69 months (M =51.6 months, SD = 6.6) and were predominantly African American (70.6 %). All teachers in the head start program participated and completed assessment on their children. Program demographic information indicated that all teachers were credentialed in early childhood education. The fit statistics of a higher order CFA were X2 (2500) = 9578.422, P < .001; comparative fit index = .893; root mean-square error of approximation = .027. Although the CFI did not reach criterion (greater than .90 cutoff), the value for the RMSEA indicated acceptable fit of the hypothesized model to the data (< 0.5 indicates good fit).

Associations were examined by Bulotsky -Shearer et al (2012) between early problem behavior (overactive and underactive behavior) at the child and the classroom level and three dimensions of school readiness: cognitive skills, social engagement, and coordinated movement, asserted at the end of early childhood education (preschool) year. The intention was to test a hypothesis of whether there is significant associations between classroom behavioral contexts characterized early in the preschool year by high levels of overactive behavior (e.g., socially disruptive or deregulated behavior among children). It was discovered that underactive and overactive problem behaviors were associated with lower school readiness skills. At the classroom level, classroom contexts early in the preschool year characterized by high levels of underactive behavior (e.g., social withdrawal among children)

Mclaren, C., Edwards, G., Ruddick, S., Zabjek, K. and Mckeever, A (2011), conducted a study involving young children aged 5years which investigated the extent to which unrestricted movement is important for young children's wellbeing and teaching and the development of psychosocial ability. That, it is to say, to what extent the dynamic immediacy of the interactions with the environment that enable children to learn and accumulate experience than do teaching alone improves psychosocial ability. The study concluded that the understanding of young children's brain who are exposed to early childhood

activities enable it to gather so much more information about their world and the interaction that make it possible to function favorably. Mclaren and his associates found out that the act of movement itself enables more oxygen to get to the brain and therefore concentration is enhanced. Similarly, Kitchen (2013) conducted her own study which focused on the role of adults in the delivery of a play based educational activity in early childhood for the development of psychosocial ability of young children. It involves play-like activities where 76 children examines piles of tiny stones against the back drop of ice and sky embody the kind of self-absorption and concentration on self-initiated tasks to be found in an environment in which all activity of this kind is valued. The hypothesis which states that "there is no significant relationship between play as an early childhood education activity and psychosocial ability of the young children was overwhelmingly rejected, as it was found out to be significant. The observed p-value was 0.001, while the correlation index r was 0.935, indicating significant relationship. She concluded that play as an early childhood activity is very important in the development of psychosocial abilities of children. The gaps that the present study intends to feel is on the area of understanding of the usefulness of early childhood activities in the development of reasoning and psychosocial abilities of children. Many teachers, parents and educationists do not seem to really understand the impact of some activities such as play on the overall development of the child, which consequently affect the outcome of early childhood education. This study is therefore, expected to fill that gap.

METHODOLOGY

Research Design

This study was an ex-post factor design, which examined how independent variables (early childhood education), influences reasoning and psychosocial abilities of pupils in Kaduna state. This design enabled the researcher to purposefully put pupils in groups based on their status (ECE and non-ECE), which was found to be appropriate for this type of research and data was collected from a sample representation of the population.

Population for the Study

The target population for the study was made up of all the primary one children admitted at the beginning of 2014/2015 academic session in Kaduna State, including all those who attended and received early childhood education and those who did not. The target population of the research therefore, was the entire primary one pupils in public schools in Kaduna state the total of which stood at 248, 801, according to the office of research and statistics, Kaduna State Ministry of Education (2014/2015).

Sample and Sampling Procedure

From the total population of 248,801 Primary one children, cluster sampling technique was used to select the ten (10) schools used in the study while simple random sampling procedure was implored to select the total of three hundred and ninety three (393) primary one pupils used as samples in the study, where each element of the population had an equal chance of being selected, guided by Krejcie and Morgan's (1970) table for determining sample size.

Instrumentation

Two instruments used were developed by the researcher in this study. Kothari(2012), (reasoning ability test and psychosocial ability test) validated by experts were duly utilized.

Reasoning Ability Test (RAT)was administered to groups, which were used for the present study. It is simple to understand and easy to interpret, and used to measure reasoning abilities of the children. This instrument is made up of two item choice options from questions, which is designed to measure the test taker's reasoning ability. In each test item, the subject is asked to tick (√) the correct response either YES or NO depending on his personal conviction as to which of the two responses is correct. This test contains two sections (A and B). Section (A) demands for the personal information (Bio-Data) of the respondents which include name, gender, environment, as well as whether or not the child had received early childhood education.

Section B of the test consists of twenty (20) test items aimed at measuring the reasoning abilities of the children. Self-constructed from readings (Pence and Nsamenang (2008), Ball and Pence (2001), Boyd et al (2005), Bennett and Berk, (2008).The reliability index of the test was established

Psychosocial Ability Test (PAT)on the other hand investigated the psychosocial abilities of the respondents through their responses. This test also contains two sections (A and B). Section (A) also demands personal information (Bio-Data) of the respondents which include name, gender, environment (school location), as well as whether the child had received early childhood education or not, (Pence &Nsamenang, 2008). Section (B) tries to extract information relevant to the major psychosocial variables of the study which includes: self-concept, peer relation, school satisfaction, and school anxiety in order to assess the psychosocial ability of the children.

This test consists of twenty (20) test items measuring the psychosocial abilities of the children. This test is also self-constructed from readings (Pence and Nsamenang (2008), Casilas, A et al (2012) Berker, et al (2014), Vitaro, F. (2012), Boyd et al (2005) & Amar (1996). They are all in agreement. The two tests have been jointly administered together. The reliability coefficient for this test was established

Validity

A measuring instrument is valid when it measured truly and accurately the quality or ability it was designed to measure. In order to determine the face validity of the instruments, copies were given out for vetting. The two tests (Reasoning Ability Test and Psychosocial Ability Test were vetted by experts who are Professors in the Department of Educational Psychology and Counseling, Ahmadu Bello University, Zaria. Copies were also given out for content validity by a Professor of Early Childhood Development Virtual University (ECDVU), University of Victoria, Canada who attested that the two instruments (of twenty items each) are valid in measuring reasoning and psychosocial abilities of primary school children.

Reliability

Test-re-testmethod was used in this study to establish reliability of the two instruments which demonstrated a good reliability. The Spearman's method was employed for the two instruments. The procedure started with distribution of thirty five (35) copies of the two validated instruments each to the Primary one Children of L.E.A Primary school Dambo and L.E.A Primary School Tudun Wada Zaria. After about eight (8) days the second set of (same) instruments were re-distributed to the same children, duly filed and returned. For reasoning Ability Test (RTA), Spearman-Brown Coefficient was 0.96 (for equal length), 0.96 (for unequal length) and Guttmann Split-half Coefficient was 0.96. For Psychosocial AbilityTest (PAT), Spearman –Brown Coefficient was 0.78 (for equal length), 0.78 for unequal length) and 0.78 Guttmann Split-half Coefficient.These according to Kothari, (2012) the two instruments are reliable and suitable for use.

Procedure for Data Collection

The two (2) instruments used for the purpose of data collection in the course of conducting this research were administered to the subjects with the help of research assistants. The researcher explained the procedure and the instructions on how to go about collecting the data. The researcher led the research assistants that guided the respondents in each of the ten sampled schools.The instruments were read by the research assistants' one after the other in some instances, with translation in children's own mother tongue for better understanding.

Procedure for Data Analyses

Independent t-test was employed for testing the two hypotheses.Each of the hypotheses was tested at 0.05 significance alpha level.

Hypotheses Testing

The following is the independent t-test statistics that was used to test hypothesis one the results of which are presented below:

Hypothesis One: There is no significant difference between children who received early childhood education and those who did not in their reasoning abilities.

The results were presented on tables below:

Table 1.1 Independent t-test table on Difference between ECE Children and Non-ECE Childrenin their reasoning abilities.

Variable	Status	N	$\bar{X}$	SD	df	t	Sig (p)
Reasoning Ability	ECE	195	11.883	3.516	**391**	5.758	0.000
	NON ECE	198	9.8	3.838			

Calculated p < 0.05, calculated t > 1.96 at df 391

The calculated mean reasoning ability levels were 11.883 and 9.800 by children who received early childhood education and those who did not, with a mean difference of 2.083,with the standard deviations of 3.516 and 3.838 for ECE and Non-ECE children respectively at 391 degree of freedom. The calculated p-value of 0.000 found is lower than the 0.05 level of significance while the t-value of 5.758 is higher than the 1.96 critical t-values at df 391. This implies that children who went through early childhood education have significantly higher reasoning ability than their counterparts without early childhood education. Therefore, the null hypothesis was rejectedhence; the difference is in favor of ECE children.

Hypothesis Two: There is no significant difference between children who received early childhood education and those who did not in their psychosocial abilities.

Table 1.2 Difference between ECE children and Non-ECE children in their psychosocial abilities.

Variable	Status	N	$\bar{X}$	SD	Df	t	Sig (p)
Psychosocial Ability	ECE	195	12.4	3.377	391	10.784	0.000
	NON ECE	198	8.4899	3.795			

Calculated p< 0.05, Calculated t > 1.96, at df 391

Their calculated mean psychosocial abilities were 12.4000 and 8.4899 by ECE and non-ECE pupils respectively with a mean difference of 3.9101,with standard deviation of 3.377 and 3.795 for ECE and Non-ECE children respectively at 391 degree of freedom. While the results of the independent t-test statistics above shows that significant differences exists between children who

received early childhood education and those children who did not in their mean psychosocial abilities. The calculated p-value of 0.000 is less than the 0.05alpha level of significance while the t-calculated value of 10.784 was higher than the t-criticalvalue of 1.96, at df 391. This implies that the null hypothesis was rejected; hence the difference is in favor of ECE children.

Summary of findings

The findings of the study revealed that:

1. Significant difference exists between children who received early childhood education and those who did not receive early childhood education in their reasoning abilities (t = 5.758, p = 0.000). This implies that those children who received early childhood education have significantly higher reasoning abilities than their counterparts without early childhood education experience.
2. Significant difference was found between children who received early childhood education and those who did not receive early childhood education in their psychosocial abilities (t = 10.784, p = 0.000), which implied that children who received early childhood education have higher psychosocial abilities than children who did not receive early childhood education.

Discussion on Findings

The study indicates that reasoning ability increases with early childhood education experiences. The p-value of 0.000 is lower than 0.05 level of significance and means of 11.883 and 9.800 for ECE and non-ECE respondents respectively which indicates that children who went through early childhood education have significantly higher reasoning ability level than their counter parts without early childhood education. This finding is in line with the finding of Murray (2011) whose study focused on observing natural research behavior of children aged 4-5 years prior to entry into primary school. He reported that the study elicited evidence to the fact that children who attended early childhood education programs have capacities to reason and construct knowledge which may result in problem solving than those who did not attend early childhood education at all. The finding is however in contrast with the findings of Boyd et al (2005) as contained in Zubairu et al (2010), in which it was found out that reasoning abilities does not differ in children who attended preschool versus those who don't. Their finding indicates that M = 0.10, SD = 1.06, t (98) =2.23, P less than .05 indicating no significant difference. In the same line, the finding is in contrast with that of Wheeler, (2012) and Torrance (1974) who suggested that reasoning abilities of children do not depend on early childhood education alone, but on other factors sheathing the fact that the attributes of children who engaged in early childhood education are more of creative thinking, which included fluency, and elaboration. Other logical reasons for this finding could be the environmental factors, facilities and other related issues.

The study also revealed that there was significant difference between children who received early childhood education and those that did not in their

psychosocial ability level. The finding indicated that the calculated psychosocial ability have the means of 12.4000 and 8.4899 for ECE and non-ECE children respectively, with the mean difference of 3.9101. The p-value of 0.000 which was less than the 0.05 level of significance, as well as t-value of 10.784 higher than t-critical at 1.96 degree of freedom which implied that significant difference existed. Therefore, early childhood education significantly influenced psychosocial abilities of children. The finding is in line with that of Conyers et al (2004) on children (aged 4-5). They reported that unruliness, an aspect of psychosocial skill in a preschool classroom occurs by reinforcing them with token when they do appropriately and punishing them by taking away tokens when they misbehave. It was found out that there was a higher display of socio emotional behavior of accepting new friends when the reinforcement increases. This indicates that psychosocial ability increases in children at that level of education only with increase in reinforcing behavior; while psychosocial ability reduces when the reinforcing behavior decreases. Some other possible logical reasons for this finding could be due to the influence of parental socioeconomic status and other related factors.

Recommendations from the study

Based on the findings of the study, the following recommendations are made:

1. It is recommended that early childhood education be made compulsory for all children in order to develop their reasoning and psychosocial abilities.
2. Child centered early childhood education curriculumshould be designed in such a way that would accommodate more expressive opportunities for play-based activities in learning capable of meeting the varied needs and interests of the children.

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THE ACADEMIC STATUS OF AESTHETIC EDUCATION IN NIGERIA'S SECONDARY SCHOOL

Ike P. Aghaosa (PhD

Abstract

The paper argues that despite the provisions of the National Policy on Education (NPE, 1981), aesthetic learning seems to be receiving little attention in Nigeria's secondary schools academic schedules. The paper used historical surveys and documentary evidences to draw conclusions from the arguments. In the appraisal of the problem frequency of aesthetic education on schools' academic time table, availability of teaching space and appropriate facilities, and their impacts on aesthetic practices in the larger society were evaluated. It is the study's contention that the provisions for aesthetic learning in terms of frequencies on academic time table, availability of teaching space and appropriate facilities for aesthetic learning are abysmally low in Nigeria's secondary schools. The overall impact of this is that it is apparently the epistemological aspect of 'knowing that' – theoretical or prepositional knowledge of aesthetic learning that is largely pursued in Nigeria's secondary schools. The 'Know How'- the procedural or practical aspect of aesthetic learning seems to be virtually nonexistent in this segment of learning. Consequently, it is recommended that concerted efforts be made to redress the lapses in the observed areas of deficiencies to allow aesthetic education to play its vital role in contributing to quality secondary education in Nigeria. This is to help engender a vigorous aesthetic learning in schools and subsequently, a vibrant aesthetic practice in the society at large.

Keywords: Theoretical or prepositional knowledge; 'Know that' Practical or procedural knowledge; 'Know how'

Introduction

Aesthetics affects most of human life and living. They are natural and contrived in environment as well as in social and cultural life of the human race. Epistemologically, according toAghaosa(2014), it is the human emotional (and to some extent) intellectual responses to aesthetic phenomena that are transformed to aesthetic learning experiences. These aesthetic experiences are packaged for aesthetic learning pedagogically in the formal as well as informal aspects of education in society.

Nigeria's rich environmental and contrived aesthetic milieu coupled with the recognition accorded aesthetics by the society as expressed in the National Policy on Education,(FRN,Pp.18-21) the current aesthetic learning subjects such as Fine Arts, Music, History, Local Crafts, to mention a few, are accorded modicum attention in the academic activities of primary and secondary education in Nigeria. A cursory visit to many public primary and secondary schools in Nigeria will in most cases show a high level of neglect of aesthetic enhancing subjects, enumerated in this paper. This is evident from the low level of activities

in the subjects mentioned. Several factors are responsible for this phenomenon. Prominent among them are: ignorance about the vital essence of aesthetics towards the cultivation of a fully rounded person educationally, and the off handed manner in which this aspect of learning is treated in schools' academic programs. How can it be contemplated or justified that in most secondary schools the allocation of teaching and learning time for aesthetic enhancing subjects in their academic time table is so scanty and in some extreme cases, non-existent? Or that in some schools there are no teachers for aesthetic enhancing subjects, and no one including the school principals and even parents seem to be bothered about this? Furthermore, even when there are teachers for the subjects, there may not be teaching spaces such as a studio and materials for teaching of the practical aspects –'Know how' of aesthetic learning experiences. The effect of this state of affairs in respect to aesthetic learning is that its learning continues to suffer dire neglect in the Nigerian schools and colleges. This ugly situation confronting aesthetic learning calls for serious concerns by all stakeholders in Nigerian Basic Education. This is because if the issue is not urgently addressed, aesthetic subjects will not only atrophy, but the benefits of a vibrant aesthetic learning and literacy will eventually be lost. This would not augur well for the educational system as well as for the aesthetic based professions in Nigeria. It is this very concern and others that have generated the interest to look into this aspect of Nigeria's secondary education. The problem of this paper is to put in public purview, the dire neglect of aesthetic learning in Nigeria's basic level of education.

The purpose of thepaper also was to examine the level of the academic status of aesthetic learning in Nigeria' primary and secondary schools. The significance of this venture would no doubt emanate from the extent it would draw public attention to the state of aesthetic education. This hopefully will also bring it to the attention of educational policy makers and society at large about the neglect of, and attendant consequences of aesthetic learning in primary and secondary schools. In addition, it would hopefully lead to practical attention and provision that would re-invigorate aesthetic learning in Nigeria. Finally too, the learners and society at large should also, benefit from a robust education that is cognizant of the vital role of a high level of educational aesthetic literacy among its citizens.

This paper relied essentially on the qualitative based approach of research in appraising the inherent concepts, issues and arguments. It therefore utilized the documentary-historical and philosophical methods of documents' inspection, language, logical and analogical analysis. Apart from appraising the fundamental concepts and issues from which deductions and inferences were made,this paper went further to proffer rational practical solutions to the inherent problems.

The paper restricted itself to the issues of aesthetic learning in primary and secondary levels of schooling in Nigeria. It also delimited itself to: frequency of aesthetic enhancing subjects in schools' academic time table; provision of

appropriate work studio spaces; and ancillary materials and the likely impact of these on aesthetic learning outcomes in the Nigerian society.

Aesthetic Education in Nigeria's Basic Education System

What is the academic status of aesthetic learning in Nigeria's basic education? Is Aesthetic education and learning accorded the necessary status as other subjects in the standard curriculum of secondary schools in Nigeria? In other words, what importance is attached to aesthetic learning in Nigeria's primary and secondary schools? What is the extent of aesthetic learning in Nigerian secondary schools? Are subjects that promote aesthetic learning adequately catered for in Nigeria's basic educational programs? Do aesthetic subjects attract the same or equal attention like other school subjects such as English language, Mathematics, Biology, Physics; Agricultural science that are accorded compulsory subjects' status in schools' curricula? As would be noted by any discerning observer, apart from English language and English Studies, nearly all other subjects such as Fine art, Local crafts, Literature in English, Historythat promote aesthetic learning and knowledge are classified elective subjects, (FRN, *p*.16). It could be contended that it is the elective statuses of these subjects that crystallized many of the epistemological as well as the pedagogical and ethical problems and issues of aesthetic learning in the Nigerian context (and perhaps, in other countries). This is because, subjects not accorded compulsory statuses in most educational curricula scheme are sometimes treated in an off–hand manner. This issue is implicit in Owanku (2014), as well as Adeniyi (2015) respective findings about the low frequencies allotted to aesthetic subjects such as Fine Arts and History on the academic time-tables of the University of Benin Demonstration Secondary School; and the University of Benin Teaching Hospital Secondary School Benin- City, Nigeria. In another perspective, Aigboduwa (2002) observes the likely negative effects the closure of the Department of Fine Art at the College of Education,Ekiadolor (an institution that produces teachers of Fine-Arts for primary and secondary schools in Edo State, Nigeria) on the teaching of Fine-Art in the primary and secondary schools in Ikpoba-Okha Local Government Area of the Edo State.

The effect of this attitude towards the various subjects that promote aesthetic learning and knowledge are discernible in the following academic syndromes in the average Nigerian basic school, as suggested by

a. . Ogumor (1987): Some of the primary and secondary schools established by the missionary and colonial governments included academic art – mainly drawing and painting patterned after the English Art styles and genre in their curricula. However even this modest attention appears to have waned greatly with time. Many primary and secondary schools in Nigeria often use the few periods allocated for aesthetic enhancing subjects in their academic time table for manual labour.
b. The author's direct experiences as a primary as well as secondary school teacher, there is a very low level of exposure of pupils to aesthetic learning activities and experiences in most pre-primary and primary schools in Edo

and Delta states of Nigeria. This is especially in the creative arts and music. In some extreme cases, these subjects are not even listed in some schools' academic time table. Where they are sometimes listed, students are often compelled to buy and present finished crafts items such as brooms and cane woven baskets to their class teachers. This is rather than give them the opportunities to learn the making of these crafts items practically. Partly because of this, some students start developing apathy or disdain for aesthetic based practices even in their later lives. Certain interests and skills are best developed and nurtured at the foundational level of learning and education.

In another perspective, Oyebade (2015) observes that many Nigerian pre-primary and primary schools' learning textbooks and instructional materials such as charts lack adequate aesthetically captivating images-illustrations, pictures, diagrams, etc, that are pedagogically and culturally relevant to the children. What obtains in many cases are imported pictures, charts, illustrating such foreign concepts and items as 'snow', 'apple', 'peach', etc, that are often abstract and obscure concepts to the pupils.

In many pre-primary and primary schools in Nigeria, aesthetic learning activities in the curriculum are still being paid lip service to. Even though they may be listed on the schools' academic timetable, they are still being carried out in essentially an uncoordinated manner. This is in spite of the abundant benefits these activities hold for young children as attested to by the research findings of child art scholars like: Lowenfield andBritain (1975) and Hino(2003).who all seem to agree strongly that the pre-primary level of schooling is not dubbed 'play classes'(Kindergarten in German) for just the name. In practice, young children because of their nature at this stage of growth and development learn best through play activities such as singing, drawing, basic modelling with clay, dancing, painting, drama and storytelling. These activities apart from entertaining these kids, serve as the bases of the development of muscular control and kinaesthetic balance. (Lowenfield and Britain 1975)The serious attention and inclusion of play activities in their learning activities are often ignored by Nigerian primary and secondary schools' teachers and administrators, calls for serious reflection. What obtains in manyNigerian pre-primary schools is mostly recitation of poems and drills in basic numbers and language skills which often could be boring to the children.

The essence of play activities for the basic levels of learning are attested by the findings of the study of Ecker (1963) who advocates that art activities should be patterned after Dewey's project method in school learning. This thinking is also implicit inHino's (2003)study findings about the importance of *"Zouke*" (Japanese for play) "Restriction and individual expression in the "play Activity/*Zoke –Asobi"*" as part of art activities in Japan's elementary (primary) schools.

In Nigeria's primary schools, the situation of aesthetic learning is not also cheering. Creative arts activities that promote aesthetic awareness are given very

low priority attention on the timetable and in practice. Exposure of pupils to these activities as earlier noted in this researcher's experience teaching in the primary level of schooling is extremely low. Handicrafts or 'handwork', which is intended to expose students to some basic manipulative skills, is a rarity. These traditional crafts ought to include: rope making, mat and basket weaving, broom making, modelling with clay, simple wood carving etc are hardly practiced in Nigerian primary schools. What one may observe in many cases is that students buy these crafts items to present to their teachers or make financial payments in lieu of them. Teachers and school authorities never consider the thrills of the process of making and the end product of the craft items as vital ingredients of developing the pupils. Drawing, painting and basic musical instruments playing are virtually extinct at this level of public schooling.(Source?)

Why aesthetic education is neglected in Nigerian schools and colleges

In the opinion of this writer, the following are some of the possible causes of neglect of aesthetic education in Nigeria's schools and colleges.

1. **Lack of interests by students for aesthetic learning**

Many school children appear to dislike aesthetic skills. This situation is noticed when one visits the few schools that have provision for aesthetic education on their school timetable. One can easily observe students sneaking out of view during aesthetic practice sessions. This situation is analogous to what Broudy(1975) observes about the situation in United States of America's elementary schools with respect to aesthetic learning. That is "the low exposure at the elementary level of schooling often does not create a universal appeal – i.e. appetite for further experience in performance". This aversion for aesthetic education that is common in the Nigerian primary schools is often carried over into the secondary level of education. The researcher has often watched with dismay students in secondary schools jump out of the (window) on his approaching their classes for Fine art lessons.

2. **Many primary school leavers in Nigeria are essentially aesthetic illiterates**.

This could be as a result of the limited media experience (in aesthetic vehicles and formal practices). There is the likelihood that many Nigerian primary school leavers are unable to differentiate between different media and end products of aesthetic phenomena and learning. In some extreme cases many of the students' (and perhaps like some of their parents' also) conception of aesthetics learning or creative arts is limited to drawing. Secondary school students' attitude to aesthetic learning activities it is speculated, to be one of the sources of apathy. It is likely that because of the just stated above, and the carry over effects into secondary schooling, aesthetic education in Nigeria like in the United State of America gives very limited opportunities for intended professionals. The plausible cause of this can be extrapolated from the psychological and pedagogical theory that some interests and eventual habits are

often formed from childhood. These if given encouragement, blossom in adulthood. This writer has been privileged to watch two children at the ages of four and five and half years old being respectively, proficient piano player and water colourist. These feats were courtesy of their respective parents who made such provisions for them at home in terms of materials and practice time at an early stage of their growth. The importance of this very observation is that perhaps there are a lot of geniuses in the various aesthetic vehicles in the Nigerian society whose capacities for development may have been stifled and eventually atrophied as a result of the lack of basic working materials of aesthetic expressions. It could also be speculated that some disruptive students' behaviours in schools are likely due to bottle – up aesthetic emotions and experiences calling for expressions. This is much more so in the Nigerian education context that is authoritarian inclined with respect to school discipline and control.

3. **Low priority attention on most schools' academic subject timetable**.

Another plausible cause of low level of aesthetic attention in schools is that many of the aesthetic enhancing subjects are more often than not merely tolerated in the academic timetable of many primary and secondary schools in Nigeria because of their elective status. Where allocations are sometimes made for such subjects on the timetable, it is merely done as a token to fulfil official requirement. This is unlike the practice with compulsory subjects like Mathematics, English, and the physical sciences, etc, that are always placed in the front burner in terms of subject and teacher allocation. In many schools' time allocation to Music, Fine Art, History, etc, on the school's academic timetable are often non-existent. In some other schools, it is often as a compromise for teaching of these subjects. In this regard, they are content with the use of time allocated for school labour or other extra-curricular activities on the timetable to teach aesthetic subjects. In many schools, because of the above noted prevalent attitudes, schools' heads never seem to be bothered whenever teachers in these subject areas are transferred out of their schools. This is unlike where Mathematics and other science subjects' teachers are transferred out of their schools. In some extreme cases teachers of History, Music, Fine Art, etc, are made to jettison the teaching of this (specialist) subjects for others such as English language, Social studies. (Source?)

Compared to other secondary schools' subjects, there are relatively fewer teachers in those subject areas that promote aesthetic learning. This is especially in music and visual arts. This is a fall out of the Federal government's pursuit of science and technology education in Nigeria. There has been a declining enrolment of students in the humanities and humanities education programmes in higher institutions of learning. This point is attested to by the observations of Lawal (1987) as well as Igbafe (2006). In their different but coincidental views, humanities education programmes have been scrapped off some tertiary institutions' programme of learning. A case in point is the College of Education, Ekiadolor that closed down the Fine arts department (among others) of the

College. (Aigboduwa, 2002). This is in spite of the paucity of teachers to teach this aspect of aesthetic knowledge. As earlier noted, many school heads and education policy makers do not seem to see this type of development as a threat to the healthy and balanced development of secondary school students. In some schools, even the Humanities' teachers are often compelled to teach other subjects such as Citizen Education, Social studies, etc, that they were not educated to teach. This coupled with the absence of a professional Aesthetic Education Subject-Teachers' Association makes an advocacy for the development of teachers in this area non-existent. As noted respectively by Adeniyi (2015)andOwanku (2014), the student-teacher ratio for Fine Arts for University of Benin Demonstration Secondary in the 2012/2013 academic session was 1: 245; while that of University of Benin Teaching Hospital Secondary School for the 2013/2014 session was 1:233. These illustrate the serious shortfall in teacher requirements for aesthetic learning.

Low provision for teaching space- studios and Aesthetic learning and facilities in schools

Some aspects of aesthetic learning encounters entail studio practices. This is evident in the practical aspect of the professional studio artists. This studio practices captures the essences of 'knowing how' as noted by Reimer(1991) which complements 'knowing that' and "about' in Broudy (1975) aesthetic of knowledge. In music and drama for example, there is the need for well-equipped studio and drama theatre and stages for the practical aspects of this domain of knowledge. In Fine Art and other visual and tactile arts, there is also need for work studios where learners can be exposed to the rudimentary studio practices of artists. Somehow in the average Nigerian secondary school, the architectural designs of the learning environments hardly put into consideration provisions for such studios and theatres that are suitable for the aesthetic learning endeavours. Ehiametalor (2003) observes that the average conventional classroom of basic schools in Nigeria is not suitable for practical learning in aesthetics. Stakeholders in education are becoming increasingly vociferous when science laboratories are not provided in schools. There is hardly any voice raised when music and art studios are not provided in the average secondary school. This is in spite of the fact that many of the conventional classrooms (by their architectural design patterns) are neither suitable nor amenable for many of the studio practices of aesthetic learning.

Owanku(2014), as well as Adeniyi(2015) reported that apart from inadequate time allocation to creative arts in the University of Benin Demonstration Secondary School; and the University of Benin Teaching Hospital Secondary School, there were also low provision interms of studio space and working materials. Aligned also with lack of studio space in schools, is the issue of absence of basic working materials. A basic music learning studio should have items such as: recorders, drums, maracas, an organ or piano, guitars, electronic amplifiers, xylophones, etc; drama theatre could incorporate musical instruments in addition to lighting equipment, costumes and other accessories that enhance

drama production.For the visual as well as tactile arts, studio materials such as drawing and painting boards, easels, brushes, colours of different makes (water, oil, pastel, crayons, etc).In addition to Art papers, canvases, Masonite boards, etc, are required. For ceramics, throwing wheels, spatulas, clay, firing kilns and other ancillary materials are needed. For sculpture, modelling and carving tools, clay, cement, wood and other modelling media are required. It also could be said for a textile studio that needs a weaving loom, designer's colours, brushes etc. All these enumerated materials are grossly lacking in many Nigeria's basic schools. It is because of this orientation of lack of studio spaces and working materials that aesthetic leaning encounters in Nigerian basic schools have largely been restricted to mere lecture affairs- of just basic principles and history of Aesthetics. Thus the orientation of aesthetic learning in Nigeria's basic schools is essentially inclined towards the knowing 'about' and 'that' aspects of aesthetic knowing.

Broudy (1975) explains that they are rarely complemented with practical or studio training-the 'knowing how' in Reimer, (1991,) of aesthetic learning. These observations cohere strongly with Ehiametalor's (2002) observation from an educational planning point of view, the unsuitability of many Nigeria's conventional classrooms for practical lessons. This aspect would have not only made aesthetic leaning less abstract in orientation, but as well practically involving. This could explain why many students and even parents often do not see the importance of aesthetic learning as a vital contribution to students' personal growth and development in many ramifications. This author has speculated that the noticeable increasing disdain of the emergent educated Nigerians for practical activities involving the hand and brain co-ordination as implicated in aesthetic leaning and domestic chores could be traceable to the pedagogical orientation of aesthetic leaning endeavours. This syndrome is analogous to what also obtains about practical lessons in the physical and chemical Sciences. It is now highly acknowledged that many science students and graduates have very little or no practical laboratory experiencesBello-Osagie(2007) in the various courses even at the university level of education in Nigeria. Given this situation, what obtains in the lower levels of formal education is better imagined.

In another dimension, it is pertinent to note that the Nigerian musical scene suffers from a dearth of musical instrumentalists.Aghaosa(2010)noted that this situation has been exacerbated with the advent of computer generated rhythms and compositions. This type of situation has the tendencies of projecting mediocre artists as the predominant practitioners in the music and screen industries- the entertainment world. Those with minor musical talents are often seen as geniuses in theNigerian context. This very situation is analogous to one in which computer science students go through their programmes without ever using a concrete personal computer.

It is likely because of lack of creative arts' studio spaces and working materials, that many practical aesthetic lessons programmes are often glossed

over or not even taught in basic schools. This is especially of many Nigerian indigenous art forms that are practical in orientation. These for example include drawing, painting, wood carving and metal etching and casting, body tattoos and decorations, hair weaving and braiding, mat making, cloth weaving and dyeing, clay pot and utensils making, music, drama and dancing etc. Incidentally the art and crafts curricula for the primary and secondary level of education advocate that these traditional art forms and practices should be integral part of aesthetic education and learning in the school system. It is one of the haunches of this study that because of this oversight of indigenous art forms in secondary education aesthetic learning programmes that this dimension of learning has acquired predominantly, an academic halo that is inclined towards West European art. This halo creates a situation where many basic school art students and leavers may know more about Renaissance and English art than they do of say African, Benin, Ife and Nok arts.

There is however a curious twist to this observed orientation in basic schools' aesthetic learning programs. Some schools and various authorities ranging from local, state to the federal often use Nigerian aesthetic vehicles (art forms) to enhance the aesthetic appeal of many occasions such as sports' competition, political campaigns and rallies, independence anniversary celebrations etc but accord it very little epistemological and pedagogical attention in formal school settings. This is a very instrumental view of aesthetic and aesthetic phenomena – to be used and discarded as it pleases the user.

Summary

This paper evaluated the academic status of aesthetic learning and education in Nigeria's basic level of education. Frequency of aesthetic enhancing subjects on school academic time-table, provisions for teaching space and materials and their eventual impacts on professional aesthetic practices in the larger society were examined.

It was contended that in many Nigerian secondary schools, few aesthetic enhancing subjects such as History, Music, and the Visual arts are seen on their academic time table. Even if there are salutary or token listings of these subjects on their time-table, the period so allocated are often used for some other extra-curricular activities like labor. In addition, there is the paucity of specialist teachers for these subjects.

In many schools, teaching spaces like studios necessary for teachings the practical aspects of aesthetic enhancing subjects are non-existent. Also, many of the conventional schools' classrooms are not easily amendable for the teaching of these subjects. So also are the scarcity of appropriate teaching materials such as painting brushes, water and poster colors, painters' easels and donkey; pianos, recorders and other necessary materials for the teaching of these subjects.

Conclusion

Conclusively, Aesthetic learning has a generally low level of attention in Nigeria's secondary level of schooling.The consequent neglect of aesthetic

learning in Nigerian schools and colleges has led to apathy for aesthetic enhancing subjects by students who normally ought to find them interesting and captivating. In addition, because of lack of appropriate teaching spaces – studios and materials for practical, the teaching of aesthetic enhancing subjects especially the visual and auditory arts have been reduced to mere lecture method lessons where if at all they are taught. In other words, it is mainly the prepositional – 'know that' aspect of aesthetic knowledge that is mainly taught. The 'know how', the procedural aspect in which the practical aspects of aesthetic knowledge is taught is hardly given attention to in secondary schools. The consequence of these is that there is low acceptance of aesthetic learning by Nigeria's secondary schools students. This invariably could lead to low enrolment and performance in these subjects at the various public certificate examinations in Nigeria. Epistemologically, the secondary level of education has been producing school leavers with no, or very low level of aesthetic literacy. Low level of aesthetic literacy invariably denies secondary school leavers the abundant opportunities to not only enjoy their leisure meaningfully, but also unable to be involved in the professional practices of aesthetic occupations in Nigeria. The society at large also does not benefit from many of the potential talents for the aesthetic based industries in Nigeria.

Recommendations

In the light of the preceding, this paper recommended the following:

1. Educational policy makers, aesthetic educators and school administrators need to be fully enlightened about the necessity of aesthetic education especially at the basic levels of education. They also should in turn ensure that adequate teaching time should not only be allocated to the subjects, but also adhered to in their teaching. They would also need to educate the students about the essence of aesthetic knowledge in their academic lives as well as in their future careers.
2. Education policy makers and administrators should also make adequate logistic provisions for aesthetic learning in schools. This is in terms of studio spaces, equipment and vital materials for the practice of the practical aspects of aesthetic knowledge.
3. Efforts should be made by educational institutions, to seek the guidance of professional artists in society to assist in promoting aesthetic knowledge and practices. In this sphere they could provide motivating prizes for aspiring young talents. So also can they provide opportunities for industrial attachments for students undergoing aesthetic education programs.
4. Professionals in the area should come up with position papers on how best to enhance the teaching/learning of the subject through seminars, conferences, workshops, etc.

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SOCIO-ECONOMIC STATUS, STUDY HABIT AND INTEREST AS PREDICTORS OF STUDENTS PERFORMANCE IN MATHEMATICS

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Abstract

This study investigated on the impact of students' study habit, interest and socio-economic status on academic achievement among selected secondary school students in Ondo west local government area of Ondo State, Nigeria. To guide the study four research Questions were raised and its corresponding hypotheses formulated. Correlational research design was used in the study. Three hundred and seventy two (372) respondents were selected from the sampled secondary schools in Ondo west local government area of Ondo state. The respondents were measured with relevant adapted standardized scale (instruments) which include socio-economic status scale, study habit scale, interest scale and students' academic performance scale with reliability of 0.79, 0.71 and 0.86 for socio-economic status, interest and study habit respectively. The data obtained was analyzed using the Linear and Multiple regression statistics. The result showed that the independent variables (socio-economic status, interest and study habit) when pulled together have significant effects on the students' academic performance and each of the independent variables made a significant contribution to the prediction of students' academic performance. In term of magnitude of contribution, study habit made the most significant contribution to the prediction followed by interest and the least was socio-economic status. Hence, it is recommended that parents should contribute to their wards academics by providing enabling environment. Teachers and parents should motivate their wards/students to study well and develop interest in learning.

Introduction

Education in Nigeria has become a vital tool for all forms of development in terms of technology, economy, science and so on. In fact, a nation cannot grow nor develop above her educational level. Sustainable economic development needs skilled manpower which is raised through productivity and efficiency of individuals that is only possible through education (Nasir & Nazli, 2010). Education sector has therefore become an 'industry' where the government invests so much, so as to reap the dividend through infrastructural development in the nation. One reason why learners learn is to acquire knowledge so that they in turn contribute to the development of their societies. Knowledge acquired from learning is better expressed in terms of the academic achievement of the learners. Academic achievement of students is the yardstick for testing educational quality of a nation.

Academic achievement has three parameters: good academic achievement, poor academic achievement and academic failure. Academic achievement is the outcome of education, the extent to which a student, teacher or

institution has achieved their educational goals. Academic achievement of students therefore consists of scores obtained from teacher-made test or examination. A number of factors have been identified as affecting students' academic performances. Some of these include: students' family background, parental discipline, degree of self-efficacy which emphasizes on interest and study habit, school location and so on (Adeyemo, 2005).

Mathematics plays a fundamental role in the scientific and technological progress of any nation, hence it is taught at all levels of education. The greater demand for economic, scientific and technological knowledge in the Nigerian development programme has brought about securing an excellent Mathematical knowledge at all levels of education, thus, increasing knowledge in Mathematics of the future engineers, physicist, chemists, sociologists, industrial and medical personnel as well as other science. The technological development is highly rooted in the study of mathematics. Okebukola (2002) opined that mathematics is referred to as central intellectual discipline of the technological societies. Mathematics liberates the mind and also gives individuals an assessment of the intellectual abilities by pointing towards direction of improvement and as such, mathematics could be referred to as the basis of all sciences and technology and therefore of all human endeavours. Despite the wide applicability and importance of Mathematics, many pupils and students seems not to find their feet in the subject as a result of their perennial failure in the subject. Some of the factors that likely to predict the performance of students' achievement in Mathematics are socio-economic status of parents, interest and study habit of students.

Parents' education, occupation or home background affects students' academic achievement in Mathematics. Grissmer (2003) posited that parents' level of education is the most important factor affecting students' academic achievement. Parents are opportune to serve as second teachers to the child and even guide and counsel the child on the best way to perform well in education and provide the necessary materials needed by him/her. Children from well-educated homes often thrive to follow the steps of the family and by these, work actively in their studies.

Family background is the foundation for children's development. The size of the family in which a child grows affects his intellectual development; in a large-size family, a child may not be given the required attention especially in his/her academics as the family will have more persons to cater for. Some families are poor and cannot adequately afford 3-square meals not to talk of meeting the educational needs of their children. And this has a serious implication on the academic achievement of the students such that students from poor families are forced to miss classes and also driven from school due to non-payment of school fees.

The role of interest in the study of Mathematics is very important because it is seen as a difficult subject. Lack of interest in a particular subject affects the way students reacts or listens to the teacher teaching the subject, and this have high impact on the academic performance of the students.Interest is a feeling of

wanting to learn more about something or to be involved in something, and if a student lacks interest in a particular subject, it affects the study habit of the student. Study habit is beyond reading for pleasure, it is an activity that is planned and done on a regular basis. Therefore, the interest of a student towards learning also determines the study habit of the student by deliberate form of consistency on the part of the student towards the understanding academic subjects (Daso, 2013).

The interest and study habit of students' towards mathematics is being made known by the outcome of student performance in mathematics, which has not been encouraging, and the numbers of students who write the re-sit examination are on increase every year. Interest and study habit are lumped together in influencing students' academic performance, because a student who is not interested in learning or in a particular subject will not inculcate good reading habit, and these have significant effect on the academic achievement of the students.

The question of how these variables can improve academic achievement of secondary school students is still a complex one. Universities, Colleges of Education and Polytechnics will stand to gain from the research findings associated with the improvement of academic achievement of the secondary school students in Ondo State.

In the light of the above statement, this study is designed to find out the extent to which socio-economic status, interest and study habit can predict academic achievement of the secondary school students. It is expected that the outcome of this study will assist the secondary school students, teachers, parents and educational stakeholders in deciding on how best to improve students' academic achievement from the socio-psychological variables perspective.

Statement of the Problem

Mathematics is one of the core subjects offered by all students from primary up to the secondary school level of education, for students to further in his/her studies, Mathematics is one of the requirements that needs to be met with at least credit pass. From year to year, the outcome of student performance in mathematics has not been quite encouraging, and the number of students who write the re-sit examination in the subject are on the increase despite the fact that the subject is taught every day in schools. With the emphasis placed on the teaching and learning as well as the usefulness of mathematics, it is expected that not less than 90% of the students should perform above average in SSCE examination. However, this is not the case. According to WAEC chief examiners report 2013, 2014 and 2015; it shows that 36.57%, 31.28% and 38.30% of students passed in Mathematics respectively. This defects all efforts placed on teaching and learning of mathematics.

Several other factors have been advanced as reasons for poor academic performance of students in mathematics; some blamed the home, society and parents for failure to inculcate discipline and learning habits in their children. Yet, others blamed the Government for failure to provide human and material

resources to facilitate good teaching and learning, some blamed the teachers for failure to inculcate the necessary knowledge, skills and behavior to students and the students themselves for refusal to learn, while majority of others blamed WAEC or NECO for their failure to measure adequately the knowledge, skills and behavior learned by students.

However, studies indicate that there is an awareness of the importance of the socio-economic status, study habit and interest on children academic achievement. With so many factors being accounted as possible reasons for poor academic achievement of students, there is an urgent need to know precisely what the problem is, in order to get a solution to tackle the problem. Many students are known to demonstrate a negative interest or apathy towards the teaching and learning of mathematics. One major reason for this is the conception that mathematics is "too difficult" or that it is "abstract". Could the poor academic achievement of students be as a result of poor study habits, lack of interest and/or the socio-economic background of students? This research is aimed at finding answers to these questions.

Research Questions

The following questions were raised to guide the study:

1. Will socio-economic status predict students' academic achievement in Mathematics?
2. Will students' study habit predict academic achievement in Mathematics?
3. Will students' interest predict academic achievement in Mathematics?
4. Will study habit, interest and socio-economic status jointly predict students' academic achievement in Mathematics?

Hypotheses

Four hypotheses were formulated and tested at 0.05 level of significance.

1. Socio-economic status will not significantly predict students' academic achievement in Mathematics.
2. Students' study habit will not significantly predict academic achievement in Mathematics.
3. Students' interest will not significantly predict academic achievement in Mathematics.
4. Study habit, interest and socio-economic status will not jointly predict students' academic achievement in Mathematics.

Methods

The research design that was adopted for this study is correlational survey research design which was used to elicit information about the extent to which socio-economic status, study habit and interest predict academic achievement of students in mathematics.The population of this study comprises 4,295 students from 62 secondary schools. The target population of this study comprised all senior secondary school two (SSS 2) in Ondo west local government area of

Ondo State, Nigeria. The sample comprises 372 students from twelve (12) randomly selected secondary schools in Ondo west local government area of Ondo State. The twelve (12) schools selected represents 20 percent of the total population. The selection was made using the balloting method of the simple random sampling technique. 30% of SSS 2 students in each school were selected as the number of students sampled.

The instruments for data collection were Socio-economic scale with seven (7) items, developed by Oribhabor (2015) was used to measure the students' socio-economic background. Study habit scale with ten (10) items developed by Charles-Ogan and Alamina (2013) was used to measure students' study habit, Interest scale with ten (10) items, was used to measure the students' interest in Mathematics. Students 2014/2015 results in Mathematics were collected from the school to measure students' performance in Mathematics. The instrument was validated by three (3) experts from the Department of Educational Evaluation and Counseling Psychology (Measurement and Evaluation), University of Benin. The instrument was subjected to reliability test using twenty (20) students from Ondo state who were not part of the sample used for the study. The reliability of 0.79, 0.71 and 0.86 for socio-economic status, interest and study habit were obtained respectively. The questionnaire was administered personally by the researcher with the help of the Mathematics teachers in various schools. The data obtained was analysed using linear and multiple regression statistics. All hypotheses were tested at 0.05 level of significance.

Findings

Hypothesis 1: Socio-economic status will not significantly predict students' academic achievement in Mathematics?

Table 1: Linear Regression Statistics of the prediction between Socio-Economic Status students' Academic Achievement

Model	**Sum of Square**	**df**	**Mean Square**	**F**	**Sig.**
Regression	117.498	1	117.498	237.079	.000[b]
Residual	159.201	370	.430		
Total	276.699	371			

	PARAMETER ESTIMATE			
Variable	**B**	**Beta**	**R**	**R^2** **R^2 Adjusted**
Constant	0.692			
Socio Economic Status	0.699	0.652	0.652	0.425 0.423

Table 1 shows that the independent variable (Socio-economic status) shows significant effect on the academic achievement of the respondents. The values of Linear regression (R) = 0.625. This implies that the independent variable (Socio-economic status) contribute to 62.5% prediction of academic achievement; thereby indicating that it is a good predictor of academic achievement. The analysis of variance worked out on linear regression yields an F-ratio value of 273.079 and is found to be significant at 0.05 levels since the p-value (0.00) is less than($p<0.05$) significant value of 0.05. This further rationalizes the rejection of the first null hypothesis which says that Socio-economic status will not significantly predict students' academic achievement in Mathematics.

Hypothesis 2: Students' study habit will not significantly predict academic achievement in Mathematics?

Table 2: Linear Regression Statistics of the Prediction Between Study Habit and Students' Academic Achievement

Model	**Sum of Square**	**df**	**Mean Square**	**F**
Sig.				
Regression	210.476	1	210.476	1175.960
0.000[b]				
Residual	66.223	370	.179	
Total	276.699	371		
		PARAMETER ESTIMATE		
Variable	**B**	**Beta**	**R**	**R^2**
R^2 Adjusted				
Constant	-0.417			
Study Habit	1.540	0.872	0.872	0.761
0.760				

Table 2 shows that the independent variable (Study habit) shows significant effect on the academic achievement of the respondents. The values of Linear regression (R) = 0.872. This implies that the independent variable (Study habit) contribute to 87.2% prediction of academic achievement; thereby indicating that it is a good predictor of academic achievement. The analysis of variance worked out on linear regression yields an F-ratio value of 1175.960 and isfound to be significant at 0.05 levels since the p-value (0.00) is less than significant value of 0.05 ($P<0.05$). This further rationalizes the rejection of the second null hypothesis which says that Students' study habit will not significantly predict academic achievement in Mathematics.

Hypothesis 3: Students' interest will not significantly predict academic achievement in Mathematics?

Table 3: Linear Regression Statistics of the Prediction Between Interest and Students' Academic Achievement

Model	**Sum of Square**	**df**	**Mean Square**	**F**
Sig.				
Regression	170.725	1	170.725	596.078
.000[b]				
Residual	105.973	370	.286	
Total	276.699	371		
		PARAMETER ESTIMATE		
Variable	**B**	**Beta**	**R**	**R^2**
R^2 Adjusted				
Constant	0.259			
Interest	0.918	0.785	0.785	0.617
0.616				

Table 3 shows that the independent variable (Interest) shows significant effect on the academic achievement of the respondents. The values of Linear regression (R) = 0.785. This implies that the independent variable (Interest) contribute to 78.5% prediction of academic achievement; thereby indicating that it is a good predictor of academic achievement. The analysis of variance worked out on linear regression yields an F-ratio value of 596.078 and is found to be significant at 0.05 levels since the p-value (0.00) is less than significant value of 0.05 ($P<0.05$). This further rationalizes the rejection of the third null hypothesis which says that Students' interest will not significantly predict academic achievement in Mathematics.

Hypothesis 4: Study habit, interest and socio-economic status will not jointly predict students' achievement in Mathematics?

Table 4: Multiple Regression Statistics Jointly Prediction Between Study Habit, Interest, Socio-Economic Status and Students' Academic Achievement.

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	229.078	3	76.359	590.083	.000[b]
Residual	47.621	368	.129		
Total	276.699	371			

	PARAMETER ESTIMATE			
Variable	**B**	**Beta**	**R**	**R^2 Adjusted**
Constant	-0.551			
Socio Economic Status	0.249	0.232	0.910	0.828
0.826				
Interest	0.352	0.301		
Study Habit	0.893	0.505		

Table 4 shows that the independent variables (Socio-economic status, Study habit and Interest) when combined together showsignificant effect on the academic achievement of the respondents. The values of multiple regression (R) = 0.910. This implies that the three independent variables (Socio-economic status, Study habit and Interest) contribute to 91.0% prediction of academic achievement; therebyindicating that they are good predictors of academicachievement.The analysis of variance worked out on multiple regression yields an F-ratio value of 590.083 and isfound to be significant at 0.05 levels since the p-value (0.00) is less ($P<0.05$) than significant value of 0.05. This further rationalizes the rejection of the fourth null hypothesis which says that Study habit, interest and socio-economic status will not jointly predict students' achievement in Mathematics.

The table also shows that each of the independent variables made a significant contribution to theprediction of academic achievement. Considering the extent of contribution, Study habit makes the most significant contribution (Beta = .505; t = 13.269; $P < 0.05$) to the prediction. Other variables makes ignificant contributions in the following order: Interest(Beta = .301; t = 8.856; $P < 0.05$) and socio-economic status (Beta = .232; t = 8.674; $P < 0.05$).

Discussion of Findings

This study examines socio-economic status, study habit and interest as predictors of academic achievement of students in Mathematics at senior

secondary school. The result has so far revealed that the three variables significantly predict academic achievement.

The result of the first, second and third hypotheses tested shows that the variables independently predict academic achievement in the subject, while the fourth hypothesis tested shows that the three independent variables have a joint effect on the academic achievement of the subject. The degree of the effectiveness of the three independent variables is manifested in the value of regression (R) = 0.910 and R2 (adjusted = 0.826). The result thus implies that 82.6% of the variance in the academic achievement of the Senior Secondary School Students accrues to the linear combination of the three variables. The value of F-ratio computed gives more weight to the result. This is an indication that the three independent variables have the capacity of predicting academic achievements, which could not happen by accident or be due to chance. This finding is in accordance with the work of previous researchers (Coleman & Deleire, 2000; Adeyemo, 2005; Hidi & Ainley, 2002; Koller, et al, 2001).

The significant impact of study habit on the academic achievement as indicated in this study cannot be overemphasized. This means that study habit has a significant role or influence on the level of performance. The explanation by Isangedighi in Kplovie (2005) based on this result is something to go by as he says that the degree of learning depends in the amount of time a child is actively engage in learning. The time spent on studying helps students to retain the materials learnt, which may eventually boost the students' academic performance. Be that as it may, the sky is the limit for students that have good study habit.

The significant contribution of interest in Mathematics is very important to note. It is however in contrast with the findings of Ajayyi, Lawani and Adeyanju (2013) and Kpolovie (2014) but disagrees with Goulart and Bedi (2011) and Shirey and Reynolds (2012).

Socio-economic status makes the least contribution but is found to be significant. This is supported by many previous studies that have found that socio-economic status affects students' outcomes (Daso, 2013; Eamon, 2005; Dotson, et al, 2009; Rothman, 2004 and Saifullahi, 2011). Low socio-economic status prevents access to resources and leads to additional stress and conflicts at home that affect all aspects of a child's life including academic achievement (Eamon, 2005).

Conclusion

Based on the foregoing findings and discussion, apt conclusions can be drawn that this investigation has indeed revealed overwhelming preponderance of data-based evidence that students' socio-economic status, study habit and interest jointly and separately predict academic performance of students in Secondary school, particularly in Mathematics (the subjects that operationally constituted academic performance in this study). The prediction of academic performance implies the great need for both teachers and parents to be actively involved in the

improvement of students' interest in learning and attitude to school for possible amelioration of the students' academic performance.

Parents' personal educational backgrounds and economic backgrounds have a significant effect on their children's education. However, parents are positive influence in their children's everyday lives, and most importantly in their everyday education, the future of our society will look brighter and brighter every day.

Students who are not performing well academically are more likely to be easily contented with just minimal success and performance. It also implies that the more a student is able to inculcate good study habit the better the achievement of a student in schoolwork.

Recommendations

Based on the findings, the researchers recommended that government at all levels should provide scholarship for indigent students. Parents also should provide enabling environment for their children and wards to study. They should also encourage their children and wards by motivating them, in order to have interest in their studies.

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RELATIONSHIP BETWEEN INTROVERSION AND ACADEMIC PERFORMANCE OF BIOLOGY STUDENTS IN FEDERAL COLLEGE OF EDUCATION, ZARIA KADUNA STATE, NIGERIA

Dr. Ibrahim Zubairu & Mufida Mas'ud Abdulkarim & Zainab Salisu Ibrahim

Abstract

This study assessed the relationship between Introversion and academic performance of NCE Biology Students in Federal Collage of Education, Zaria. A sample of 242 students consisting of 121 male and 121 femalestudents was used from the total population of six hundred and fifty one. This research employed a causal comparison approach (ex-post facto) and adopted an instrument known asEysenck Personality Inventory (EPI) by Hans J. Eysenck (1974). The data collected was analyzed by means of descriptive statistics and two hypotheses tested using Pearson's Product Moment Correlation (PPMC) and independent t-test respectively at0.5 alpha level.The findings of the study show that a significant relationship exists between introversion and academic performance of NCE students. This means that introversion was found to be positively related to academic performance (r=.726, p=.022). It also revealed that there is no significant difference between male and female introverted students' academic performance (t=0.928, p=0.355. This implies that differences do not exist between male and female introverted students in their academic performance. The paper thus recommends among others that introverted students should be encouraged to select Biology as a course of study.Furthermore, the paper recommends that both male and female introverted students should be closely monitored and be fully occupied with extra work in order to bring out the best in them academically, and by means of well-equipped guidance and counseling centers managed by qualified personnel to help both male and female students manage their personality to improve academic performance.

Introduction

Introversion is the state or tendency toward being wholly or predominantly concerned with and interested in one's own mental life. According to Martin (2015), an introvert is a person whose "energy comes from dealing with the ideas and reactions within one's head, in the inner world". Cain (2012) says that, opposite to extroverts, "introverts prefer less stimulating environments and tend to enjoy quiet concentration, listen more than they talk, and think before they speak".

Academic Performance on the other hand is the outcome of education. It is the extent to which a student, teacher or institution has achieved their educational goals. The tracking of academic performance fulfills a number of purposes. Areas of achievement and failure in a student's academic career need to be evaluated in order to foster improvement and make full use of learning

process. It is against this reason that Onang (2014) states that academic performance provide framework for talking about how students fare in institutions, and a constant standard to which all students are held. Performance results allow students to be ranked and sorted on a scale that is numerically obvious, minimizing complaints by holding teachers and institutions accountable for the components of each and every grade.

Many researchers have consistently attempted to identify the major predictors of individual academic performance. Factors such as study habit, maturation, home background, child rearing patterns, peer group influence, socio-economic background and learning environment are among them. While according to Eyong, David, Umoh (2014), another major factor that is believed to be responsible for academic performance in students is their personality traits. In fact, academic performance is considered as one important criteria of educational quality. On the other hand, learners are different across a vast range of variables. In that, not only are they different in terms of personality characteristics, family backgrounds, age and gender, etc., they also exhibit different attitudes and emotional responses to the environment. Students have distinctive personality characteristics which makes them prepared for having different worldviews, and thus for behaving differently in various social and educational settings. Taking these differences into account can help educators recognize their students' individual differences. Predictors of academic performance often lay on a continuum with cognitive measures, intelligence and mental abilities at one extreme and non-cognitive variable (such as personality characteristics, socioeconomic status, etc.) at the other one. It is against this reason that the researcher develops specific interest to investigate the extent to which introversion relates to academic performance of Biology students in Federal College of Education, Zaria with the view of contributing to knowledge since improvement of students' academic performance is among the basic goals of educational planning.

Statement of the Problem

Research on personality and its relationships to important personal, social and economic constructs is as vibrant and influential as ever and has been credited with prompting many of the major advances in fields such as organizational behavior (Hough, 2001 in Sambo, 2011). Much of this contribution can be linked directly to theoretical and statistical reviews of the role of personality, such as the pivotal meta-analyses of correlations between personality and work performance (Barrick& Mount, 1991; Hough, Eaton, Dunnette, Kamp, &McCloy, 1990 in Sambo, 2011). Such integrations of research have allowed researchers to assess the major features of these relationships, providing guidance for future studies. Therefore, there is dearth of information on comparable review of the relationship between personality and gender on academic performance. Furthermore, many teachers do not seem to properly understand the impact of personality, specifically introversion as it concerns performance in academics. It is against this background that this article reports on

an attempt to provide just such an exhaustive statistical review that will contribute to knowledge towards addressing the issue.

Objectives of the Study

The objectives of the study are to determine;

1. the relationship between introversion and students' academic performance.
2. the difference between male and female introverted students' academic performance.

Research Hypotheses

Hypothesis 1.There is no significant relationship between introversion and Students' academic performance.

Hypothesis 2. There is no significant difference between male and female introverted students in their academic performances.

Significance of the Study

Findings from this study will be of immense contribution to the teachers, parents, curriculum planners and the field of educational psychology;

To teachers and parents, it will provide them with a better understanding of the various types of students' personality and how it relates to their academic performance and classroom interactions. It will also go a long way in helping the teacher manage, instruct and encourage his/her students based on their personality types towards achieving academic excellence. Students will benefit from this study if subject teachers actually play their role by helping students in understanding their personal, social and academic problems and how to go about solving them in/outside the classroom.

Secondly, to curriculum planners, knowledge of personality, its characteristics and impacts on academic achievement will assist them in developing a curriculum that will cater for the needs of multiple diverse learners, both the introverted and extroverted student.

Finally, this research will be of immense contribution to the existing body of literature in the field of educational psychology on the effect of personality traits on students' academic performance in higher institutions of learning, thereby constituting an empirical body of literature for future research in the subject area.

Scope and Delimitation of the Study

The study was delimited to a comparative assessment of academic performances of male and female introvertedNCE 2 Biology students of Federal College of Education, Zaria,Kaduna State. Academic performance is delimited to Biology students'overall scores in departmental courses.

Concept of Introversion

Introversion is one of the major personality traits identified in many theories of personality. As reported by Zubairu, (2000), Psychologists states that people who are introverted tend to be inward turning, or focused more on internal thoughts, feelings and moods rather than seeking out external stimulation.

Concept of Performance

Performance is completion of a task with application of knowledge, skills and abilities. In work place, performance or job performance means good ranking with the hypothesized conception of requirements of a task role. An effective performance is determined by skills achievement and competency of the person,his level of skill and knowledge. To this end, Spencer and McClelland (1994) as contained in Zubairu (2016) defined competency as "a combination of motives, traits, self-concepts, attitudes, cognitive behavior skills (content knowledge)" that helps a person to differentiate themselves superior from average persons.

Concept of Academic Performance

Academic Performance on the other hand is the outcome of education. It is the extent to which a student, teacher or institution has achieved their educational goals. The tracking of academic performance fulfills a number of purposes. Areas of achievement and failure in a student's academic career need to be evaluated in order to foster improvement and make full use of learning process. It is against this reason that Onang (2014) states that academic performance provide framework for talking about how students fare in institutions, and a constant standard to which all students are held. Performance results allow students to be ranked and sorted on a scale that is numerically obvious, minimizing complaints by holding teachers and institutions accountable for the components of each and every grade.

Social Learning Theory

As contained in Zubairu (2016), Psychologists wondered whether behaviorism might offer a more direct and effective explanation of the social behavior than the less precise concepts of psychoanalytic theory. Social learning theorytherefore, focuses on learning and nurturing in contrast to traits-based theories, which emphasizes heredity and nature. Human experience not human nature is considered the primary cause of personality growth and development. As we learn, we alter the way we perceive our environment and the way we interpret incoming stimuli, which influences the way we interact or behave. Social learning takes the concept a step further, introducing the idea that we learn through our interactions with society. Society plays a much larger role in the way we think about ourselves and the world and how we interact or behave in the larger context of society. Social learning theories are of interest in business because they deal with the learning process and the effect of incentives and disincentives on behavior modification.

Theory of self-growth and humanism on the other hand stress the private and subjective experience. Personality is considered an expression of the need for personal growth. Different personalities are manifestations of differing stages and paths in the individual's quest to fulfill his innate capabilities. Maslow's hierarchy of needs is a particularly influential model in this area and one of the multiple humanist tools that can be used in the development of paths for personal, as well as professional, development.

Social Reactivity Theory

The social reactivity theory alleges that all humans, whether they like it or not, are required to participate in social situations. Since extraverts prefer engaging in social interactions more than introverts, they also derive more positive affect from such situations than introverts do. The support for this theory comes from work of Brian R. Little (1967) in Nsamenang (2008), who popularized concept of "restorative niches". Little claimed that life often requires people to participate in social situations, and since acting social is out of character for introverts, it was shown to harm their well-being. Therefore, one way to preserve introverts' well-being is for them to recharge as often as possible in places where they can return to their true selves places little calls "restorative niches".(Little (1967 in Nsamenang, 2008)

Social Attention Theory

Yet another explanation of the high correlation between extraversion and happiness comes from the study by Ashton, Lee, and Paunonen (200). They suggested that the core element of extraversion is a tendency to behave in ways that attract, hold, and enjoy social attention, and not reward sensitivity. They claimed that one of the fundamental qualities of social attention is its potential of being rewarding. Therefore, if a person shows positive emotions of enthusiasm, energy, and excitement, that person is seen favorably by others and he or she gains others' attention. This favorable reaction from others likely encourages extraverts to engage in further extraverted behavior. Ashton, Lee, and Paunonen's (2001) study showed that their measure of social attention, the Social Attention Scale, was much more highly correlated with extraversion than were measures of reward sensitivity. However, it was also found that extraverts did not respond stronger to social situations than introverts, nor did they report bigger boosts of positive affect during such interaction

Review of Empirical Studies

The study of Child(1964), Entwistle and Entwistle, (1970) in Sambo (2011) on the relationship between introversion and academic performance, revealedthat, introverts perform better than extroverts, because of their greater ability to consolidate learning and better study habits. Also the study ofDunsmore (2005)revealed that introverted learners were more successful than their extrovert counterparts. One might argue introvert students' higher academic performance

emanates from their more effective study habits and their more concentration ability inside the classroom as concluded by (Sambo, 2011).

Another interesting finding is that of Khan and Bhat (2008) as contained in Zubairu (2000) who made it clear that the role of the personality on students' academic performance cannot be overemphasized. They undertook the study of the personality factors of high and low achievers of elementary level students. The sample for the study was 100 (50 high achievers and 50 low achievers) who were selected randomly from one educational zone. The results revealed that high achievers were reserved, detached, aloof, critical, stiff, more intelligent and also high achievers were found to be emotionally stable, mature and faced reality (introvert attributes) where as low achievers were more social, emotionally unstable and affected by feelings (extrovert attributes).

Onang (2014) conducted an investigation in Bamenda Province in Cameroon was a survey involving four hundred and seventy five (475) samples that investigated the performances of high school students in sciences and arts related courses owing to their personalities. The study revealed that introversion does not have any significant relationship with academic performance of students ($r=0.324$, $p=0.564$) and extraversion do also not have any significant impact on the performance of the students ($r=0.231$, $p=0.651$) respectively.

Result from hypothesis two shows that there is no significant difference between the mean Academic performance of male and female introverted students. Their computed academic mean performance scores have a mean difference of 0.173 in favor of female students which is not significant. It was therefore concluded that the difference is not significant. This finding in line with the finding of Atkinson (2004) as contained in Sambo (2011). The finding is however contrary with that of McCrae *et al.* (2002) in Sambo (2011), who reported that there is significant difference between male and female introverted studentsinvolved in the study, in their academic performances.

The present study is also in contrast with that of Onang (2014), which investigated the performances of high school students to study sciences and arts related courses owing to their personalities. His study revealed that male and female introverted students differ in their performances academically ($f=6.431$, $p=0.007$). Many factors may be responsible for these differences in the results, which may include the sample and sampling method as well as the period of the study and scope of the research.

RESEARCH METHODOLOGY

Research Design

The research design used in this study is the causal comparative approach, otherwise known as the ex-post facto research design. According to Fraenkel and Wallen (2000) as reported by Sambo (2011), Causal-comparative research allows researchers to investigate the possibility of a causal relationship among variables that cannot be manipulated as in experimental research. In a causal comparative study two or more groups that are different on a particular variable are compared

on another variable. The researcher decided to adopt this design for this study because is an inherent trait among the subjects used for this study.

Population for the Study

The target population for the study was made up of all the male and female Biology Nigerian Certificate in Education (NCE)students for 2014/2015, in Federal College of Education, Zaria. This was reported to be six hundred and fifty one(651), according to the records provided by the office of the academic secretary (2015).

Table 1. Table of Population Distribution by Students Combinations

Students' Combinations	Number of Respondents		Total	Percentage
	Male	Female		
Biology/Chemistry	198	153	3515	3.92%
Biology/Computer	113	90	203	31.18%
Biology/Int. Science	50	47	97	14.90%
	361	290	651	100%

The table above describes thepopulation by students 'combinations. The first combination, Biology/Chemistry has 198 male and 153 female with a total of 351 students which equals to 53.92%. The second combination, Biology/Computer has 113 male and 90 female students with a total of 203students which represents 31.18%. While the third combination Biology/Int. Science has 50 male and 47 female students with a total of97 students representing 14.90%. The total student population from the three combinations as shown on the table is 651 which representing 100%.

Sample and Sampling Technique

The sample size for this study was determined based on the Krejcie and Morgan (1970), table of determining sample size of a known population. A total of two hundred and two (242) respondents were selected for the purpose of this study which represented the population.

Simple random sampling technique was used to draw the respondents from the five (5) different departments in the School of the Science, Federal College of Education Zaria, So as to give every section equal chance of being included in the sample.

Table: 2 Table of Sample by Students' Departments

Sampled Departments	Number of Respondents		Total Percentage	
	Male	Female		
Biology/Chemistry	49	49	98 40.50%	
Biology/Int.Science	33	33	66 27.27%	
Biology/Computer	39	39	78 32.23%	
	121	121	242	100%

Instrumentation

The instrument for thi study is an adaption of the Eysenck's Personality Inventory (EPI) by Hans J. Eysenck (1947). While academic performance of the students was determined by their end of semester result. The instruments were harmonized into twosections (A and B). Section (A) was used to gather student's personal data. Section (B) contains 57 'Yes-No' items with no repetition of items and was designed to elicit information on the student's introversion, a personality traits used in the study.

Validity and Reliability of instrument

Validity

The Eynseck's Personality Inventory (EPI), which was used to determine introverted student was validated by Senior lecturers in the Department of Educational Psychology and CounselingAhmaduBello University, Zaria owing to studies conducted by Maqsud (1980) andBalarabe (1981) as contained inSambo (2011).

Reliability

In order to ascertain the reliability of the instruments, forty (40) copies were used for pilot testing, which were administeredby means of test-re-test method to selected NCE students who were not part of the main study. The Cronbach alpha reliability coefficient of 0.85 was obtained. This therefore, confirmed the reliability of the instrument used as fit for the main study.

Procedure for Data Collection

Copies of the Eysenck Personality Inventory (EPI) were administered on the sampled Biology students of Federal college of education, Zaria. The researchers distributed the instruments to the various students (respondents)

themselves having been familiar with the nature of the environment. The lead researcher explained to the research assistants that guided the respondents in each of the three groups of Biology combinations. The instruments were filled correctly within forty five (45) minutes in each instance and returned to the researchers. The scoring system is the same as presented by Eysenck which is two marks for correct answer and zero for wrong answer.

Procedure for Data Analysis

Data collected were analyzed using both descriptive and appropriate inferential statistics such as Pearson Product moment Correlation and t-test. First of all, Descriptive statistics involving frequency, percentages, means and standard deviation were used for the Bio-data variables. For hypothesis one (1), Pearson Product moment correlation technique was used to determine the relationship between introversion and ac0ademic performance of students. While independent t -test was used on hypothesis two (2) because of the independent variables involved (male/female) at 0.05 level of significance.

Data Analysis and Presentation of Results

Presentation of Bio data variables in frequencies and percentages

Table 3: Distribution of respondents by Gender

Gender	Frequency	Percentage
Male	121	50%
Female	121	50%
Total	242	100%

Hypotheses Testing

Two hypotheses were formulated specifically to determine the impact or otherwise of introversion and academic performance of NCE Biology students in Federal College Education, Zaria. This section deal with hypotheses testing and result presentation.

Hypothesis One: There is no significant relationship between Introversion and Academic performance.

Table 4: Pearson Product Moment Correlation on relationship between Introversion and Academic performance

Variables	**N**	**Mean**	**Std.Dev**	**Df**	**Correlation index r**	**P**
Introversion	242	5.7227	3.74293	240	0.726**	0.022
Academic Performance	242	2.3380	1.06223			

*Correlation is significant at 0.05 level ***

Outcome of the Pearson Product Moment Correlations statistics revealed that significant relationship exist between academic performance and introversion. Reasons being that the calculated p value of 0.022 is lower than the 0.05 level of significance, at a correlation index r level of 0.726. This implies that the higher the level of introversion among students, the higher their academic performance and vice versa. Therefore the null hypothesis which states that there is no significant relationship between Academic performance and introversion of students is thereby rejected.

Hypothesis Two: There is no significant difference between the mean performance of male and female introverted students.

Table 5: Independent t test statistics on difference between the mean performance of male and female introverted students

Variable	**Gender**	**N**	**Mean**	**Std.dev**	**Std.Err**	**Df**	**t cal**	**t crit**	**P**
performance mean scores	Male	121	2.3041	1.33309	.15603	240	0.928	1.96	0.355
	Female	121	2.4780	.90100	.10474				

Calculated p > 0.05, calculated, t calculated < 1.96 at df 240.

Results of the independent t test statistics above showed that there is no significant difference between the mean Academic performance of male and female introverted students. This is because the calculated p value of 0.355 is greater than the 0.05 alpha level of significance and the calculated t value of 0.928 is lower than the 1.96 t critical value at df 240. Their computed academic mean performance mean scores are 2.3041 and 2.4780 by male and female introverted students respectively with a marginal mean difference of 0.173 in favor of female introverted students. This implies that among the introverted students the mean academic performance of male and female students is not significantly different. Therefore the null hypothesis which states that there is no significant difference between the mean Academic performance of male and female introverted students, is retained.

Summary of Major Findings

The followings are the major findings in this study;

1. Significant relationship exists between Biology students' academic performance and introversion. The calculated p–value is 0.022, lower than

0.05 alpha level of significance at 240df and with the mean of 43.7227 and 2.3380 for introversion an academic performance respectively.

2. There is no significant difference between the mean academic performance of male and female Biology students. This is because the calculated p-value of 0.355 is greater than the 0.05 alpha level of significance and the calculated t-value of 0.928 is lower than the 1.96 t-critical value at df 240. Their computed academic mean performance scores are 2.3041 and 2.4780 by male and female introverted students respectively.

Discussion on Findings

The Sample for the study consists of 121 (50%) male and 121 (50%) female Students. This means that a total of 242 sampled introverted students' means scores were tested. Results from hypothesis one revealed that there is a significant relationship between introversion and students' academic performance, the higher the level of introversion the higher the academic performance as shown by the students. This also agrees with the findings of Child, (1964), Entwistle and Entwistle, (1970) in Sambo (2011). In their research into the relationship between introversion and academic performance, it was observed that, introverts perform better than extroverts, because of their greater ability to consolidate learning and better study habits. This finding is also in line with that of Dunsmore (2005), who concluded that introverted learners were more successful than their extrovert counterparts. One might argue introvert students' higher academic performance emanates from their more effective study habits and their more concentration ability inside the classroom (Sambo, 2011).

This finding is in agreement with that of Khan and Bhat (2008) as contained in Zubairu (2010) who made it clear that the role of the personality on students' academic performance cannot be overemphasized. They undertook the study of the personality factors of high and low achievers of elementary level students. The sample for the study was 100 (50 high achievers and 50 low achievers) who were selected randomly from one educational zone. The results revealed that high achievers were reserved, detached, aloof, critical, stiff, more intelligent and also high achievers were found to be emotionally stable, mature and faced reality (introvert attributes) where as low achievers were more social, emotionally unstable and affected by feelings (extrovert attributes).

The present study is however in contrast with that of Onang (2014), who conducted an investigation in Bamenda Province in Cameroon. The study was a survey involving four hundred and seventy five (475) samples which investigated the performances of high school students to study sciences and arts related courses owing to their personalities. The study revealed that introversion does not have any significant relationship with academic performance of students ($r=0.324$, $p=0.564$) and extraversion do also not have any significant impact on the performance of the students ($r=0.231$, $p=0.651$) respectively.

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The present study is also in contrast with that of Onang (2014), which investigated the performances of high school students to study sciences and arts related courses owing to their personalities. His study revealed that male and female introverted students differ in their performances academically (f=6.431, p=0.007). Many factors may be responsible for these differences in the results, which may include the sample and sampling method as well as the period of the study and scope of the research.

Recommendations

In line with the findings of this study, the following recommendations are made:

1. Introverted students should be encouraged to select Biology as a course of study and monitor their progress at home and school. Teachers should also pay close attention to the academic needs of their introverted students, guide and encourage themthrough out.
2. The paper also recommends thatboth male and female introverted students should be closely monitored, be well guided in order to bring out the best in them, help their personality to improve their academic performance.

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SCHOOL HEALTH EDUCATOR'S TRIPARTITE-BASED INTERVENTIONMODEL TO MANAGE FAULTY PSYCHOSOCIAL ENVIRONMENT OF UNIVERSITY STUDENTS

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& Prof. S.N. Omobude-Idiado

Absract

Most university students suffer from psychosocial maladjustments which put their learning and school performance at stake. Manyof them find it difficult to enjoy physical safety, psychological wellbeing, emotional security and optimal health status. Hence, the Tripartite-based Intervention Model of the School Health Educator which, to a large degree, can manage the many faulty psychosocial environments of university students. It is a three-wheeled social and psychological framework that contributes to promoting worthwhile health status of university students by reducing the many challenges created by the students and other school personnel which impinge on them and their environment. Three phases of dynamic interaction are needed to achieve the model's specific objectives of minimizing the occurrence of faulty psychosocial environments, reducing identified psychosocial damages, assuring physical safety, psychological wellbeing, emotional security and sound health status of university students

Keywords: *Tripartite-based model, school health educator, psychosocial environment*

Introduction

Higher Education in Nigeria is referred to as tertiary education that consists of universities, polytechnics, monotechnics and colleges of education.In universities, the main goal of the National Health Insurance Scheme is partly advocated through School Health Programme which positively enhances the health status of students and other school personnel as responsible and productive citizens of Nigeria.Although health status is an all-encompassing construct that varies from individual to individual and from population to population; to a large extent, a particular individual's health status is determined by his or her psychosocial environment. University students are confronted with psychosocial environments, both intrinsically and extrinsically. Individual student from dysfunctional psychosocial environment, Fergusson, Horwood and Lynskey (1994); Lansford, Malone, Castellino, Dodge, Pettit and Bates (2006) typified is a higher risk of psychosocial maladjustment such as depression, conduct disorders, and psychosocial substance use. Under such impaired health status, learning and school performances of the students become at stake. Hence, the Tripartite-based Intervention Model of the School Health Educator which, to a large degree, can manage the many faulty psychosocial environments of university students. Therefore, the paper was addressed under the following sub-heads:

- Concept of faulty psychosocial environment

- Impact of faulty psychosocial environment on health status
- School Health Educator's Tripartite-based Intervention Model to manage faulty psychosocial environment of university students

Concept of Faulty Psychosocial Environment

Psychosocial environment is complex and multidimensional in nature.It is made up of two concepts: 'psychosocial' and 'environment'. Psychosocial environment was defined by experts in workplace as the culture and climate of workplace such as respect for work-life balance, mechanisms to recognize and reward good performance, valuing employee wellness, encourage employee feedback about organizational practices, zero tolerance for harassment, bullying and discrimination, ensuring employee psychological safety and health (Public Service Health and Safety Association, 2011). The term 'psychosocial' encompasses both psychological and social aspects of one's experiences invariably placing consequences on health, school satisfaction and performances. Simply put, the psychosocial environment is how we live, feel, think, interact and gain experiences from the surrounding. An enabling psychosocial environment positively enhances an individual's culture, thoughts, feelings, interactions, and life satisfactions. However, a deviation from such a normative environment constitutes a faulty psychosocial environment. In sum, a faulty psychosocial environment is that close connection between individuals' dysfunctional parts of thoughts, emotions and behavioural experiences and their social experiences of relationships, way of life and tradition.

Individual's psychosocial environment operates internally and externally within his or her immediate surroundings. External influences of one's psychosocial environment are the parts of life that we have no control over, such as family. Family typology and the members who play a role in raising one up largely impacts one's health status. Family members that are well-adjusted in terms of happiness, communication, love and other interpersonal relationships are more likely to bring up well-adjusted children.Internal variables of psychosocial environment are basically inherently borne in an individual many of which are genetic make-up, feelings, thoughts as well as individual's physical health statue, hormonal functioning and fitness level.

Impact of Faulty Psychosocial Environment onHealth Status

Psychosocial environment cannot be eschewed as one of the many indicators of health status. Overtime, health has been difficult to define and understand by experts in the behavioural and medical sciences, the basis for which health status has earned professional controversies still for its relativity. However, Quan (2006) made an effort to define health status as the level of wellness, fitness, and any underlying diseases or injuries coupled with other influencing conditions such as one's weight, nutrition, agility and flexibility or ability to move; smoking, alcohol consumption, caffeine intake, your compliance with prescribed medications, treatment, activity, diet and so on. Despite the

manner in which it is defined, health status cannot be extricated from an individual's current state of physical, social, emotional, spiritual, occupational, intellectual and environmental health.

For a better illustration, the model of the dynamic impact of an individual's psychosocial environment on his/her health status is given in Figure 1.

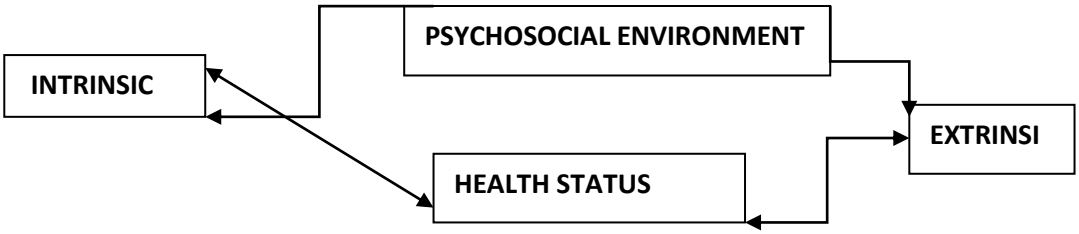

Figure 1: Model of impact of psychosocial environment on health status

In the model, the dual-fold intrinsic and extrinsic dimension of one's psychosocial environment is obvious. Intrinsically, faulty genetic makeup, feelings, thoughts, or physical well-being is one of the bedrocks of psychosocial behavioural tendencies of esteem problem, rebelliousness, insecurity, deficient coping skills, and anger. Individuals from dysfunctional psychosocial environment, Roustit, Chaix and Chauvin (2007) added is a higher risk psychosocial maladjustment such as depression, conduct disorders, and psychosocial substance use. In the same vein, stable emotional, mental and physical internal environments are more likely to amount to high self-esteem, adequate coping styles, and proper interpersonal relationships between friends and mates. This implies that a specific psychosocial internal environment is a determinant of health status at that point in time. Therefore, a stable intrinsic psychosocial environment is more likely to improve an individual's health status. Extrinsically dysfunctional social support, stress and pressure in the family, school or workplace, have increased chances of precipitating violence, negative behaviours, distrust, dietary deprivation, job dissatisfaction, alcohol and tobacco use and misuse, and sexual harassments.No wonder, Parveen (2007) amplified that some families reflect a climate of fear, depression, and cynicism which have a negative effect on individual. Families with violence, negative behaviours, anger, distrust, dietary deprivation, drug abuse, parental problems, sexual assaults, physical or emotional abuse are more likely to experience poor health status. Though, not all children who grow up in these kinds of dysfunctional families have poor health status, just as not all children who grow up in happy families are well-adjusted, but there are elements of relationships between these environments and health status. Similar analogy can be likened to other external environmental factors including social support from friends, stress and pressure in the school and workplace.

Any particular psychosocial behaviour emanating from the intrinsic or extrinsic psychosocial environment is an indicator of health status. This implies that faulty psychosocial attributes, evident in negative human behaviour, are parameters of poor health status and vice versa. Through such behaviour, a person not only contributes to determining his or her poor internal or external environment, he or she is also acted upon by that environment and actions. In other words, an individual creates his faulty psychosocial environment with his unhealthful behaviours and isin turn influenced by that same environment.In sum, anypsychosocial behaviour is a one-way product of the internal or external psychosocial environment; andthe internal or external environment is a two-way product of health status and that environment itself. Hence, the resultant individual health status influences both him and his internal or external psychosocial environment in a dynamic fashion.

School Health Educator's Tripartite-based Intervention Model to manage Faulty Psychosocial Environment of University Students

A number of theoretical frameworks have been advanced to predict and modify human behaviour. One commonly used theory is the Social Cognitive Theory (SCT) propounded by Bandura in 1986. The SCT has been widely applied to human behaviour especially with respect to changing unhealthful and harmful behaviours of individuals. Based on the principle of reciprocal determinism, the theory is operated on triad interplay of *person, behaviour and environment*. In it, there is a continuous and dynamic influence between the individual person, his/her behaviour and the environment.In addition to theories modifying human behaviour, the World Health Organization (WHO, 2012) indicated that out of the vast body of literatureon health behaviour, three general themes emerge: those that focus on individual capacity –intrapersonal; those that focus on interpersonal relationships and supports; and those thatexamine environmental supports and contexts. The School Health Educator's crucial role in ameliorating the multidimensional and complex nature of faulty psychosocial environment of university students cannot be overstated, hencethe Tripartite-based Intervention Model which combines both SCT and WHO approaches (*see Figure 2*).

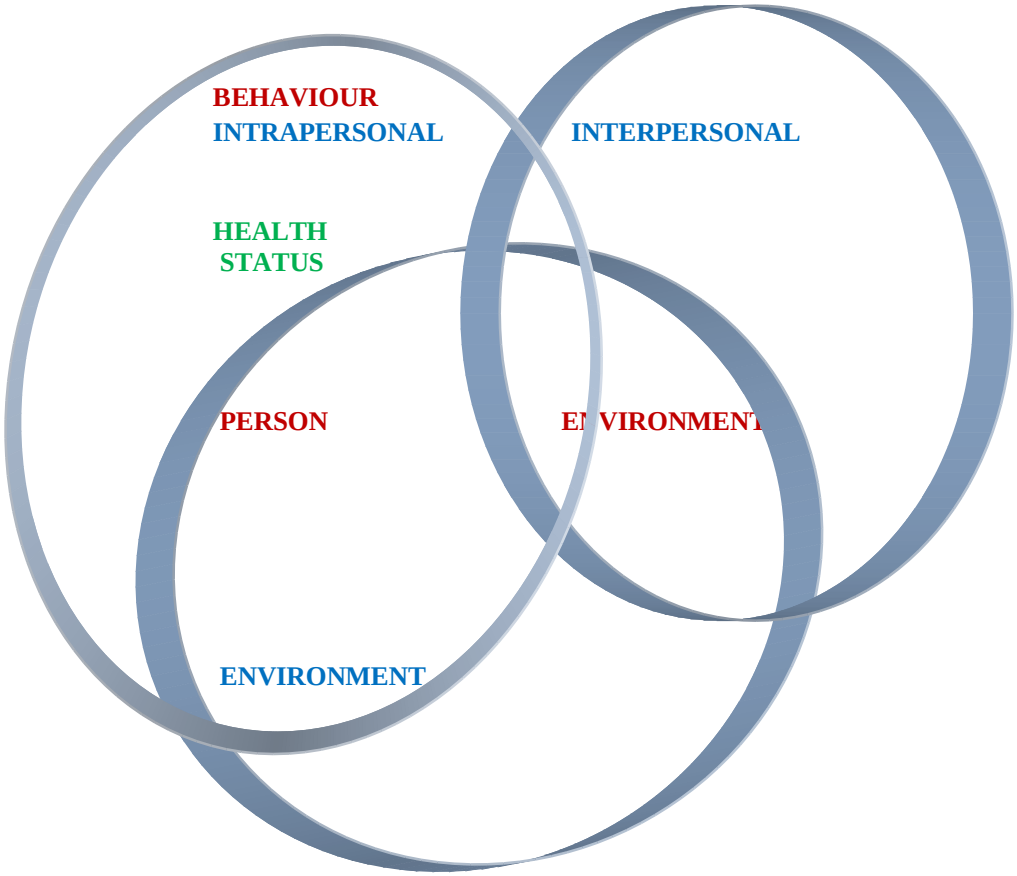

Figure 2: Tripartite-based Intervention Model

The properties of the model include:

1. What
2. Why
3. How
4. For whom

What

The Tripartite-based Intervention Model is a three-wheeled social and psychological framework that critically contributes to promoting worthwhile health status of university students by reducing the many challenges created by the students, and other school personnel which impinge on them and their environment. The model consists of three phases of behavioural and environmental interventions for the targeted group namely: (i) Phase I (Intrapersonal) (ii) Phase II (Interpersonal) and (iii) Phase III (Environmental).

Phase I (Intrapersonal): The intrapersonal phase consists of the physical/physiological, emotional, and thought potentials of university students (*persons*) playing major roles in determining specific *behaviours* that reflect their *health status* at that point in time. Keyconcepts associated with the person include: personalcharacteristics, emotional arousal/coping, behaviouralcapacity, self-efficacy, expectation, expectancies, self-regulation(Perry, Baranowski& Parcel, 1990; Baranowski, Perry & Parcel, 1997) as well as self-control.

Phase II (Interpersonal): The students' constant and regular interactions with other members of the university *environment* underpin obvious *behaviours* that have influence on the players' *health status*. Resultant health status imparts not only the students' behaviours but also the nature of their interactions with others in the social environment in return.In addition to the intrapersonal attributes of the students, observational/experiential learning,and reinforcement of Perry, Baranowski and Parcel (1990); Baranowski, Perry and Parcel (1997) are also contributing constructs.

Phase III (Environmental): The social or emotional environment created by the student acts on him (*person*) and determines his *health status* in the university *environment*. Influences on behaviourwhich involve the environmentcan be physical, social, cultural,economic, political in nature (Ockene&Ockene, 1992), or situational in nature (Baranowski, Perry & Parcel, 1997).

The phases of the model revolve at the same time either in the clockwise or anticlockwise direction. In the clockwise direction optimal health status is almost a reality. However in the anticlockwise, faulty psychosocial environment is a possibility. Therefore, the dynamic movement of the phases of the model determines the health status (optimal or faulty) of university students at any point in time. Health status happens to form the core and critical element of psychosocial discourse in the university environment. This is because only the emotionally stable and socially fit student can have successful learning achievements in an enabling university environment.

Why

The aim of the model is to manage the multidimensional and complex nature of any faulty psychosocial environment created by students and other members of the university environment. Other specific objectives are to: (1) minimize the occurrence of faulty psychosocial environments created by others and students' violence, drug use and abuse, anger, inordinate sexual drives, cult and occult influences, bullying, unhealthy competitive and recognition drives, and other harmful actions implied on university students' health status; (2) ameliorate known psychosocial damages on students' esteem, coping, conformity, security, capability, capacity, relationship, worth, and feelings; (3) assure every student a physically safe university environment; (4) promote a psychologically enabling university environment for university students; (5)

facilitate an emotionally secure school environment for university students; and (6) achieve an optimal health status for university students as its core.

How

At the intrapersonal level,the relationship among physical/physiological, emotional, and thought potentials of university students (*persons*) playing major roles in determining specific *behaviours* that reflect their *health status* at specific situation is interactive. The clockwise or anticlockwise direction of the phase entails that the student's personal qualities (demographic profile, cognitive attributes, motivation, skills and personality) determines any behaviour exhibited and he is in turn influenced by the behaviour in his health status. Students not only self-regulate their actions with their gender, race, ethnicity, thoughts, attitudes, knowledge and beliefs, they are also acted upon by their actions in a reciprocal manner. This means that students create theirbehaviours and are influenced by their behaviours with implication on their health status.In thisreciprocal interactive scheme, in which multipledeterminants of behaviour are assumed, behaviouralsoexerts an influence on both theperson and health status.

In an anticlockwise movement, the demographic characteristics of the students are basically beyond the realm of behaviour change, but inappropriate emotional arousal or coping skills evident in fear or anxiety, poor behavioural capacity, low self-efficacy, misconceived beliefs, and poor behavioural control strategies falls within the scope of intervention in the Tripartite-based Intervention Model.Redding, Rossi, Rossi, Velicer and Prochaska (2000) reiterated that the stereotypic picture of the relatively young executive who develops high blood pressure provides an illustration of how variables associated with person, (e.g., personal characteristics), interact with the behaviour and health status. Consider a university student in his late 30s who is obsessed with academic achievement, advancement, and recognition. This student is highly competitive and wants things done quickly. Such a student is sometimes described as being hostile and might be found operating in a highly stressful psychosocial environment better qualified as "Type A personality". The student's predominant personality type negatively influences his behaviour. Thus, the student is less likely to take the time to acquire the cognitive and behavioural skills necessary to reduce risk behaviour such as stress management. In order to ameliorate any psychosocial damage on such a student's coping capacity and feelings, as well as help manage his or her personality type, the School Health Educator's Tripartite-based Intervention Model can be used in introducing the student to acquire appropriate knowledge and skills necessary to perform daily tasks (behavioural capacity); strategies to increase his self-efficacy; choose a model who probably is well-adjusted and learn appropriate stress management techniques (observational learning).

More and appropriate tripartite intervention strategies are needed to manage psychosocial environmental issues on interpersonal basis.At the interpersonal phase, the students' constant and regular interactions with and

observation of the actions of other members in the university *environment* (modeling) and personal experiences acquired in trial and error underpin obvious *behaviours* that have an influence on the players' *health status*in a dynamic fashion. No wonder, Social Learning Theory (SLT) operates under the belief that the opinions, thoughts, behaviour, advice, and support of the people surroundingan individual influence his or her feelings and behaviour, and the individual has a reciprocal effecton those people (Rimer&Glanz, 2005).SCT incorporates the basic parts of SLT but adds the principlesof observational learning and vicarious reinforcement (watching and learning from the actions ofothers) (Bandura & Walters, 1963).In addition to key constructs relevant to behaviourinterventions at the intrapersonal phase, observational/experiential learning, and vicarious reinforcement are of interpersonal value in behaviour modification.Thus, the model'sinterventions are grounded in symbolic modeling (which helps students discover metaphoric perceptions of mind and body and create a symbol of their experiences),vicarious learning, enactive mastery experiences (which aid efficacy and authenticate successful health actions), and persuasion.

Intervention strategies commonto the tripartite model at the interpersonal level include the use of multiple ways to promotebehaviour change involving makingadjustments to the environment orinfluencing personal attitudes in reciprocal determinism; approaching specific desiredbehaviour change in smallsteps to ensure success for self-efficacy; offering credible role models whoperform the targeted behaviour in observational learning;promoting self-initiated rewards andincentives, directly, vicariously or self-managed in reinforcement;promoting mastery learning throughskills training in behavioural capacity;and modeling positive outcomes of healthfulbehaviour in expectations (Bandura, 1995). Underlying theoretical constructs include social supportprogrammes, social norms and social networks.The social environment includes family members, co-workers, friends, health professionals, and others; because it affects behaviour, the social environment also impacts health(Rimer&Glanz, 2005). The tripartite model could initiate a social network of health professionals such as nutritionists, exercise physiologists, physicians and other health care officers who would collaborate to render social support within specified norms for students in health counseling units.

Basically, students experience psychosocial problems in the school, though these tend to vary between them. With the model, the School Health Educator can help university students prevent disease, promote health, and modify unhealthy lifestyles for many different risk behaviours.Students and their caregivers are prime candidates for intervention to curb poor coping and academic mastery skills. Schools provide a unique opportunity to influence the skill management techniques and practices of parents and School Health Educators on behalf of students. A comprehensive coping and skill management programme introduced to schools in the university is a welcomed development. Programme components include a School Health Educator's guide, videos, newsletters, handbooks,

student development, group meetingsdesigned to encourage school-wide changes to support the programme.According to SCT, three main factors affect the likelihood that a student will change a healthbehaviour of poor coping and mastery skills: self-efficacy, goals and outcome expectancies. If the student has a sense of self-efficacy, he or she can change behaviour even when faced with obstacles. If he or shefeelsis unable to exercise control over the health behaviour, he or she remains unmotivated and unable to persist through challenges. As an individual adopts new behaviour, this causes changesin both the environment and the individual (Rimer&Glanz, 2005).Self-efficacy is considered the most important personal factor in behaviourchange and an important construct in other health behaviour theories as well (Rimer&Glanz, 2005). The School Health Educator can make deliberate efforts to increase students' self-efficacy by assisting them in setting small achievable and reward able goals, self-contracting, monitoring and reinforcement.

Ockene and Ockene (1992) noted that interactions are also assumed to occur betweenproblem behaviours (e.g., eating high fat foods, lack ofexercise, smoking) and physiological factors (e.g.,nicotine, caffeine addiction). To assure every student a physically safe university environment which contributes effectively to prevent disease, the student needs toengage in multiple healthy behaviours like exerciseadoption, low fat/high fiber eating habits,mammography screening, and wearing seatbelts when need arises. Most behaviours are learned responses andcan be modified. Thus, learning through observing thebehaviour of others (i.e., modeling) is important. Emphasis is also placed onlearning both cognitive and behavioural skills forcoping with situations and making changes in healthbehaviour. Thus, a student who wants to quitsmoking but lacks the cognitive and behavioural skillsto effectively cope with stressful situations withoutcigarettes is less likely to successfully change smokingbehaviour in spite of motivation to do so.

At the environmental phase, the social or emotional environment created by the student acts on him (*person*) and determines his *health status* in the university *environment*. The students' perceptions of theenvironment are referred to as *situations;* this keyvariable can facilitate or inhibit behaviour for potential health status. In thisreciprocal interactive scheme, in which multipledeterminants of students' behaviours are assumed, their health statusalso exerts an influence on them (that is, students' education, personality, thoughts, beliefs, feelings, motivation, expectancies, and skills)and the university environment. The environment and past experience with a particular intrapersonal attribute of the students can provide reinforcement foracting in a particular way. To effectively minimize school unrest evident in players' violence, anger, open and hidden protects, substance abuse, uncontrolled sexual drives, bullying or cult activities, situational interventions can been offered. Such intervention could be persuasive or compulsive or both. Hence through compulsion For example, students have been mandatedtorenounce membership in secret cults in order to increase their security on campus. Technological devices have been strategized to monitor

suspected movements on campus; and oaths taking in legal institutions are stringent psychosocial control measures.

For Whom

The model is recommended by the School Health Educator principally for university or higher school students at the local, national or international phases of human learning. However, other beneficiaries of targeted population shall include university staff members, and all school learners at the primary or elementary, secondary, or middle school level.

Conclusion

Overtime, many university environments have been banes of psychosocial distress. Most students find it difficult to enjoy physical safety, psychological wellbeing, emotional security and optimal health status. Hence the School Health Educator's Tripartite-based Intervention Model – a three-wheeled social and psychological framework that contributes to promoting worthwhile health status of university students by reducing the many challenges created by the students and other school personnel which impinge on them and their environment. Three phases of dynamic interaction are needed to achieve the model's specific objectives of minimizing the occurrence of faulty psychosocial environments, reducing identified psychosocial damages, assuring physical safety, psychological wellbeing, emotional security and sound health status of university students.

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THE INFLUENCE OF LEARNING STRATEGIES ON MATHEMATICS ACHIEVEMENT OF MALE AND FEMALE SECONDARY SCHOOL STUDENTS

Judith Hannah Osarumwense (Ph.D) & Friday Egberha

Abstract

The study examined the influence of learning strategies on Mathematics achievement of male and female secondary school students in Edo South Senatorial district. It aimed to investigate the influence of learning strategies employed by male and female students on achievement as well as to determine the difference in relationship between learning strategies and their achievement in Mathematics. To carry out the study, three hypotheses were formulated and tested at .05 α level. A correlation survey which was based on the framework of ex-post facto was adopted. The population was made up of all secondary school students in Edo South Senatorial district. A multi-stage sampling technique was adopted and a sample size of 280 students was used. A standardized adopted four point Likert's scale was used for data collection. The reliability of the instrument was .89. Data collected were analyzed using Pearson Product Moment Correlation and the Fisher's Z statistics. The findings revealed that the learning strategies employed by male and female students significantly influence their achievement in Mathematics and that learning strategies have no differential influence on achievement in Mathematics for both male and female students. It was therefore recommended amongst others that students should use more of cognitive learning strategies in studying Mathematics as it contributes more to achievement in Mathematics.

KEY WORDS: learning strategies, Mathematics, sex differences, achievement.

Introduction

Learning is a very complex phenomenon. This is because, learning is influenced by so many factors such as teacher's factor, school factor, social economic status, intelligence, provision of learning materials, attitude, interest, sex, motivation, and many more. These learning factors are however interwoven which make learning a complex phenomenon.

Sex of students is an issue that has been debated upon over the years as it influence students' learning rate especially on effective learning of Mathematics and Science based subjects. To some, they believe that male students perform better than female students in Mathematics and science while others believe that female students perform better than male students in subjects that require verbal skills (Johnson, 2005). Sex as a term is used to describe the natural make up of the body as to being a male or female (Osarumwense & Egberha, 2013). Students' learning could be determined by their style of learning which is usually related to the preferences, tendencies, and strategies they employ in studying (Thomson & Mascazine, 1997). Students that usually accept responsibility for

their own learning, discover new knowledge, understand new concepts, and apply different strategies to enhance their learning style and are able to create, think and reflect on Mathematics concepts, engage in the use of multiple instructional and learning strategies to promote their learning are likely to do very well irrespective of their sexes (Thompson & Mascazine, 1997). Therefore, the learning strategies employed by both male and female students are of paramount importance to effective Mathematics learning.

Relevant studies have shown sex difference in factors that motivated learners to learn, which have bearings to the way they regulate themselves as well as the way they engage the use of different learning strategies (Zimmerman & Martinez-Pons, 1990; Qutami & Abu-Jaber, 1997; Wolters & Pintrich, 1998; Peklaj & Pecjak, 2002; Ader, 2004 in Altun & Erden, 2013). Lin and Liu (2010) found out that male students are more motivated and use better learning strategies than female students. Altun and Erden (2013) found in their study that male and female students differ in the learning strategies they used as well as how they benefitted from learning. Bannert, Sonnerberg, Mengelkamp and Preger (2015) found in their study that the level to which female college students complied in the use of cognitive learning strategies was significantly higher than those of male college students majorly in the aspects of memorizing, analyzing, and explaining. They further found that the sex of students greatly affect their cognitive learning strategies and computer attitudes.

Peklaj and Pecjak (2002) found that girls used Meta cognitive self-regulation strategies than boys in learning Mathematics. However, it was found out that there was no difference by sex in the use of self-efficacy, perceptions and self-regulation based learning. Iri (2013) in his study found that the Meta-cognitive knowledge of female students was significantly higher than that of male students. Zhu (2007) noted that literature supports that male students are better skilled in problem solving approach than female students which makes it obvious that both male and female students differ in problem solving skills. Based on the report, it is evident that males are better off in cognitive abilities, psychological attributes and mediated by experience and education. To Zhu (2007), the differences that exist in Mathematics problem solving skills of male and female students could be as a result of their cognitive abilities, speed of processing information, learning styles, and socialization.

Zhu (2007) found sex differences in Mathematical problem solving patterns as standardized tests based on Mathematical problems require multiple steps and some systematic approach. Therefore, it is possible for students to arrive at correct solution by choosing and combining a set of appropriate strategies. Zhu (2007) also found that boys and girls differ in their use of learning strategies in solving Mathematical problems as manipulative learning strategy was to the favour of girls and retrieval learning strategy to the favour of boys. Based on his findings, girls preferred the use of concrete learning strategies while boys preferred the use of abstract learning strategies and are more flexible in employing strategies on extension of problems than girls.

Arani and Mobarakeh (2012) found that there was no significant difference by sex in the use of meta-cognitive strategies except for the fact that they differ in the usage of logical/Mathematical intelligence. To them, intelligent Mathematics students and those that reason Mathematics logically use more Meta cognitive strategies in solving Mathematics problems and that learning process is influenced by the differences that existed between male and female students. Furnham (2001) noted that students differ in the way they evaluate themselves. As found by Arani and Mobarakeh (2012), there was no significant difference between male and female students in the use of Meta cognitive strategies. It was found that males had a higher performance in the application of logical/mathematical intelligence based on the mean for each group.

Chen, Ferron, Gorin and Thompson (2005) found a significant difference by sex in logical reasoning. Male students demonstrated higher performance on logical reasoning while female students demonstrated higher mastery ability on questions that deal with 'evaluate and verify'. However, they found minimal impact of sex differences in the aspects of Mathematics skills of students. On the contrary, Performance Institute of Students Assessment (PISA) (2003) found that there were remarkable differences in the way students enjoy and were interested in studying Mathematics, their self-related belief, as well as their emotions and learning strategies they exhibited in studying Mathematics.

Chen, et al (2005) found that there was a significant difference between male and female students in the use of meta-cognitive self regulation, use of time and how they manage study environment, they regulate their effort, seek for help and their perception about their self efficacy. They however noted that meta-cognitive self regulation, use of time and how they manage study environment and their perception about their self efficacy statistically significantly predicted boys Mathematics achievement whereas the way students regulate their effort alone statistically predicted girls Mathematics achievement. On the aspect of computer and library resources usage, Bassi (2014) noted that many scholars have found differences among male and female students towards the use of library resources. Manda and Mulkangara (2007) emphasized that sex is associated with the use of electronic information resources and that male PG students used e-resources more than female students. To Flore (1999), Males established friendship with their computer while female students saw computer mainly as a tool to complete a learning task. However, Kahveci (2010) found that female students only felt less confident in the use of technology compared to their male counterparts and that they did not have a negative attitude towards the use of computer for learning. Kadijevich (2000), Comber and Colley (2003) and Li and Kirkup (2007) indicated that males have more positive attitude towards the use of technology compared to female students. Thus, to them the use of computer is domiciled in male's activities. To Olusi (2008), in technological application, male students profitted better than the female students. Oyesiku and Oduwole (2004) discovered in their study that male students used the library more frequently than their female counterparts.

Bassi (2014) confirmed that peer pressure has great impact on the way elementary students conformed to expected sex roles until they go higher in class. He noted that both male and female students performed equally in Mathematics and science subjects but that females tend to decline in their interest and attitude towards Mathematics learning. Shodhganga (2007) on the other hand, found that girls interacted and concentrated more than boys whereas, boys were better in language, reasoning and drilling abilities.

Over the years, there have been series of debates over the performance of male and female students in Mathematics. It is mostly believed that male students outperform their female counterparts in the subject and that the differences that exist in the performance of students in Mathematics are traceable to genetic make up. Boaler in Johnson (2005) however, disputed that assertion and noted that performance is not caused by sexual genetic make-up but by some other factors since female students have improved overtime. She further stressed that, if it was genetic make up, nothing would have make the female students to improve. On the other hand, Thompson and Mascazine (1997) in Osarumwense (2015) noted that performance of students is influenced to a great extent by their learning styles and that students that accept responsibility for their own learning, are able to create, think and reflect on Mathematics concepts in order to discover new knowledge, understand new concepts, and apply different strategies to enhance their academic gains and not necessarily their sexes. No matter how naturally endowed any student may be, if he or she does not employ learning strategies to enhance gain in knowledge, such might not do well in any subject and as well in Mathematics that requires effective studies. To this effect, the researches deemed it necessary to investigate the influence of learning strategies on Mathematics achievement of male and female secondary school students. The study specifically aimed to determine the influence of learning strategies employed by male and female students and their academic excellence in Mathematics and to also determine the difference in relationship between learning strategies and achievement in Mathematics based on sex.

Research Questions

The following research questions were posed for the study

1. Is there a relationship between learning strategies employed by male students and their achievement in Mathematics?
2. Is there a relationship between learning strategies employed by female students and their achievement in Mathematics?
3. Is there a difference in relationship between learning strategies employed by students and their achievement in Mathematics based on sex?

Hypotheses

The following hypotheses were formulated for the study;

1. There is no significant relationship between learning strategies employed by male students and their achievement in Mathematics.

2. There is no significant relationship between learning strategies employed by female students and their achievement in Mathematics.
3. There is no significant difference in relationship between learning strategies employed by students and their achievement in Mathematics based on sex.

Method

The study employed correlation research design and all junior and senior secondary school students in Edo South Senatorial district made up the population of the study. A sample size of 280 students was used for the study. Multistage sampling techniques were used to select the sample. First of all, Edo South Senatorial district was selected using purposive sampling technique. The choice of this senatorial district was based on the fact that it is the district with the highest Local Government Areas. Secondly, equal stratified random sampling technique was used to select two (02) secondary schools (one public and one private) from each LGA in Edo south senatorial district. Thirdly, proportionate simple random sampling technique was used to select five (05) students from JS2 and five (05) students from JS3 and also, five (05) students from SS2 and five (05) students from SS3. Most of the schools visited had higher number of male students. Hence, three male students and two female students were sampled from such schools while few schools where the number of female students were more, three female students and two male students were sampled. A total of twenty (20) students were sampled from each school and 280 from the senatorial district. On the whole, 160 male students which is 57% of the sample and 120 female students which is 43% of the sample were used for the study.

Questionnaire was used for data collection. The questionnaire is a developed standardized scale that was developed by Osarumwense (2015). The reliability of the instrument was .89 which shows that the instrument is highly reliable. The questionnaire consisted of two sections: A and B. section A sought for demographic data such as name of school, school ownership, sex, identification code to enable the researchers identify the Mathematics scores of students. Section B was based on items addressing on the study. Also, the Mathematics scores for the 2013|2014 third term results were collected from the vice principals of the schools used and the scores were standardized using Z and T scores to allow for comparison from one school to the other. The data obtained from the questionnaire Mathematics standardized scores were correlated using Pearson Product Moment Correlation for the formulated hypotheses. After which, hypothesis 3 was analyzed using Fishers' Z.

Results

Hypothesis 1: There is no significant relationship between learning strategies employed by male students and their achievement in Mathematics.

Table 1: Pearson Product Moment Correlation Statistics of Learning Strategies of Male Students and Academic Achievement in Mathematics

Correlation between learning strategies and achievement	
Pearson correlation	.662
Sig (2 – tailed)	.000
N	160

From Table 1, correlation coefficient of .66 was obtained which shows that the correlation between learning strategies of male students and achievement of students is high and positive. The P-value of .000 was also obtained which is less than the .05 Alpha level which shows that there is a significant relationship between learning strategies of male students and their academic achievement in Mathematics. Therefore, the null hypothesis is rejected. It is therefore concluded that the learning strategies employed by male students positively correlate with their academic performance.

Hypothesis 2: There is no significant relationship between learning strategies employed by female students and their achievement in Mathematics.

Table 2: Pearson Product Moment Correlation Statistics of Learning Strategies of Female Students and Academic Achievement in Mathematics

Correlation between learning strategies and achievement	
Pearson correlation	.696
Sig (2 – tailed)	.000
N	120

From Table 2, correlation coefficient of .70 was obtained which shows that the correlation between learning strategies of female students and achievement of students is high and positive. The P-value of .000 was also obtained which is less than the .05 Alpha level which shows that there is a significant relationship between learning strategies of female students and their academic achievement in Mathematics. Therefore, the null hypothesis is rejected. It is therefore concluded that the learning strategies employed by female students positively correlate with their academic performance.

Hypothesis 3: There is no significant difference in the relationship between learning strategies and students' academic achievement in Mathematics by sex.

Table 3: Fishers' Z Statistics on Differences in Relationship by Sex

Sex	N	R	Zr	Z-Critical	Z – calculated
Female	120	.696	.8673		
male	160	.662	.7928	1.96	.6143

Results in Table 3 shown that the calculated Z- value of .61 is less than the critical Z-value of 1.96 at .05 alpha level therefore, the null hypothesis is retained. It is therefore concluded that, there is no significant difference between the correlation coefficients computed for male and female students. Learning strategies have no differential influence on achievement in Mathematics for both male and female secondary school students. Therefore, learning strategies influence achievement in Mathematics of both male and female secondary school students in the same way.

Discussion of Findings

Findings revealed that the learning strategies employed by male students significantly influenced their achievement in Mathematics and that the learning strategies employed by female students significantly influenced their achievement in Mathematics. These findings are in line with the assertion of Thomson and Mascazine (1997) who noted that Learning of students is influenced by their learning style defined as the preference, tendencies, and strategies that individual exhibits while learning. Students that accept responsibility for their own learning, apply strategies to complement their dominant learning style and create, think and reflect about Mathematics concepts, engage in multiple instructional and learning strategies to maximize their learning are likely to do very well irrespective of their sexes (Osarumwense & Egberha, 2013). Therefore, the learning strategies employed by both male and female students are of paramount importance to effective Mathematics learning.

Findings revealed that learning strategies influence achievement in Mathematics of both male and female secondary school students in the same way. Peklaj and Pecjak (2002) and Iri (2013) found that meta-cognitive self-regulation skills of girls are higher than those of boys in Mathematics class. However, they found that gender did not have any impact on self-efficacy perceptions and self-regulation based learning strategies of the students. Bannert , et al (2015) found in their study that the level of the use of cognitive learning strategies in the aspect of memorizing, analyzing and explaining of concepts by female college students was significantly higher than those of male college students. It was also noted according to their findings that the gender of the college students has an effect on cognitive learning strategies and computer attitudes of the students. However, the findings of this study contradict the finding of Altun and Erden (2013) who found in their study *that "there is a difference between the gender in the use and*

benefit of learning strategies" (p. 2354). The difference in the findings of this study could be due to the fact that gender does not have any mental impact on achievement as the sex of a student has to do with the body make up and not intellectual ability of the individual. That is to say, male and female students can achieve high irrespective of their sexes when they utilize effective learning strategies to study (Osarumwense & Egberha, 2013, p.77).

Conclusion

Based on the findings of the study, it is therefore concluded that the learning strategies employed by both male and female students highly correlate with their achievement in Mathematics and that there is no significant difference in relationship by sex.

Recommendations

Based on the findings of this study, the following recommendations were made

1. Teachers, parents, and school counsellors should encourage students to employ the different learning strategies in studying Mathematics so as to have high achievement in Mathematics.
2. Parents, teachers and counselors should encourage students to use more of cognitive learning strategies in studying Mathematics as it contribute more to achievement.

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CAUSES AND CONSEQUENCES OF COMMUNICATION BREAKDOWN AMONG NEWLY MARRIED ADULTS IN KWARA STATE

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Abstract

This study examined the causes and consequences of communication breakdown among newly married adults in Kwara state. Six Hundred and Thirty (630) newly married adults were selected using stratified random sampling techniques. "Questionnaire on Causes and Consequences of Communication Breakdown among newly Married Adults" (QCCCBANMA) designed to find out the level of knowledge and perception of married adults in Kwara State on the causes of communication breakdown in marriage. Null hypothesis were generated and tested at 0.05 alpha level of significance using t-test and Analysis of Variance (ANOVA). The findings confirmed that distance between couples, mistrust, uncaring attitude and early marriage as major causes of communication breakdown among newly married adults while broken homes, physical illness, desire to commit homicide and extra marital affairs as serious consequences of communication breakdown among newly married adults in Kwara state. It was recommended among others that Parents should encourage their children on the need and importance of consulting marriage councellors when preparing to get married and Counsellor should organize regular workshops, seminars and pre-marital counseling to young people on marriage and its expectations so as to provide them with more information about successful marriage in life.

Keywords: Communication Breakdown, Newly Married Adults, Causes, Consequences.

Introduction

Marriage and family are of fundamental importance to man and his society to enjoy peace and harmonious living in life. However, in spite of these institutions to man, it is true that the concept of marriage is so elaborate and multidimensional as it involves a critical rite of passage that goes beyond man and woman living together. In marriage, communication is inevitable. Esere (2008) suggested that the best way to facilitate marital intimacy and improve relationships is by communicating fully and openly with one's spouse.

According Oniye (2008) a major problem in marriage, is failure to disclose attitudes, values and beliefs during courtship, which results in a lack of cognitive information that could prevent choices in which conflicting values system prevents closeness. Poor communication styles can cause irrevocable damage to relationships; affecting productivity, satisfaction, performance, morale, trust, self confidence and even physical health. Truly, communication is

the key to healthy relationships. It allows for expression of love and affection between married adults.

The greatest gift that family living can impact to all of its members is a gift of healthy communication. Although, couples speak with each other every day, but effective communication does not usually exist between couples and this alone might lead to several complicated marital problems. According to Starcarat (2009) communication can break down in a relationship for variety of reasons, including birth of a baby, financial strains and distrust in the relationship. Couples who do not live together for a long time also results in lack of communication and eventually total breakdown. The use of absolute statement, not listening up and prove to be always right can bring about communication breakdown in marriages (Spart, 2009).

In some homes, words are rarely exchanged except in anger in nagging or in demand. Sometimes the main, if not the sole communication between couples is through their children. When the children leave home, the couples live in chilly or perhaps frosty silence. Some wives are made to feel as though the husband is only interested in them for sexual satisfaction. The wife feel taken for granted, unappreciated and neglected. Even within marriages, sex can be separated from love, in the sense that sexual intercourse can be demanded and performed without sensitivity to the feelings of the other partner (Satway, 2006).

Oladuntoye (2002) opined that premature conclusion and interpretation of the other partner's expression and unnecessary keeping secrets from each other could interfere with spousal communication. Most times, just few of the newly married adults can explain why their marriages no longer work out within a very short period as it used to be in their mind before and on their wedding day. One can now reason with Yahaya (2008) that the transition of joy, affection and mutual concern of courtship to the realities of marriage can sometimes be traumatic. However, Akinade (1997) opined that early marriage are dysfunctional and problem prone which has a great risk of divorce or separation. Barry (1968) also noted that marriages contracted at an early age are much likely to end in divorce than those contracted by people who are more matured and whose personalities are more completely developed.

Communication is a huge word and while some people understand what it means, so some often completely fail in understanding its process and raw power to influence radical change in all areas of life, when communication among couples become strained or when non-existed, the entire foundation of the relationship is affected (Theravive, 2009). Breakdown in communication usually make love go unnoticed between two living spouses. The findings of these studies revealed that individuals who are separated from their spouses or divorced experience greater rates of psychopathology, physical illness, suicide, homicide, violence, and mortality from disease (Berkman & Breslow, 1983). Yahaya (2008) opined that ineffective communication between husband and wife is a key factor that causes divorce and marital instability.

Poor communication styles can cause irrevocable damage to relationships; affecting productivity, satisfaction, performance, morale, trust, self confidence

and even physical health. Esere (2008) observed that ineffective communication can lead to numerous family problems including excessive family conflict, ineffective problem-solving skill, lack of intimacy, weak emotional bonding. However, when there is marital instability, there is problem in upbringing and caring for the children, which may lead to increase in young people involvement in immoral or wicked behaviors.

In fact, couples may be involved in extramarital relationship which may bring into the family, infections such as HIV/AIDS and other sexually transmitted diseases. Akinboye (2002) opined that, marriages these days are so bad and the consequences so traumatic that some people tend to suggest that the evils of marriages are considerably more than the blessing. Esere (1997) noted that about forty percent (40%) of marriages contracted every year in Nigeria end up in divorce or separation. Writing on divorce, some of the consequences of divorce have been highlighted by many people including Cox (1968), these consequences include family disorganization, juvenile delinquency, weakening of the socio-economic stability of most families and existence of more criminals in the society.

The role of communication in building homes and harmonious society cannot be over-emphasized as the alarming rate of the consequences of communication problem is not a thing of joy. Although, it is true that every relationship and marriage will inevitably go through cycles of joyful and difficult times and every marriage have its own nature of communication but how couples go through their difficult time will define the quality of the relationship. In many cases, quite a few of the communication problems that cause divorce have existed in the couple's relationship long before they got married but it has been ignored and somehow hoping that marriage might offer a miraculous panacea but it does not. As a result, marriages experience multiple cracks throughout due to the strong inward thirst for their unmet needs.

Considering the aforementioned and explained problems associated with communication breakdown in marriage, one would discover that communication is an essential tool to determine both the success and failure of any interpersonal relationship. Newly married adults who establish good and sound communication style are likely to have pleasant relationship and marriage. In other words, for any relationship, especially marriage to be successful, effective communication is necessary. Therefore, the need for conducting a research to find out the causes and consequences of communication breakdown among newly married adults in Kwara state.

Method

From each of stratified selected Senatorial districts, respondents were randomly drawn from public organizations such as schools, secretariats, churches, mosques, N.Y.S.C Secretariat, hospitals, and local government

headquarters. A sample of 210 newly married adults was selected from each of the Senatorial districts, and eventually, 630 respondents were drawn from the three senatorial districts in Kwara State as sample for the study.

The major tool used for this research study is the questionnaire titled "Questionnaire on Causes and Consequences of Communication Breakdown among newly Married Adults" (QCCCBANMA) designed to find out the level of knowledge and perception of married adults in Kwara State on the causes of communication breakdown in marriage. The Section A was on the respondents' personal data, the Section B on the causes of communication breakdown in marriage while section C on consequences of communication breakdown in marriage. The parts B and C of the questionnaire require the respondents to make choices from four options such as: SA-Strongly Agree, A-Agree, D-Disagree, SD -Strongly Disagree.

The data collected was subjected to mean, standard deviation, t-test and Analysis of Variance (ANOVA), to compare the mean score of the variables and determine if there would be any significant differences between the variables at 0.05 alpha level.

Results

Table 1: Mean and Rank Order of Respondents' Expression of Causes of Communication breakdown in Marriage

Items No.	In my opinion, communication breakdown among newly married adults can be caused by :	Means	Rank
1	Unemployment	3.33	9th
2	Use of absolute statement by a partner when discussing	3.34	7th
3	Stress at work	3.37	6th
4	Economics conditions	3.34	7th
5	Mistrust	3.47	2nd
6	Selective listening	2.96	14th
7	Lack of attending skills to disturbing issues by partner	2.99	13th
8	Distance between couples	3.72	1st
9	Anxiety	3.33	9th
10	Defensiveness on the part of a partner	3.10	12th
11	Birth of the first baby	3.19	11th
12	Early marriage	3.43	4th
13	Nagging by a spouse	3.38	5th
14	Uncaring attitude	3.47	2nd
15	Feeling of invulnerability	2.96	14th

Table 1 revealed the mean and rank order of respondents' expression on the causes of communication breaking among newly married adults. The table indicates that item 8 is ranked first with mean score of 3.72 and it states that

distance between couples is a major cause of communication breakdown among newly married adults. It also indicates that items 14 and 5 were ranked 2nd with mean score of 3.47 each and it states that mistrust and uncaring attitude as second cause of communication breakdown among newly married adults while item 12 was ranked 4th with mean score of 3.43 stating that early marriage is another cause of communication breakdown among newly married adults.

Table 2: Mean and Rank order of Respondents' Expression of Consequences of communication Breakdown in Marriage

Items No.	In my opinion, communication breakdown among newly married adults can lead to:	Means	Rank
1	Marital conflict in the home	3.73	4th
2	Marital instability	3.72	6th
3	Separation	3.71	10th
4	Social problem	2.99	15th
5	hatred between couples	3.16	14th
6	Temptation	3.69	11th
7	Broken home	3.74	1st
8	Extra marital affairs	3.74	1st
9	Psychological problems	3.73	4th
10	Physical illness	3.74	1st
11	Desire to commit homicide	3.74	1st
12	Domestic violence	3.43	12th
13	Juvenile delinquency	3.35	13th
14	Termination of friendship	3.72	6th
15	Divorce	3.72	6th

Table 2 revealed the mean and rank order of respondents' expression on the consequences of communication breakdown among newly married adults. The table indicates that 7, 11, 10 and 8 were ranked 1st with mean score of 3.74 each and it states that broken homes, physical illness, desire to commit homicide and extra- marital as major consequences of communication breakdown among newly married adults.

Hypothesis 1:

There is no significant difference in the expression of newly married male and female adults on the causes of communication breakdown in marriage

Table 3: Mean, Standard Deviation and t-value of Respondents' Expression on the Causes of Communication Breakdown among Newly Married Adults on the Basis of Gender.

Gender	N	Mean	SD	Df	Cal. t- value	Crit. t-value
Male	320	59.8563	.60143	628	31.64*	1.96
Female	310	38.5581	12.0270			

*significant, $p<0.05$

The result of the t-test in Table 3 indicates that the calculated t-value is 31.64 which is greater than critical t-value of 1.96, the hypothesis is therefore rejected. Therefore, there is significant difference in the expression of newly married male and female adults on the cause of communication breakdown.

Hypothesis 2:

There is no significant difference in the expression of newly married male and female adults on the consequence of communication breakdown

Table 4: Mean Standard Deviation and t-value of Respondents on the Consequence of Communication Breakdown among Newly Married Adults on the Basis of Gender.

Gender	N	Mean	SD	df	Cal. t- value	Crit. t-value
Male	320	59.8563	.29200	628	18.81*	1.96
Female	310	38.5581	11.65045			

*significant, $p<0.05$

The result of the t-test in table 4 indicates that the calculated t-value is 18.808 which is greater than critical t-value of 1.96, the hypothesis is therefore rejected. Therefore, there is significant difference in the expression of newly married male and female adults on the consequence of communication breakdown.

Hypothesis 3:

There is no significant difference in the expression of newly married adults on the causes of communication breakdown in marriage on the basis of family type.

Table 5: Mean, Standard Deviation and t-value of Respondents' Expression on the Causes of Communication Breakdown among Newly Married Adults on the Basis of Family Type.

Family type	N	Mean	SD	Df	Cal. t- value	Crit. t-value
Monogamy	392	58.5561	2.99563	628	43.67*	1.96
Polygamy	238	34.2563	10.32905			

*Significant, p<0.05

The result of the t-test in Table 5 indicates that the calculated t-value is 43.67 which is greater than critical t-value of 1.96, the hypothesis is therefore rejected. Therefore, there is significant difference in the expression of newly married adults on the cause of communication breakdown on the basis of family type.

Hypothesis 4:

There is no significance difference in the expression of newly married adults on the consequence of communication breakdown on the basis of family type

Table 6: Mean, Standard Deviation and t-value of respondents' expression on the consequences of communication breakdown among newly married adults on the basis of family type.

Family type	N	Mean	SD	Df	Cal. t- value	Crit. t-value
Monogamy	392	59.5918	.80073	628	25.50*	1.96
Polygamy	238	44.5798	11.61731			

*Significant, p<0.05

The result of the t-test in Table 6 indicates that the calculated t-value is 25.50 which is greater than critical t-value of 1.96, the hypothesis is therefore rejected. Therefore, there is significant difference in the expression of newly married adults on the consequence of communication breakdown in marriage on the basis of family type.

Discussion

The four null hypotheses raised for this study were rejected. The findings of this study revealed that all the respondents agreed with the 15 identified possible causes of communication breakdown among newly married adults. The findings revealed that there is significant difference in the expression of male and female respondents on the causes of communication breakdown among newly married adults. This result agrees with the study of Jolin (2007) who stated that

when a partner expects the other to know how he/she feels without expressing himself/herself directly communication breakdown occurs in marriage as one cannot know what the other has in mind without saying it out. In addition to this, the study also discovers that there is significant difference in the expression of newly married male and female adults on the consequences of communication breakdown among newly married adults. This result also agrees with the opinion of Jolin (2007) who stated further that if every time the wife expressed her thought and her husband belittles her, criticizes her or makes fun of what she says, eventually she will stop talking to him. As a result, the wife may develop the feeling of hatred for her spouse and it might result to constant violence and marital conflict in the home.

There was significant difference found in the expression of newly married adults on the causes of communication breakdown on the basis of family type. This can actually be true because marriage is a process involving two complex people, yet it is possible to achieve a useful and workable relationship if the newly married are adequately exposed to learning methods of relating with each other. This was supported by Cohn (2009) who asserted that unless two people who are living together turned to each other's wave length, they might be (psychologically) miles apart. This result agrees with the submission of Yahaya (2008) who opined that ineffective communication between husband and wife is a key factor that causes divorce and marital instability.

Implications

The implication of this study is that counselling is an important aspect of human life without which the society will be in a confused state. Counseling enables people (especially couples) live a well-adjusted and happy life. The findings of this study will no doubt be of great advantage to counsellors in carrying out their work more effectively. Newly married couples will be properly guided on how to manage other social problems and discourage broken homes and as such raising a prosperous family. More so, couples between the ages of 20 years to 35 years should be enlightened more on the need and importance of good communication in marriage through programmes like workshop, seminar, and symposiums.

Conclusion

Based on the analysis of data and interpretation of results, there were significant differences on the causes and consequences of communication breakdown in the expression of newly married adults on the basis of gender and family type.

Recommendations

Communication breakdown has been found as negative contributor to the peace of growing families and societies at large. Therefore, considering the above, the study wishes to suggest the following recommendations to help reduce communication problems in marriages:

1. Strong love, patience, endurance and high sense of understanding must exist between intending and married couples in order to enable them handle any arising situation that seems unpleasant
2. Parents should encourage their children on the need and importance of consulting marriage councellors when preparing to get married
3. Counsellor should organize regular workshops, seminars and pre-marital counseling to young people on marriage and its expectations so as to provide them with more information about successful marriage in life
4. Religious bodies and leaders should take the center stage in advocating good moral attitude to others
5. The various non-governmental organizations (NGOs) and women societies in particular should establish and employ marriage councellors to educate women to be more patient, tolerant in their respective homes if not for their spouse sake but for the sake of their children and family at large.
6. The media should be more involved in the enlightment of the public on the importance of communication not only in marriage but in our everyday activities
7. Lastly, the research study therefore, recommended that government should provide more support to counseling profession in terms of finance and other related requirements that will be useful in actualizing the utmost goals and objectives of counseling profession.

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INFLUENCE OF FAMILY FACTORS ON THE CAREER PREFERENCE OF SENIOR SECONDARY SCHOOL STUDENTS IN BENIN CITY METROPOLIS

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Abstract

This study was designed to investigate the influence of family factors on the career choice of Senior Secondary School students in Benin City metropolis. To guide the study, 3 research questions were raised which were formulated into hypotheses. Descriptive survey research design was used for the study. The population of the study was all S.S. 2 students in the 3 Local Government Areas which make up Benin metropolis which are: Egor, Oredo and Ikpoba-Okha. The study sample consisted of 240 students carefully selected using the proportional stratified sampling technique from 7 selected public and private schools. A structured questionnaire titled Family Variables and Career Choice Questionnaire was used for data collection. The hypotheses where tested using t-test and z-test (proportion). The findings of the study revealed that the Socio-economic Status of the family, Family Involvement and Family Obligation significantly influence the Career Choice of Senior Secondary School Students in Benin City metropolis. It is recommended that significant career influences such as the family, government, school counsellors and school administrators need to be well equipped with correct and up to date information on career and work so as to positively guide students regarding their career preference.

***Keywords**:* Career Preference, Secondary School Students, Socio-Economic Status, Family Involvement, Family Obligation.

Introduction

Career preference is one complex decision that every individual has to make at one point in life. Theories of career proved that the period of adolescence is an important phase in the life of every child and it is at that period that important career decisions are made (Super, 1990- Exploration Stage; Ginzberg, 1951). Important career decisions, such as whether to attend University, Polytechnic, College of Education or a Technical School or enter the job force immediately after Secondary School are made during adolescence.

Despite the efforts of guidance counsellors posted to the secondary schools by both the Federal and State governments in Nigeria to carry out vocational guidance, most secondary school students were usually not vocationally mature by the time they leave secondary school and are unsure of the career path to follow. It is important to understand why this issue of career preference still lingers on till now. In time past, the career path of a child was almost hereditary, making it common practice to see children take after the trade of their parents (Ehigbor & Akinlosotu, 2016).

However, the society has become more complex and the demands for new skills are becoming more intense, therefore, the old paradigm would not fit into our contemporary reality. Nigeria is currently plagued with gross unemployment of the youths as the number of graduates joining the workforce yearly is more than the available jobs. Even though the government keeps promising providing jobs for its citizens, not much have been done over the years to reduce this trend. Recent studies carried out showed that the rate of unemployment in Nigeria is daily on the increase. As at 2007 the rate of unemployment in Nigeria stood at 4.9%, 10.44% in the last quarter of 2015 and is presently at 12.1% (International Labour Organisation, 2016). This alarming rate of increase in unemployment, rapid changes in information and communication technologies, increasing globalisation, and greater competition, are all contributing to a dramatic change in working life, which have impacted on career preference. Also, the false glamour painted by stars on the media coupled with the introduction of trade subjects in the Nigerian school curriculum, have heightened the problem of career preference as career options seems to be on the increase daily and this has not made the task of choosing a career for adolescents any easier.

The decision an adolescent makes regarding their career affects the rest of a person's life which makes it important to understand the social factors that influence the adolescent's career preference. Various social theories of career preference have shown that an individual's family of origin have a way of influencing the career preference that the individual makes. Tella (2003) was of the view that parents play an invaluable role in laying the foundation for their children's career. She stated that students of secondary and tertiary institutions are often not aware of the influence of their parents on their career preference and may accept the preference of their parents as theirs. A conflict therefore occurs when the child submits to his parent's preference while at the same time resenting his submissions as he becomes aware of his loss of independence and realises his area of interest.

In the context of human society, a family (from Latin: familia) is a group of people affiliated by recognized birth or marriage. According to Mezieobo and Opara, (2007), family is a group of persons united by the ties of marriages, blood ties and adoption. It consists of single household, interacting and intercommunicating with each other in their respective social role of husband and wife, mother and father, brothers and sisters, creating a common culture. It can also be put as a basic social unit consisting of parents and their children, considered as a group, whether dwelling together or not. Members of the immediate family include spouses, parents, brothers, sisters, sons and/or daughters. Members of the extended family may include grandparents, aunts, uncles, cousins, nephews, nieces and/or siblings-in-law.

In issues relating to career preference, adolescents are vulnerable to environmental influence including peers, media, culture, and especially parents and family. However, the home represents the first workplace of an adolescent and they commonly follow in their parent's footsteps, whether that results in taking over the family business or adding to a family's generation of doctors or

lawyers. Hairston (2000) stated that of the factors that influence career preference processes, family members, particularly parents, are the most influential determinant of career plans, occupational aspirations, and occupational expectations. This is also supported by Otto (2000), when he asserted that even if schools had the resources with which to meet young people's career guidance needs, neither teachers nor counsellors can replace the influence parents have on their sons and daughters' career plans.

According to Bandura (1995), adolescents tend to pursue those activities for which they are most efficacious or self-confident. For example, adolescents who are efficacious about their abilities to successfully pursue their educational development and broaden their vocational options are more likely to engage in tasks related to those pursuits. Self-efficacy, Bandura stated, is a learned behaviour that is predicted by adolescents' responses to four sources of experiential learning: personal performance accomplishments, vicarious learning (modelling by significant others), the emotional support of others, and others' verbal encouragement. The development of adolescents' self-efficacy leads to their preference of academic and career-related pursuits, their persistence toward successfully accomplishing these pursuits, and their successful performance of these pursuits.

Generally, parents' career aspirations aid children in selecting occupational goals, influence their knowledge of occupations, and familiarize them with occupational roles and requirements. Whether the child internalizes those aspirations is greatly determined by numerous values found within the home. Also the occupational orientations of parents familiarize children with occupational roles, while the value orientations of parents provide the learning environment that motivates the aspirations of children (Hairston, 2000).

Adolescent girls may be particularly vulnerable, compared to their male peers. Girls are likely to change their goals to suit their parents' wishes. Hairston, (2000) reported that in early adulthood, many African American children, particularly African American females are influenced by the aspirations of their mothers. The employment status of mothers, as well as the mother-child relationship influences the vocational outcomes of African American children. African American mothers influence their children by establishing middle class values of hard work and responsibility, placing emphasis on education, maintaining high expectations, and introducing cultural values.

Parent's perceptions of their children's interests and abilities and their specific expectations for their child's success can likewise influence preferences, beliefs, and career actions. Similarly, because secondary school students typically seek approval and family support regarding specific career decisions, these students will likely experience a struggle if their career decision does not align with familial expectations. It should also be noted that individuals expressing inadequate emotional support from their families are more indecisive when making career decisions (Chope, 2000). By the time parents figure out what the

world is about, they think about job security, financial security, and prestige. These values ultimately resurface when children begin considering career options. The career preference process of young people can be compared to rocks in a polisher. ―All kinds of people grind away at them…but, parents are the big rocks in the tumbler (Otto, 2000)

One of the ways the family can be of influence on the career preference of an adolescent is the socio-economic status of the family. The socio-economic status of a family has to do with their standing in the society based majorly on their level of income, education and occupation. Alika and Egbochuku (2009) were of the view that parental socio-economic level exerts a lot of influence on the educational attainment of the adolescent. Secondary school students born to professionals such as bankers, doctors, teachers, merchants usually have different upbringing from students born to peasant farmers, domestic workers, cleaners, labourers and petty traders and it would not be strange to see that the career preference a secondary school student makes is a reflection of the socio-economic status of their family of origin. Adolescents from high Socio-Economic Status families therefore, tend to choose vocations that they believe are prestigious and represents their family status even when such a vocation is against their own personal interest or capabilities while those from low Socio-Economic Status families tend to settle for vocations that are within the financial capacity of their parents irrespective of their own interest, skill or achievement. Research shows that students of low Socio-Economic Status families are engaged in less deliberate career development activities, receive less guidance in school and from home regarding career and encounter barriers that prevent them from attending any post-secondary institution. The preference of the students is limited because the financial requirement of some careers is high and they may settle for careers that they can easily finance, even when they have the abilities and academic requirements of another career.

In families where the parents are educated, there is much emphasis on going through higher institutions and even going further to post/graduate level and adolescents from such homes are encouraged to go into professional careers to suit the educational level of the parents. In some cases, students from such homes are not encouraged when they decide to go into a career path that does not seem to match the level of the parents. In families where the parents are less educated, they tend to emphasize on hard work in order to make money without much emphasis on going through higher institutions. In educated families, adolescents tend to benefit from the knowledge base of the parents as they get exposed to various career fields at a tender age, whereas their counterparts from less educated homes get little or no information on various careers from their parents (Adeyemi & Abimbade 2012).

Family involvement is the extent to which parents and other family members are interested in the career path of their children thus providing them necessary information. It is another factor of influence on the career preference of secondary school students. School counsellors face the difficult task of working with a large number of students. Therefore, many students complete secondary

school and are ignorant of university preference and career processes and decisions. These students tend to enrol into colleges or universities, hoping that time will allow them to make a decision and become certain about their future. As a result, these students waste time, money, and effort, not sure of what to expect from life (Amatea, Daniels, Bringman, & Vandiver, 2004). Hence, the family has a more involved role in developing their children's career path other than waiting for the school counsellors who are usually over tasked. Family involvement can either be a blessing or a curse to an adolescent as the family can be positively or negatively involved in the career preference of secondary school students. The family can be involved positively in the life of adolescents by encouraging them in line with their abilities, providing the necessary information about different careers or even taking them to places on excursions where they can learn about various careers.

There are times also where the family is totally not involved in the career decision of their wards. To this end, lack of family involvement in the life of an adolescent may affect their career preference as every child desire support from their family in virtually every important decision they make while growing up. Without parental approval or support, secondary school students are often reluctant to pursue or even explore diverse career possibilities.

Family obligation another factor of influence on the career paths of adolescents relates to a perspective that emphasizes submission to other individuals rather than individual rights and in this case submission to the family (Qin, 2010). It is believed that the family interests take precedence over individual member's interests, and children of the family are expected to obey elders and participate in maintaining the household. On issues of career preference, students tend to feel obligated to follow the preference of their parents as their own preference. Family obligation can function as a protection for secondary school students when they select careers since their career path has been streamlined to a relatively "safe" direction where networking and role models have been established for them by elders in their family system, thus facilitating family interdependency which can provide a powerful resource for students.

However, family obligation can also function as a barrier to adolescents' career preference in that obligations may hinder them from pursuing their true passion if their preferences are quite different from what elders have chosen for them, and thus create a source of stress and may lead to the decision of sacrificing one's interest to achieve family's interest. Some adolescents feel obligated to take up high paying careers so as to lift the status of their family. If the career preference of an individual has to be taken, certain factors needs to be considered, unfortunately some adolescents may feel too obligated to the family to consider these factors, leading to wrong career choices and future work frustration and dissatisfaction.

Nigeria's labour force by occupation is categorized into three major groups which are agriculture, industry and services. Agriculture consists of

occupations involving farming, fishing and forestry, industry includes occupations involved in mining, manufacturing, energy production and construction and services consists of those engaged in government activities, communications, transportation, finance and all other economic activities that do not produce material goods. According to 1999 estimates, the distribution is agriculture 70%, industry 10% and services 20%. Every child hopes to one day become part of this labour force. They grow up fantasizing about various occupations, having high hopes, wanting to give back to the society and raise families of their own.

The career preference secondary school students make while in school marks a major turning point in their lives. Hence, one has to make exhaustive career research before making a career preference so as to adjust with the evolving socio-economic condition in Nigeria.

In the wake of drastic unemployment and unemployability of our graduates in Nigeria most especially in Edo State and if our adolescents must be properly guided in making career decisions, it is pertinent to properly investigate the family factors that can influence their career choice. Hence, this study investigates the family factors that influence the career preference of adolescents in Benin City metropolis. This to a large extent may help to reduce the frustration in the workplace and rate at which students drop out of our higher institutions as a result of being frustrated by the careers they seemingly chose for themselves. The questions then are:

1. Does the Socio-Economic Status of the family influence the career preference of Secondary School students?
2. Does family involvement influence the career preference of Secondary School students?
3. Does family obligation influence the career preference of Secondary School students?

Hypotheses:

1. Socio-economic status of family will not significantly influence the career preference of Senior Secondary school students in Benin metropolis.
2. Family involvement will not significantly influence the career preference of Senior Secondary school students in Benin metropolis.
3. Family obligation will not significantly influence the career preference of Senior Secondary school students in Benin metropolis.

Method

The survey method was used for the study and all Senior Secondary School 2 students in Benin metropolis which consists of Egor, Oredo and Ikpoba-Okha Local Government Areas comprising of 15, 435 Students was the population of the study. 7 schools were selected using the proportional stratified sampling technique based on location and 112 females and 128 males were selected from the schools making a total of 240 respondents using the simple random technique. The Family Variables and Career Preference Questionnaire" (FVCQ) was used to collect data and the respondents were expected to respond to the items on a

modified 4-point Likert scale of strongly agree (4), agree (3), disagree (2), strongly disagree (1). Cronbach's Alpha was used for the reliability of the instrument with a calculated value was 0.763.

Results

Table 1: Age distribution of respondents

Age	Frequency	Percent
13	13	5.4
14	58	24.2
15	74	30.8
16	52	21.7
17	30	12.5
18	13	5.4
Total	**240**	**100.0**

Table 2: Sex distribution of respondents

Sex	Frequency	Percent
Male	128	53.3
Female	112	46.7
Total	**240**	**100.0**

Hypothesis 1: Socio-economic status of family will not significantly influence the career preference of senior secondary school students in Benin City metropolis.

Table 3: One-Sample t-test of SES of family and Career Preference of Students

Variable	N	Mean	Std. Dev.	Test Mean	t	Sig. (2 tailed)
Influence of Socio-economic status of family and career preference	240	16.07	4.53	20	-13.454	.000

α = 0.05

Table 3 shows a calculated t value of -13.454 and a p value of 0.000 testing at an alpha level of 0.05. The p value is less than the alpha value, so the

null hypothesis which states that the Socio-economic Status of the family will not significantly influence the career preference of senior secondary school students is rejected. Consequently, Socio-economic status of the family significantly influences career preference of secondary school students in Benin City metropolis. Since the t value is negative, it shows that students from a low SES are more influenced by the status of their family in their preference of career.

Hypothesis 2: Family involvement will not significantly influence the career preference of senior secondary school students in Benin metropolis.

Table 4: One-Sample t-test of Family Involvement and Career Preference of Students

Variable	N	Mean	Std. Dev.	Test Mean	t	Sig. (2-tailed)
Involvement	240	31.25	4.75	32.5	-4.087	.000

α = 0.05

Table 4 shows a calculated t value of -4.087 and a p value of 0.000 testing at an alpha level of 0.05. The p value is less than the alpha value, so the null hypothesis which states that family involvement will not significantly influence the career preference of senior secondary school students is rejected. Therefore, family involvement significantly influences career preference of secondary school students in Benin City metropolis.

Hypothesis 3: Family obligation will not significantly influence the career preference of senior secondary school students in Benin metropolis.

Table 5: One-Sample t-test of Family Obligation and Career Preference of Students

Variable	N	Mean	Std. Dev.	Test Mean	t	Sig. (2 tailed)
Family Obligation	240	29.37	3.71	22.5	28.654	.000

α = 0.05

Table 5 shows a calculated t value of 28.654 and a p value of 0.000 testing at an alpha level of 0.05. The p value is less than the alpha value, so the null hypothesis which states that family obligation will not significantly influence the career preference of senior secondary school students is rejected. Consequently, family obligation significantly influences career preference of secondary school students in Benin City metropolis. Since the t value is high, it shows that the more students are obligated to their families, the more influence the family has on their preference of career.

Discussion of Findings

The result revealed that Socio-economic Status of the family significantly influence the career preference of senior secondary school students as the result gave a calculated t value of -13.454 and a p value of 0.000 testing at an alpha level of 0.05 which led to the rejection of the null hypothesis. This finding agrees with Jamabo (2014) who found in his study that parental socioeconomic status has strong influence on adolescents' vocational aspiration and that adolescents' are well disposed to their parents' vocation. However, it is important to note that the influence is more with students from low SES families. This indicates that the lower the SES of an individual's family, the higher the influence on their career preference. Osa-Edoh and Alutu (2011) conducted a study on Parents' socioeconomic status and its effects in students' educational values and vocational choices. The findings indicated that there was significant difference in educational values and aspirations of students from different socio-economic status groups.

Testing for hypothesis 2, a calculated t value of -4.087 and a p value of 0.000 testing at an alpha level of 0.05 was obtained. The p value was less than the alpha value, so the null hypothesis which states that family involvement will not significantly influence the career preference of senior secondary school students was rejected. Consequently, family involvement significantly influences career preference of secondary school students in Benin City metropolis which is consistent with the study by Keller (2004) when he stated that family involvement is an important factor on career choices and that it influences the career preference of secondary school students. He went further to state that when students feel supported and loved by their parents, they have more skill in thinking about careers and the world of work than when they do not feel supported and loved. This is supported by Wikelund (2006), who pointed out that the more intensively parents are involved in their children's learning, the more beneficial are the achievement effects.

Emilija, Laura, and Natalija (2014) also studied the Relationship between Parental Involvement and Students Career Decision Self-Efficacy. Four research questions were formulated and 205 students of 11-12 grades from Vilnius and Trakai secondary schools participated in the main research. The results indicated that lack of engagement was negatively associated with career decision's self-efficacy.

Table 5 shows a calculated t value of 28.654 and a p value of 0.000 testing at an alpha level of 0.05. The p value is less than the alpha value, so the null hypothesis which states that family obligation will not significantly influence the career preference of senior secondary school students was rejected. Consequently, family obligation significantly influences career preference of secondary school students in Benin City metropolis. Since the t value is high, it shows that the more students are obligated to their families, the more influence the family has on their preference of career. This finding agrees with Qin (2010), who observed that family obligation functions as a positive contributing factor to interest-choice congruence. He hypothesized that interest would have stronger

association with career choice when perceived family obligations were low and interest would have weaker association with career preference when perceived family obligations were high. However, this was rejected as the hypothesis proved that family obligation had a positive relationship with interest-choice congruence. This indicates that family obligation influences the career choice of students in line with this present study. Also, in a study carried out by Nadya, Shin-ye, Arpita, Wen-hsin, and Catia (2016), it was revealed that family obligation influences the career decision making of individuals.

Conclusion

The conclusion drawn from this study is that Socio-economic Status of the family, Family Involvement and Family Obligation influences the Career Choice of Senior Secondary School Students in Benin City metropolis. In order words, the family has a role to play in the career path of secondary school students.

Recommendations

It is recommended that career education needs to start at a very early age by every stakeholder. However, important consideration should be given to the interest, skill and abilities of the individuals so as to set early career goals and make appropriate career decisions. The family needs a heightened awareness that their responsibilities to their children doesn't end in providing their basic needs of food, clothing and shelter, but also they need to be more positively involved in the career path of their children in making informed life decisions such as the career preference by exposing them to various options in line with their personality make-up and providing the necessary information to these students so they can make informed career decisions.

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