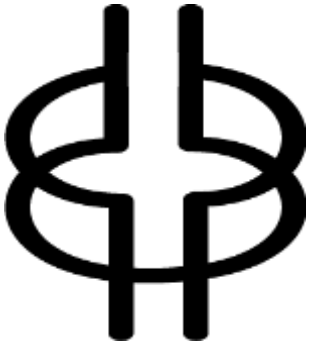
# Ghana Journal of Education: Issues and Practice (*GJE*)



NYANSAPO – "Wisdom Knot"

Symbol of wisdom, ingenuity, intelligence and patience

# Ghana Journal of Education: Issues and Practice (*GJE*)



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# Ghana Journal of Education: Issues and Practices (*GJE*)

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**Editorial Comment**

The Ghana Journal of Education: Issues and Practice (*GJE*) is a peer reviewed journal which focuses on classroom practice and policy issues that affect teaching and learning. In this volume, researchers and authors have contributed a wealth of high quality and informative material to the journal. This volume contains seven articles that have gone through a peer review process at three levels by independent reviewers.

Akosua Serwaa-Adomako Boateng and Kwesi Nkum Wilson report on a study that investigated whether education level and occupational status of parents in the Agona West Municipality in the Central Region of Ghana have any significant relationship with parental involvement in adolescent academic achievement, using the cross-sectional survey and correlational research designs. The findings from their study showed amongst others, that, the educational level of both mothers and fathers had a significant relationship with parent's ability to engage in school-based activities of pupils as well as encourage the pupils with respect to their academic achievement. However, occupational status of only fathers had significant relationship with parent's ability to involve in school-based activities. The authors provide guidance implications and recommendations based on the findings from the study.

Etheldreda C. Intsiful and Ernest Kofi Davis used a sequential mixed methods design to investigate linguistic influences on junior high school two (JHS 2) students' Mathematics word problem in the Cape Coast Metropolis in the Central Region of Ghana. The authors observed from the results of their study that students had very weak ability in Mathematics word problem solving. Their performance declined as the difficulty level of the questions increased from primary to JHS. The authors recommend amongst others, the need for Mathematics teachers to pay extra attention to the teaching of word problem solving in Mathematics and in-service and pre-service providers to pay attention to Mathematics word problem in professional development programmes.

Justice Ray Achoanya Ayam employed quantitative research methodology with a well-validated research instrument to investigate the reform in the public university financing scheme, using Ghana's higher education transformation agenda as a case. The author observed

statistically significant relationship between the combined effects of the variables, while three variables out of the seven were found be significant in predicting best fit equation for financial sustainability. The study recommends to Ministry of Education (MOE) and the National Council for Tertiary Education (NCTE), a review of the funding policy direction with a precise focus on addressing Ghana's higher education infrastructural deficit, skills gap, improving research, science and technology.

Mohammed Usman Sani, Jimada Yahaya Danladi and Lopwus Mut'ngap Amos used a survey design to assess the availability of facilities and equipment influencing the implementation of the physical education curriculum at the secondary school level in Nigeria. The findings from their study showed that Physical Education facilities and equipment influence the implementation of secondary schools Physical Education curriculum in Nigeria. The authors recommend the need for the Federal Ministry of Education in Nigeria in conjunction with the States Ministry of Education to provide physical education facilities and equipment for the implementation of Physical Education curriculum in Secondary Schools in Nigeria.

Charles Omane-Adjekum, Kenneth Asamoah-Gyimah and Joseph Tufuor Kwarteng used the descriptive survey design to assess students' perceptions of the Bachelor of Education (Accounting) programme at the University of Cape Coast. The authors used the Context Input Process Product evaluation (CIPP) model as their main framework for the study. The study found amongst others that students perceived the Bachelor of Education (Accounting) programme to be satisfactory to the context rubric of the CIPP model. However, it was found that the programme was not satisfactory with respect to the input rubric of the CIPP model. The authors recommend amongst others the need for the programme designers in Accounting Education at University of Cape Coast to include courses that will expose students to the use of current accounting software used in Ghana such as Tally Accounting.

Amaechi Appolus Azunwanne and Obiweluozor Nkechi used a descriptive survey research design to assesses the impact of human resource management on teachers' productivity in colleges of education in the North-central geo-political zone of Nigeria. The findings from their study showed that recruitment processes, training and

development and staff welfare have a significant impact on teachers' productivity in colleges of education. The authors recommend, among others, the need for administrators of colleges of education in the research locale to follow the stipulated due process in recruitment, increase staff training and development, and improve on staff welfare so as to motivate teachers to greater performance, which will in turn increase productivity.

Kunloye Rotimi William, Olokooba, Issa Nasiru and Abdulsalam Alliyu Ayodele used descriptive survey design to examine students' perception of difficulty levels of the Nigerian Senior School Civic education Syllabus (SSSCES) and the factors associated with their perceptions. The results from the study showed that the Senior Secondary School Civic education Syllabus (SSSCES) topics are perceived by students to be of different difficulty levels ranging from difficult to very simple, majority of them being predominantly very simple. The observed difficulty levels were associated with inadequate textbooks, teachers' presentation of lessons and wide content coverage. The authors conclude that Civic education is learnable and curriculum objectives are achievable and recommend that teachers should enhance the learnability of the few perceived difficult topics by students through the use of predominantly learner-centred strategies when teaching the subject.

The editorial team is grateful to all reviewers for the useful feedback they offered on the papers they reviewed and the level of professionalism they exhibited through the review process. To the College of Education Studies, University of Cape Coast, the team would like to say a big thank you for the continual financial and logistical support which has made the publication of *GJE* possible.

**Ernest Kofi Davis, PhD**
**(Editor-in-Chief)**

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# Relationship between Educational and Occupational Status of Parents and their involvement in Adolescents' Academic Achievements in Agona West Municipality

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## Abstract

The study was conducted to know whether education level and occupational status of parents in the Agona West Municipality of Ghana have any significant relationship with parental involvement in adolescent academic achievement. The cross-sectional survey and correlational research designs were employed and data were collected with the use of a structured questionnaire. The questionnaire was self-administered to the 310 basics 8 pupils that were purposively sampled from the 6 randomly selected schools. Findings revealed that, in the Agona West Municipality, education level of both mothers and fathers had a significant relationship with parent's ability to engage in school based activities of pupils as well as encouraging the pupils with respect to their academic achievement. However, occupational status of only fathers had a significant relationship with parent's ability to involve in school based activities. Additionally, no significant relationship between a parent's occupational status and their ability to encourage pupils with respect to their academic achievement was found. The authors provide guidance implications and recommendations based on the findings from the study.

**Key words:** academic achievement; adolescent pupil; education level; occupational status; parental involvement.

## Introduction

The holistic education of every child involves the active participation of all stakeholders including the community, teachers, guidance counsellors, the child as well as parents/guardians (Anon, 2015). The community, for example, is to instil the right values in

learners, involve them in community life as well as support families and pupils in need of assistance. Teachers are not only to teach the curriculum content to their pupils but also to make it practical in order for pupils to easily apply in their daily living. Guidance counsellors are also to actively partake in caring deeply for the development of pupils, instil in them the desire to learn continuously as well as motivate and help them to find and develop their individual potentials in order to effect positive change in the world. The pupil is also expected to cherish education and be eager to get more from what education offers, develop civic responsibilities as well as have a national identity and pride. As stated by Anon (2015), parents are not left out as educational stakeholders. They are to take the ultimate responsibility of bringing up their children in the right way, being interested in their schooling and everything that has to do with the development of their children.

Currently in Ghana, it appears a large number of children suffer from developmental challenges, especially during their adolescent stage. Although these developmental challenges are of a transient nature and bound to occur in one's life as part of human development (Gupta, Verma, Singh, & Gupta, 2001) their severity, if not controlled, could have an adverse effect on children's behaviour and overall development. Moreover, in some instances, uncontrolled behavioural problems could not only impose adverse impact on the academic achievement of children but may lead to unavoidable security risk that can hamper overall community progress. In the Ghanaian economy, teachers are often times blamed when children exhibit behavioural characters that cause them to perform poorly in their academic development, although the lack of parental involvement could have a bearing on their performance (Lee & Bowen, 2006; Pena, 2000). Of course, teachers have their role to play; however, persistent involvement of parents in the academic development of children provides teachers with the needed support necessary to facilitate children's learning, both at home and in the classrooms. Most importantly, unlike teachers, parents have weighty impact on the social, moral, cultural, emotional and physical development of children hence their "proper" participation in the academic maturation of their children is more than just cognitive training. Unfortunately, especially in the Ghanaian context, the role of parental involvement in the academic achievement of pupils has not been empirically assessed in the existing

literature. This study capitalizes on this gap by examining whether the academic status and occupational level of parents has a significant relationship with their active participation in the academic development of children in Agona West Municipality.

Elsewhere, literature on the relationship between parental involvement and the academic achievement of pupils seem to be unsettled and controversial. On one hand, it is argued that parents who involve themselves in the education of their children have a positive bearing on their children's academic achievement and overall development (Seal, 2010; Houtenville & Conway, 2008; Nye et al, 2006; Jeynes, 2005; Desforges & Abouchaar 2003; Myeko, 2000). On the contrary, it is found out that though parents desire to be involved throughout the academic journey of their children, the educational history, occupation status and limited finances of parents constrain this desire. Lee and Bowen (2006) point out that parents who have higher college education are very much involved in the academic achievement of their children. In particular, well-educated parents are argued to pay much attention to the meetings and programmes held in the school of their children, have more school related discussions with their children at home and mostly have higher academic expectation for their children (Lee & Bowen, 2006). In a related study, Pena (2000) provided a contrasting argument that learned parents rarely had the luxury of time to visit the school of their child to find out about their child's academic progress and other school related happenings. The study adds that parents with little or no educational background do not engage in the education of their children. Thus, because of their low parent efficacy level in helping their children academically, they feel they are incapable of helping with homework or other school related events and programmes (Lee & Bowen, 2006; Pena, 2000). Pupils born of Southeast Asian refugee parents are said to have no parental involvement in their schools and completion of their assignments because; the parents have no formal education and therefore do not feel competent to assist their children in the area of their academic work (Hill & Taylor, 2004).

In the literature, the extent of parental involvement has been strongly linked to the employment status of parents, although the actual effect is inconclusive. In particular, when a parent is unemployed, that parent may dedicate their time resource into the education of the pupil.

They may be able to motivate or assist their children to complete school assignment as well as attend all school programmes. However, it is argued that a pupil with both parents being unemployed will be hindered with regard to their development because the parents will be stressed out in trying to find a job and therefore may not be able to engage in the education of the pupil. Some basic needs of the pupil may not be easy to provide due to parents employment status (Levine-Rasky, 2009). Boateng (2015), for instance, noted that, during the energy crises in Ghana in 2015, about 350 people lost their job, which had an adverse consequence on school going children, as redundant workers could not afford to provide for their family. Moreover, parents with low socioeconomic status are reported not to be engaged in the academic achievement of their children whether at home or in their school irrespective of the expectations they may have for their children concerning their academic achievement due to their inability to financially support the education of their children (Louie, 2001). On the other hand, parents belonging to the high socioeconomic class who are unable to be personally involved in the academic achievement of their children are said to hire the services of private teachers for their children (Lew, 2007).

Indeed, the missing link between parents and their children's educational development poses a challenge, especially in developing countries, yet attention has not been given to this issue in the extant literature. In Ghana, a reported case of lack of parental involvement in the education of pupils is pronounced in Agona West Municipality. The Ghana Statistical Service (2014) reports that, only about 40% of parents had attained education beyond junior high school level in the Municipality while less than 30% of both mothers and fathers were not gainfully employed. Related reports add that there is little to no parental involvement in the academic achievement of adolescent pupils (Ghana News Agency, 2012; 2009). Additionally, from the year 2006 to 2009, a school at Agona Kukurantumi had none of its pupils going to the senior high school since the school repeatedly scored zero percent in the basic education certificate examination (B.E.C.E). Although much of the blame were put on the head of school, the head of this school bemoaned that the poor performance of pupils in the junior high school was due to lack of parental involvement in the education of the pupils. As a result, the pupils frequently absented themselves from school and

engaged in several activities when out of school. Other pupils who had no parental involvement in their education had to raise money to support their education by selling coconut in Tema (Ghana News Agency, 2009).

Unlike places such as the United States of America where schools have school based policies as measures to enhance on parental involvement (Paige & Gibbons, 2003; Hornby, 2011), not much is known on the measures Junior High Schools in the Agona West Municipality have implemented to enhance on parental involvement though they keep speculating that parents are not involved in the academic achievement of Junior High School pupils. The Ghanaian economy has reformed their education enrolment policy and implemented a free SHS policy where students can go to the secondary school for free. Although this policy will increase the number of enrolment, the question is whether all stakeholders will play their vital role to ensure the quality of developing pupils as they attend schools. While the role of teachers has been found to have a direct bearing on students, it is relevant to ascertain whether education level and occupational status of parents has a significant relationship with parental involvement in the academic achievement of pupils in Agona West Municipality of Ghana.

This paper contributes to the ongoing debates by examining the role of parental involvement in the children education in a community where parents are known to engage in several economic and social activities-Agona West Municipality of Ghana. In this community, the cycle of blaming teachers whenever adolescent pupils do not excel academically is soaring. However, the question of whether such poor student performance is the result of the absence of parental role in the education of their children is unclear and this study fills the knowledge gap.

**Research Questions**

Specifically, the paper sought to answer the following research questions:

1. What is the educational level of parents of Basic Eight pupils at Agona West Municipality?
2. What is the occupational status of parents of Basic Eight pupils at Agona West Municipality?

3. What is the parental involvement type engaged in by parents of Basic Eight pupils in the Agona West Municipality?

**Research Hypothesis**

$H_O$: There is no significant relationship between the education level and occupational status of parents and their ability to be involved in the academic achievement of junior high school pupils in the Agona West Municipality in Ghana.

$H_1$: There is a significant relationship between the education level and occupational status of parents and their ability to be involved in the academic achievement of junior high school pupils in the Agona West Municipality in Ghana.

## Methods

**Research Design**

In order to achieve the purpose of the study, the cross-sectional survey and correlational research designs were used for the study. The cross-sectional survey design was most suitable for the study since the study sought to determine the occupational status and educational level of parents as well as to determine the involvement type parents in Agona West Municipality were engaged in based on the opinions of the junior high school pupils. The correlational research design was also employed for the study since it allows a researcher to identify the relationship that exists between two or more variables (Creswell, 2002). This research design was used since the study sought to find out if there exists a relationship between a parent's ability to be involved in the academic achievement of pupils in Agona West Municipality and a parent's education level and occupational status.

**Population**

With target population in research being the entire group of people from which information is needed (Crowther & Lancaster, 2008), all pupils in all junior high schools in the Agona West Municipality can be said to be the target population for the study that was conducted in the Agona West Municipality. However, since it was not feasible to include all the target population, an accessible population based on the inclusion criteria listed below was used for the study:

i. A pupil in basic eight.

ii. A pupil who had basic seven results in the present school enrolled in.
iii. A pupil who wrote basic seven examinations in all nine subjects.
iv. A pupil who lived with a male and female parent figure.
v. A pupil who knew the occupational status and highest education level of parents
vi. A pupil who had a parent assent to their being part of the study.

**Sampling**

Based on geographical location of Junior High Schools in the Agona West Municipality have been grouped into three clusters: Circuit A, Circuit B and Circuit C. Using Stratified sampling, schools in each of the three circuits were grouped into two based on their performance: high performing and low performing schools. This was done using the 2016 basic education certificate examination ranking analysis in the municipality. From each of the two strata in each of the three circuits, a school was randomly selected. This implies that a total of six junior high schools constituting three high performing schools and three low performing schools were selected for the study. Using purposive sampling, all the accessible pupils in the six schools that were randomly sampled were used for the study. A total of 310 junior high school pupils constituted the sample of basic eight pupils for the study since they met the inclusion criterion for the study.

**Measures**

Data were collected with the use of a structured questionnaire. The questionnaire was pilot tested at Apam, Gomoa West, in the Central Region of Ghana since the district shares similar characteristics as the study area; Agona West Municipality. The alpha coefficient for the various dimensions measuring parental involvement in the study was above the threshold of 0.65. This depicted that the instrument was internally consistent as stipulated by Goforth (2015).

**Data Analysis**

For the research objectives, descriptive statistics was used. Specifically, data for these objectives were presented with the use of

tables. To test and analyse the research hypotheses, correlational analysis was conducted.

**Presentation, Analysis and Discussion of Findings**

Presented below are the findings of the research study that was conducted at Agona West Municipality of Ghana as guided by the research objectives and formulated hypotheses.

**Background Information on Respondents**

A brief description of the 310 pupils that participated in the study is presented in this section. Junior high school pupils and not their parents were used as respondents because, they are the recipients of whatever involvement type their parents engage in and are best to tell if their parents are involved in their academic achievement or not. Table 1 shows the proportion of males to females as well as the age range of pupils that participated in the study.

**Table 1: Demographic Information of pupils used for the study in Agona West Municipality**

| Variables | Categories | Percentage |
|---|---|---|
| Sex of pupils | Male | 52 |
| | Female | 48 |
| Age Range of Pupils | 10-12years | 13 |
| | 13-15years | 67 |
| | 16-18years | 20 |

(Source: Field Survey, 2017)

From Table 1, it can be seen that more than half of the 310 basic eight survey respondents (52%) were males while the remaining 48% of the respondents were females. Findings from the survey indicates that the proportion of males from the selected schools that took part in the survey were more than the proportion of females. This corroborates the report by Ghana Statistical Service (2014) which stated that though more females existed in the Agona West Municipality, there were more males as compared to females within the age bracket of 0-19 years who were in school. Also, it is evident from West African Examinations Council (2017) that more males than females always sit for the Basic Education Certificate examination in the Central Region of Ghana where the Agona West Municipality is situated.

The ratio of males to females in the survey indicates that the number of males is still higher than females in some Ghanaian basic schools though positive progress has been made to bridge the gap between males and females most especially in our basic schools (Zaney, 2017). It can be confirmed that policies such as Campaign for Female Education-Ghana and Girl-Child Education Unit of the Ghana Education Service that exist to encourage female education though effective have not fully met their objectives as stated by Zaney (2017).

It is also observed from the results in Table 1 that, 13% of the 310 basic eight pupils fall within the 10 to 12 years age group. The outcome of the survey shows that 67% of basic eight pupils fall within the 13 to 15 years age group. The remaining 20% were from 16 to 18 years of age. As expected, a large percentage (67%) of the respondents belonged to the 13-15 years age bracket. It is generally observed in the Ghanaian educational setup that most pupils begin basic one at age 6 and will, therefore, turn 13 years in basic eight. It can therefore be said that most of the pupils surveyed in the Agona West Municipality have never repeated any class since their age bracket corresponds to their educational level. Findings with respect to whether their parents involvement in their academic achievement is constrained or not will enable timely measures to be taken to prevent them from falling out of school as stipulated by some earlier researchers (Maithly & Saxena, 2008; Catheline, 2005; Gupta et al., 2001).

**Research question 1: What is the Educational level of Parents of the Basic Eight Pupils at Agona West Municipality?**

Findings on the highest education level of the parents of pupils that were used for the study is presented on Table 2. This was relevant since the study sought to find out if a significant relationship exists between the education level of parents and their ability to be involved in the academic achievement of pupils.

**Table 2: The highest educational level of pupils' parents in Agona West Municipality**

| Variables | Categories | Percentage |
|---|---|---|
| Highest Education level of Pupils' Mothers | Up to JHS | 62 |
| | Beyond JHS | 38 |
| Highest Education level of Pupils' Fathers | Up to JHS | 58 |
| | Beyond JHS | 42 |

(Source: Field Survey, 2017)

As illustrated in Table 2, majority of the parents have attained up to only junior high school education. However, more fathers than mothers have furthered their education beyond junior high school. In particular, 42% of fathers have education beyond junior high school while only 38% of mothers have attained education beyond junior high school. The remaining 58% of fathers and 62% of mothers have attained education up to junior high school. This is in consonance with a report by Ghana Statistical Service (2014) which clearly indicated that 69% of parents that cohabited had attained up to only junior high school education while 60% of parents that had married had also attained up to only junior high school education. It is therefore relevant to find out if the educational level of parents in the Agona West Municipality has a significant relationship with their involvement level as stated in some research findings (Lee & Bowen, 2006; Hill & Taylor, 2004; Pena, 2000).

**Research question 2: What is the Occupational Status of Parents of the Basic Eight Pupils at Agona West Municipality?**

Another key variable that is cited in literature to affect parental involvement in the academic achievement of pupils is the occupational status of parents. In view of that it was relevant to find out the occupational status of the parents of respondents in order to ascertain if there was any relationship between occupational status and parental involvement in Agona West Municipality of Ghana. Findings on the occupational status of the parents of pupils that were used for the study is presented in Table 3.

**Table 3: The occupational status of pupils' parents in Agona West Municipality**

| Variables | Categories | Percentage |
|---|---|---|
| Occupational Status of Pupils' Mothers | Working | 85 |
| | Not Working | 15 |
| Occupational Status of Pupils' Fathers | Working | 90 |
| | Not Working | 10 |

(Source: Field Survey, 2017)

Findings from the survey as shown on Table 3 clearly depict that 90% of the fathers of the basic eight pupils are working while 10% have no employment. Also, 85% of mothers are engaged in an occupation while 15% are unemployed. This depicts that a greater percentage of parents of the respondents used for the survey in the Agona West Municipality are employed. This also clearly shows that 80% and over of parents that cohabit or are married in the Agona West Municipality are economically active. With a majority of the parents being employed, it is relevant to know if their occupational status has a significant relationship with their ability to be involved in the academic achievement of their adolescent children as stated in previous research findings (Rhee, 2009; Sohn, 2007).

**Research question 3: What is the parental involvement type engaged in by parents of Basic Eight pupils in the Agona West Municipality?**

Relevant to this study are parent involvement practices such as the ability of parent to encourage their child to pay attention to their studies as well as parents ability to engage in all school based activities of their children. Table 4 presents the survey findings with respect to whether parents in the Agona West Municipality are involved in the academic achievement of pupils or not.

**Table 4: Parental involvement types of parents of basic eight pupils in Agona West Municipality**

| | | Agree | Disagree |
|---|---|---|---|
| Encouraging the pupil | Mother | 98% | 2% |
| | Father | 91% | 9% |
| School based Involvement | Mother | 55% | 45% |
| | Father | 37% | 63% |

(Source: Field Survey, 2017)

From Table 4, it is seen that out of the two types of involvement, in order of ranking, most pupils in the Agona West Municipality agreed that they receive encouragement from their parents (98% of mothers and 91% of fathers) concerning their academic achievement. Only 55% of mothers and 37% of fathers according to the pupils that participated in the study engage in school based parental involvement activities. To answer the research question, it is noticed that unlike American and European parents that engage in school based involvement practices due to the effective implementation of both national and school based parental involvement policies (Seal, 2010), parents in the Agona West Municipality prefer to encourage their children concerning their academic achievement other than being engaged in school based involvement practices. It is not far from true that almost all parents in the Agona West Municipality engage in encouraging their adolescent children with respect to their academic achievement in order that they succeed academically and have a better life in future. With a minimum daily wage of 8.80 cedis in Ghana (Brakopowers, 2016), every parent would desire that their adolescent children excel academically in order to maximize their chance of good living in future. Hence their encouraging pupils in the Municipality with respect to their academic achievements.

**Hypothesis Testing**

Using Correlational analysis, this section presents the findings with respect to the hypotheses that were formulated for the study.

$H_O$: There is no statistically significant relationship between the education level and occupational status of parents and their ability to be involved in the academic achievement of junior high school pupils in the Agona West Municipality in Ghana.

$H_1$: There is a statistically significant relationship between the education level and occupational status of parents and their ability to be involved in the academic achievement of junior high school pupils in the Agona West Municipality in Ghana.

Displayed in Table 5 are the findings with respect to the hypotheses.

**Table 5: Correlation between occupational status and education level of parents and their involvement in the academic achievement of pupils in the Agona West Municipality**

| Variables | Coefficients | |
|---|---|---|
| | Pearson Correlation | Significant level |
| Mother Education level*Mother Encouraging the pupil | 0.12 | 0.04 |
| Mother Occupational status*Mother Encouraging the pupil | -0.03 | 0.58 |
| Mother Education level*Mother School based Involvement | 0.65 | 0.00 |
| Mother Occupational status* Mother School based Involvement | 0.05 | 0.36 |
| Father Education level*Father Encouraging the pupil | 0.24 | 0.00 |
| Father Occupational status*Father Encouraging the pupil | -0.11 | 0.06 |
| Father Education level*Father School based Involvement | 0.64 | 0.00 |
| Father Occupational status*Father School based Involvement | -0.42 | 0.00 |

(Source: Field Survey, 2017)

The results presented in Table 5 indicate that there is no statistically significant relationship between occupational status of mothers and their involvement in encouraging their adolescent children with respect to their academic work as well as engaging in school based involvement activities respectively (p= 0.58, 0.36). Also there exist no statistically significant relationship between occupational status of fathers and their involvement in encouraging their adolescent pupils that participated in the study (p= 0.06).

There was however a small positive and significant correlation between mothers and fathers educational level and their involvement in encouraging the junior high school pupils respectively (r= 0.12, p= 0.04; r= 0.24, p= 0.00). Also, there was a strong positive and significant correlation between the education level of mothers and fathers and their involvement in school based parental involvement practices respectively (r= 0.65, p= 0.00; r= 0.64, p= 0.00). Occupational status of

only fathers also had a moderate negative but significant correlation with a fathers involvement in school based parental involvement activities (r=-0.42, p= 0.00).

**Discussion**

To answer the research hypotheses, the outcome of the analysis shows that the educational level of both mothers and fathers had a significant relationship with their ability to encourage their child concerning their academic achievement. For school based parental involvement, though only the educational level of mothers had a significant relationship with their ability to get engaged in school based involvement practices, both the educational level and occupational status of fathers had a significant relationship with their ability to engage in school based involvement practices.

According to Lee & Bowen (2006), parents who have higher college education pay much attention to meetings and programmes organized in their children's schools and actively partake in discussions that go on within such meetings. Since only a small percentage of parents in the Agona West Municipality have attained educational level higher than junior high school (See Table 2), that is, higher than the present educational level of the pupils, it confirms why a majority of the parents are not engaging in school based parental involvement.

Also, Rhee (2009) and Sohn (2007) stated that most parents who are economically active had no luxury of time to engage in school based involvement practices such as attending school organized programmes or inquiring about their child's academic achievement from their school. With the Ghanaian traditional home having the role of a mother as being responsible for the general wellbeing of household members and the father being the breadwinner (Quarco, 2008), it explains why occupational status in the Agona West Municipality has no significant relationship with a mother's ability to engage in school based parent involvement activities but had a significant relationship with the ability of fathers to engage in school based parent involvement practices. With the traditional role of fathers being the financiers of the home and over 90 percent of parents in the Agona West Municipality being employed in the informal private sector (Ghana Statistical Service, 2014), it explains why a greater proportion of these parents are unable to engage in school based parent involvement practices.

This is because workers in the informal private sector either earn less or have no stable income and therefore have to engage in multiple jobs or work more hours in order to make ends meet (Richwine, 2012; Osei-Boateng & Ampratwum, 2011). Those in government sectors are also expected to work from 8 am in the morning to 5 pm in the evening and this becomes a challenge for them to have the luxury of time to be able to attend school organized programmes that are usually organized within working hours of parents.

From the survey findings, a parent's ability to encourage their child concerning academic achievement had a positive and significant relationship with the educational level of both parents. This is difficult to explain since majority of the parents in the Agona West Municipality had educational level not beyond that of the present academic level of their children and yet encouraging pupils with respect to their academic achievement was the most practised type of parental involvement in the Municipality. With over 90 percent of parents in the Agona West Municipality employed in the informal private sector due to their low educational level (Ghana Statistical Service, 2014) it is agreeable that parents will engage in verbally persuading their children to excel academically in order to have better employment stands in future than they have.

## Conclusions

From the study, it is concluded that, in the Agona West Municipality of Ghana, there exist a relationship between the education level of both mothers and fathers and their ability to be involved in encouraging their children as well as engaging in school based involvement activities. However, occupational status of only fathers also had a significant relationship with a father's ability to engage in school based involvement activities.

## Guidance Implications and Recommendations

With the economic pressures imposed on parents due to low income (the minimum daily wage is 8 cedis 80 pesewas in Ghana) (Brakopowers, 2016), it explains why most parents in the Agona West Municipality as indicated by the findings, are unable to encourage their children with respect to their academic achievement or get engaged in school based parental involvement activities in their child's school.

Parents rather invest a greater portion of their day in their occupation in order to earn enough to finance activities in the home. However, since fathers who are mostly the breadwinners in our traditional Ghanaian homes (Quarco, 2008) have significant influence in the academic achievement of pupils in the Agona West Municipality, it is recommended that measures should be put in place to get them involved if improving the academic achievement level of the pupils in the Agona West Municipality is of great interest. Parent education programmes should be designed and organized to train parents, especially fathers, on how they can effectively engage in school based parent involvement practices as well as encourage their children concerning their academic achievement.

Such educational programmes will enlighten parents to understand the developmental stage of their children in order for them to maintain close relationship with them. Parents who participate in such educational programmes will be able to identify on time when their children are faced with any academic challenge which may hamper their education. With a considerable percentage of parents in the municipality having no better educational level than the present educational level of their adolescent children, such parent education programmes will build upon their self-confidence to be able to better engage in the suitable parental involvement type.

Since this can be achieved only when parents, most especially fathers, make time out of their busy schedules, and junior high schools in the municipality employ the services of professional counsellors, it is recommended that these parent education programs must be scheduled to take place on days that majority of the parents will be able to attend, such as holidays.

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# Linguistic Influences on Junior High School Students' Mathematics Word Problem Solving

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## Abstract

Mastery of language of instruction is important for the successful teaching and learning of Mathematics since mathematical concepts are communicated through the use of language. The study sought to find Ghanaian Junior High School (JHS) 2 students' performance in Mathematics word problems. It also investigated the linguistic difficulties students face when solving Mathematics word problems and how their English language proficiency affect their problem-solving procedures. A sequential mixed methods design was employed in the study. The target population was made up of all JHS 2 public school students in the Cape Coast Metropolis in the Central Region of Ghana. One hundred and eighty-seven JHS 2 students were selected from six public schools in the Cape Coast Metropolis through stratified random sampling procedures. Achievement test and interview guide were developed and used for the study. The data collected through the test were analysed using descriptive statistics, while that of the interview were analysed using percentages and presented as narrative description with some illustrative examples from what students said in the process of explaining their procedures. The results from the study showed that students had very weak ability in Mathematics word problem solving. Their performance declined as the difficulty level of the questions increased from primary to JHS. The authors recommended amongst others, the need for Mathematics teachers to pay extra attention to the teaching of word problem solving in Mathematics and in-service and pre-service providers to pay attention to Mathematics word problem in professional development programmes.

**Key words**: Linguistic, Mathematics, Word Problem, Junior High School, Ghana.

**Introduction**

Mathematics is one of the subjects which is studied in the school curriculum all over the world. It is important not only as academic subject but also for participation in societal practices such as commerce. It is one of the essentials and basic areas of school curriculum which deals with a wide field of subject matter. Despite the importance of the study of Mathematics to individual students and national development, students' performance in Mathematics both locally and internationally has not been good. Locally, chief examiners' reports in Mathematics at the Basic Education Certificate Examination (B.E.C.E) level, national standardised examinations conducted at the end of grade nine, shows that students perform poorly in Mathematics in general and word problem solving in particular (WAEC 2016; WAEC 2017 & WAEC, 2018). Again, in their study involving an investigation of curriculum delivery in English, Mathematics and Science at the Junior High School level in the Central Region of Ghana, Davis et al. (2019) found that students performed poorly on the Mathematics achievement test. The study revealed a significant effect of school type, that is, above-average, average and below-average achieving school on students' achievement in Mathematics in general. Significant differences in achievement of students from above-average and average achieving schools, above-average and below-average achieving schools, and average and below-average achieving schools, respectively, was also observed by Davis et al. (2019). Internationally, Ghanaian JHS 2 students performed poorly in Mathematics in Trends in International Mathematics and Science Study (TIMSS) (Mullis, Martin, Foy & Arora, 2012).

Several factors could account for Ghanaian students' poor performance in Mathematics. These include factors such as teaching methods used in the teaching and learning of Mathematics, linguistics influences on students' understanding of Mathematics, availability and use of teaching learning materials, home support for students' learning, students' attitudes towards Mathematics and teachers' attitudes towards Mathematics and the teaching of Mathematics (Davis, Bishop & Seah, 2013; Agbenyegah & Davis, 2015; Davis, 2018; Davis, Beccles & Intsiful, 2019).

For the purpose of this study, the authors investigated the linguistic influences on students' understanding of Mathematics, focusing on the processes they follow in solving word problems. This

is because Ghanaian students study Mathematics using the local language up to grade three. From grade four onwards, they study Mathematics in foreign language, which is the English language. In the view of the authors, the sudden switch in the language of instruction from grade four onwards in the Ghanaian school system has the tendency to affect the learning outcomes in Mathematics, especially for the majority of students in public/state schools who hardly use the English language outside the school premises.

Large body of literature, both past and present, suggests that word problem solving remains one of the areas in Mathematics that is difficult for students to learn and teachers to teach. Issues relating to sentence features of Mathematics word problems such as semantic and syntactic have often been reported as being a major source of error for students (Boonen, Koning, Jollies & Schoot, 2016; Spanos, Rhodes, Dale & Crandall, 1998; Verschaffel & Corte, 1993). A study by Boonen, Koning, Jollies and Schoot (2016) among grade six students in the Netherlands revealed that semantically complex word problem solving was difficult for students. Boonen, Koning, Jollies and Schoot (2016) therefore argue about the need for attention to be paid on both reading comprehension skills and mental representation skills in teaching word problems. While a lot of research have been carried out on this important topic in a number of developed countries, the same cannot be said about Ghana. Despite reports of students' poor performance on word problem solving in Mathematics at the Basic Education Certificate Examination (National Examination at grade nine), not many studies have been conducted to deepen our understanding of Ghanaian Junior High School students' performance in word problem solving. This study was therefore carried out to provide some insights about Ghanaian Junior High School students' performance on word problem solving in Mathematics. However, semantic and syntactic sentence features of word problem in Mathematics did not form the main focus of this study.

Researchers have shown that language influences cognition (Perlovsky & Sakai, 2014; Vygotsky, 1987). Many researchers in Mathematics education have also made similar observation (Davis, 2010; Davis, Bishop & Seah, 2013; Davis, 2018; Durkin, 1991). According to Durkin (1991), for example, Mathematics education begins and proceeds in language, it advances and stumbles in language,

and its outcomes are often assessed in language. This suggests that mastery of language of instruction is key to successful study of Mathematics.

The literature suggests that effective study of school Mathematics by Bilinguals requires mastery of two levels of language proficiency. According to Cummins (1981), these are Cognitive Academic Language Proficiency (CALP) and Basic Interpersonal Communicative Skills (BICS). Basic Interpersonal Communicative Skills is also referred to as Social Language in literature (Haynes, 2007). Other researchers have also observed that linguistic demands for the effective study of Mathematics require more than mastery of BICS or Social Language. Haynes (2007), for example, argues for the need for bilingual learners who are taught Mathematics through the use of English as medium of instruction to acquire good mastery of Academic English Language in order to engage meaningfully in cognitively demanding task in Mathematics. In this research, the authors have used Everyday/Social language to denote BICS and Academic language to denote CALP.

Everyday language includes the basic language the child needs for ordinary everyday conversation such as *go, come and compare*, while Academic language includes the language the child needs in order to understand the school Mathematics curriculum (Cummins,1981). Examples of Academic Language in this study include *dividend, quotient, minuend and subtrahend.* However, it is common to find words in both everyday and academic languages that have different meanings in the everyday and academic sense such as difference and product. Product in Mathematics is the outcome of multiplication of two factors. In everyday language, it means a product of a company. Students' mastery of these levels of language has influence on their ability to understand and solve word problems in Mathematics (Davis, 2010; Agbnyega & Davis, 2015; Mestre, 1988).

Mathematics also has its own system of language (involving the use of symbols) and convention of reading which could be different from the conventional left to right movement of the eyes of texts in other disciplines. In set language, for instance, the use of 'and' denote intersection of sets, whilst the use of 'and' in probability denote the product of probabilities. In series and sequences the convention of

reading is often from bottom to the top. The symbol $\sum_{1}^{10} 2r$ is read as, "from 1, sum 2r up to 10" (Morgan, Craig, Schütte & Wagner, 2014). This suggests that much of children's mathematical education takes place in language and therefore mastery of all levels of language is important for successful learning of school Mathematics. It is against the background of the influence of language on students' learning outcomes in Mathematics that this study was developed to investigate the influence of language on JHS 2 students' performance in Mathematics word problem solving.

Newman's (1977) approach to error analysis in Mathematics word problem solving formed the main theoretical perspective for this study because it afforded the researchers a lens with which students' strategies in solving the word problems were analysed. Newman (1977) outlined five possible sources of error students often encounter when they are solving word problems in Mathematics. First, errors associated with reading of the question (Reading). Second, errors associated with understanding of the question (Comprehension). Third, errors associated with decoding the mathematical problems in the text, that is, translating the statement in English language into mathematical statements. For example, the sum of the first ten counting number can be transformed into mathematical statement as $\sum_{1}^{10} r$ (Transformation). Fourth, errors associated with following the processes involved in solving the problem (Processing Skills). Fifth, errors associated with writing answer to the problem, this may include looking back to ensure that the correct answer is achieved (Encoding). Errors associated with reading constitutes the first step in Newman's approach, as already noted. In order to have further insight into the linguistic challenges students faced, the researchers used Cummins (1981) categorisation of two levels of language proficiencies, namely BICS and CALPS as another theoretical lens. This enabled the researchers to ascertain the sources of students' linguistic challenges.

## Research Questions and Hypothesis

*Research Questions*

The following research questions were posed to guide the study:

1. What is the general mastery level of JHS 2 students in Mathematics word problem?
2. What is the performance of JHS 2 students from above-average, average and below-average achieving schools in the word problem solving?
3. What is the difference, if any, in the performance of students from above-average, average and below-average achieving schools?
4. In what ways do students' English language proficiency affect their word problem solving strategies in Mathematics?

*Null Hypothesis*

To address Research Question 3, the following null hypothesis was formulated:

There is no significant difference in the achievement of JHS 2 students from above-average, average and below-average achieving schools in word problem solving in Mathematics.

## Methods

### Research Design

Both quantitative and qualitative methods were used to address the research questions and hypothesis formulated to guide the study. A sequential explanatory mixed methods design involving collection and analysis of quantitative data followed by collection and analysis of qualitative data was, therefore, employed in this study. Creswell recommends the use of mixed methods design for a thorough and comprehensive treatment of various aspects of issues related to the topic under investigation (Creswell, 2012).

### Population

The target population consisted of all JHS 2 public school students from the 96 public schools in the Cape Coast Metropolitan area of the Central Region of Ghana. This area was targeted because of two reasons, namely public-school students' performance in Mathematics in the area has not been as good as expected and it is the educational hub of Ghana. The area has the Premier Teacher Education University in the country and several top Senior High Schools in the country. JHS 2 students were the target population because JHS1students were still

adjusting to the JHS system whilst the JHS 3 students were busy preparing for their Basic Education Certificate Examinations (BECE), at the time of the research.

**Sample and Sampling Procedure**

One hundred and eighty-seven JHS 2 students comprising 97 boys and 90 girls were selected from six out of the ninety-six public schools in the Cape Coast Metropolitan area, through stratified random sampling procedure. The schools that were sampled for the study constituted 6.25% of the schools in the research locale. Literature suggests that at least 5.0% of the population constitute acceptable sample for research studies (Krejcie & Morgan, 1970). The stratified random sampling procedure was used in order to ensure that above-average, average and below-average achieving schools were all represented. The authors grouped the junior high schools in Cape Coast Metropolis according to their achievement levels in BECE Mathematics, as above-average, average and below-average achieving schools. The simple random sampling procedure was then used to select two schools from each of the three categories of schools (that is, above-average, average and below-average achieving schools). A JHS 2 class was selected from each of the six public schools. For schools that had more than one streams, the simple random sampling procedure was used to select one class. Using the Table of random numbers, one stream was randomly selected. The use of random sampling gave each of the JHS classes in schools that had more than one stream equal opportunity to participate in the study (Creswell, 2012). For each of the classes selected, all the students participated in the first part of the study, which was the administration of an achievement test. The second part of the study involved selection of 36 students, six from each school, using the stratified random sampling procedure. These students were made up of two each of those whose scores were among the highest, median and lowest respectively. The 36 students were each requested to read and explain the import of questions 2, 4 and 6 (see Appendix A), and also explain the processes they followed in solving each of the three questions in interview sessions. Permission was sought from the District Education Office in Cape Coast for the project to be carried out in the schools in the district. Before the administration of the instruments, the project was explained to students and their assent

sought by inviting them to participate. Parents of the students who assented to participate in the study were informed about the study and participation of their child/ward in it.

**Research Instruments**

Two research instruments were developed and used for the study. These were achievement test and interview guide. The achievement test consisted of six items on word problem solving. The items were drawn from the upper primary (grades four to six) and the Junior High School syllabi. Items 1 and 2 were drawn from the upper primary school syllabus, while items 4-6 were drawn from the JHS1 and JHS 2 syllabus. Students had to answer these items in one hour (see Appendix A). The interview guide consisted of items which enabled the authors to collect information on the linguistic difficulties students experienced solving the word problems and how those difficulties affected their interpretation of the questions and the approaches used.

In order to ensure the validity of the achievement test, the items were adopted from some of the Basic School Government approved text books. They were also given to experts in the area of Mathematics education to read through and provide their critical comments. Both the achievement test and the interview guide were pilot tested in a school in another district in the Central Region to ensure that they elicited valid response. According to Robson (2002), reliability is the extent to which a researcher obtains the same results for measuring the same behaviour on different occasions. Robson (Op cit, p.342) indicates that reliability coefficient of .40 to .60 indicates fair reliability, reliability coefficient of .60 to .75 indicates good reliability and reliability coefficient of above .75 indicates excellent reliability. The test items used in the research had reliability coefficient of .662. This reliability coefficient shows that the test was quite reliable, since the reliability was good.

**Data Analysis**

The data collected through the test were analysed using descriptive statistics (the means, the mode and the standard deviation) and inferential statistics (ANOVA and t-test). This was used to provide a vivid picture of trends in students' performance on the test. While the data collected from the interviews were analysed qualitatively and presented as narrative description with some illustrative examples. The

qualitative analysis provided an insight into the linguistic difficulties students faced as they went through the word problem solving. All names used in the presentation of results are pseudonyms.

**Results**

The results of the study have been presented based on the research questions and the hypothesis that were formulated to guide the study.

**Research Question 1:** What is the general mastery level of JHS 2 students in Mathematics word problem?

This research question was posed to ascertain JHS 2 students' performance in Mathematics word problems. For the purpose of analysis, the pass rate for the whole test, and items meant to test students' performance on the primary, JHS 1 and JHS 2 levels word problems were each set at 50% (half of the score allotted). The results of students' performance are presented in Table 1. Results from Table 1 show that students generally performed poorly on the whole test. Less than 5.0% (4.8%) passed the whole test. In order words, less than 5% scored 10 out of 20 or better, (that is, 50.0% or better) on the test. The minimum score on the whole test was 0%, as many as 41.7% of the students scored 0%. The maximum score was 14 out of 20 (that is, 70%). Less than 1% of the candidates scored 70% on the test. The mean score on the whole test was 2.37 out of 20 (11.9%). This implies that the mean score on the whole test was about 12%. The Standard Deviation of 3.07 on the test shows that the scores are highly dispersed.

Pass rate of students in each of the categories of items (primary, JHS 1 and JHS 2) is presented in Table 1. The results show that pass rate of students in each of the three categories was very low. The pass rate on the primary level items was the highest (16.1%), this was followed by JHS1 (7.1%) and JHS 2 (1.6%). This is an indication that 83.9% of the students failed the primary level items, 92.9% failed the JHS 1 level items and 98.4% failed the JHS 2 level items. This shows that almost all the JHS 2 students could not correctly solve the JHS 2 level items in the Mathematics word problems, while the vast majority could not solve the JHS1 and primary levels items in the Mathematics word problems.

**Table 1: Overall Performance of Students on the Test (**N = 187)

| Item | Pass Rate | Minimum | Maximum | Mean | Standard deviation |
|---|---|---|---|---|---|
| Primary (1 and 2) (out of 5marks) | 16.1% | 0.0 (62%) | 5.0 (4.3%) | 0.96 | 1.47 |
| JHS1 (3 and 4) (out of 5marks) | 7.5% | 0.0 (58.3%) | 5.0 (2.7%) | 0.80 | 1.17 |
| JHS 2 ( 5 and 6) (out of 10marks) | 1.6% | 0.0 (68.4%) | 6.0 (1.6%) | 0.64 | 1.20 |
| Overall | 4.8% | 0.0 (41.7%) | 14 (0.5%) | 2.37 | 3.07 |

NB: Values in brackets show the percentage of students who obtained the minimum/maximum score

**Research Question 2:** What is the performance of JHS 2 students from above-average, average and below-average achieving schools in the word problem solving?

In order to ascertain the situation across the various school contexts, that is, above average, average and below average achieving schools, this research question was formulated. The results are presented in this section.

*Performance by Above Average achieving School*

Results of students from the above-average achieving schools are presented in Table 2. The results from Table 2 show that students from the above-average schools generally performed very poorly on the whole test. Less than 10% passed the test. In order words, less than 10% scored 10 out of 20 or better (that is, 50% or better) on the test. The minimum score on the whole test was 0%, as many as 12.9% of the students from the above-average achieving schools scored 0%. The maximum score was 14 out of 20 (that is, 70%). The mean score on the whole test was 4.43 out of 20 (that is, 21.5%). The standard deviation of 3.67 show that the scores are highly dispersed.

Pass rate of students in each of the three categories of items (Primary, JHS 1 and JHS 2) was very low. The pass rate on the primary level items was the highest (30.6%), this was followed by JHS1 (14.5%) and JHS 2 (4.8%). This is an indication that 69.4% of the students failed the primary level items, 85.5% failed the JHS 1 level items and 95.2% failed the JHS 2 level items. This is shows that vast majority of the JHS 2 students could not correctly solve the JHS 2 level items in the

Mathematics word problems, while the majority could not solve the JHS1 and primary levels items in the Mathematics word problems.

**Table 2: Performance of Students in Above-Average achieving School (**Above Average n = 62)

| Item | Pass Rate | Min | Max | Mean | Standard deviation |
|---|---|---|---|---|---|
| Primary | 30.6% | 0 (38.7%) | 5.0 | 1.86 | 1.81 |
| JHS1 | 14.5% | 0(29.0%) | 5.0 | 1.43 | 1.43 |
| JHS2 | 4.8% | 0(46.8%) | 6.0 | 1.18 | 1.54 |
| Overall | 9.6% | 0(12.9%) | 14.0 | 4.43 | 3.67 |

NB: Values in brackets show the percentage of students who obtained the minimum score

Results of students from the average achieving schools are presented in Table 3. The results from Table 3 show that as with the above-average achieving school students, students from the average achieving schools also generally performed very poorly on the whole test. Less than 2.0% passed the test. In order words less than 2.0% scored 10 out of 20 or better (that is, 50% or better) on the test. The minimum score on the whole test was 0%, as many as 51.6% of the students from the average achieving schools scored 0%. The maximum score was 10.6 out of 20 (that is, 53.0%). The mean score on the whole test was 1.49 out of 20, that is, 7.5%. The standard deviation of 2.25 shows that the scores are highly dispersed.

Pass rate of students in each of the three categories of items (Primary, JHS 1 and JHS 2) was also very low. The pass rate on the primary level items was the highest (11.0%), this was followed by JHS1 (6.3%) and JHS 2 (0.0%). This is an indication that 89.0% of the students failed the primary level items and 93.7% failed the JHS 1 level items. This is an indication that none of the JHS 2 students could correctly solve the JHS 2 level items in the Mathematics word problems, while the vast majority could not solve the JHS1 and primary levels items in the Mathematics word problems. The majority scored zero on the test for the Primary, JHS 1 and JHS2 items.

**Table 3: Performance of Students in Average School (**Average n = 64)

| Item | Pass Rate | Min | Max | Mean | Standard deviation |
|---|---|---|---|---|---|
| Primary | 11% | 0(62.5%) | 3.5 | 0.68 | 1.09 |
| JHS1 | 6.3% | 0(70.3%) | 3.0 | 0.52 | 0.91 |
| JHS2 | 0% | 0(84.4%) | 4.0 | 0.37 | 1.52 |
| Overall | 1.6% | 0(51.6%) | 10.6 | 1.49 | 2.25 |

Note: Values in brackets show the percentage of students who obtained the minimum score

Results of students from the below-average achieving schools are presented in Table 4. The results from Table 4 show that, as with the students from above-average and average achieving schools, students from the below-average achieving schools generally performed very poorly on the whole test. None of the students from the below-average achieving schools passed the test. In order words, none scored 50% or better on the test. The minimum score on the whole test was 0%, as many as 60.7% of the students from the below-average achieving schools scored 0%. The maximum score was 7 out of 20 (that is, 35.0%). The mean score on the whole test was 1.19 out of 20 (that is, about 6.0%). The standard deviation of 1.89 shows that the scores are highly dispersed.

Pass rate of students in each of the three categories of items (Primary, JHS 1 and JHS 2) was very low. The pass rate on the primary level items was the highest (6.5%), followed by JHS1 (1.6%). This is an indication that 93.5% of the students failed the primary level items, while 98.4% failed the JHS 1 level items. As with the students from average achieving schools, none of the JHS 2 students from the below-average achieving schools could correctly solve the JHS 2 level items in the Mathematics word problems, while the majority could not solve the JHS1 and primary levels items in the Mathematics word problems. The majority of the students from the below-average achieving schools also scored zero on the test for the Primary, JHS 1 and JHS2 items.

**Table 4: Performance of Students in below-average School** (Below Average n = 61)

| Item | Pass Rate | Min | Max | Mean | Standard deviation |
|---|---|---|---|---|---|
| Primary | 6.5% | 0(85.2%) | 4.0 | 0.34 | 0.89 |
| JHS1 | 1.6% | 0(75.4%) | 3.0 | 0.46 | 0.85 |
| JHS2 | 0% | 0(73.8%) | 2.0 | 0.39 | 0.71 |
| Overall | 0% | 0(60.7%) | 7.0 | 1.19 | 1.89 |

NB: Values in brackets show the percentage of students who obtained the minimum score

**Research Question 3**: What is the difference, if any, in the performance of students from above-average, average and below-average achieving schools?

This research question was posed to ascertain the effect of school type, that is, above-average, average and below-average achieving school on students' performance. The null hypothesis: "there is no significant difference in the achievement of JHS 2 students from above-average, average and below-average achieving schools in word problem solving in Mathematics" was formulated to guide the analysis. A one-way Analysis of Variance (ANOVA) was therefore carried out. Table 5 presents the results of the one-way ANOVA. The results in Table 5 shows that there was significant difference in the performance of students among the three school types ($F = 26.904$, $p < 0.05$). This is an indication that school type had effect on students' performance in word problem in Mathematics.

**Table 5: Analysis of variance (ANOVA) of performance by achievement levels (above- average, average and below-average achieving schools)**

| | Sum of squares | Df | Mean squares | F | Sig |
|---|---|---|---|---|---|
| Between Groups | 396.906 | 2 | 198.453 | 26.904 | 0.00 |
| Within Groups | 1357.251 | 184 | 7.376 | | |
| Total | 1754.158 | 186 | | | |

Post Hoc analysis revealed that performance of students from above-average achieving schools was significantly higher than those from average achieving schools ($\mathbf{t_{(124)} = 5.430, p < 0}$). Performance of

students from above-average achieving schools was also significantly higher than those from below-average achieving schools (**$t_{(121)} = 6.13$, $p < 0$**). However, the performance of students from average achieving school was not significantly higher than those from the below-average achieving schools ($t_{(123)} = 0.814$, $p > 0$). This is an indication that the performance of students from average achieving schools was similar to those from below-average achieving schools.

**Research Question 4**: In what ways do students' English language proficiency affect their word problem solving strategies in Mathematics?

This research question was posed to explore students' language proficiency and how their mastery of the language of the test affected their strategies in solving word problem in Mathematics. To address this research question, Newman's error analysis and Cummins categorization of language proficiency based on BICS and CALPS were used to guide the analysis.

*Errors associated with Reading*

Majority (78%) of the students were able to read the questions. The few who were not able to read the questions were mainly from the below-average achieving schools. The words that were challenging to the students are presented under each of the three questions.

*Question 2* "Mr. Obeng had 80 cows, 25% of the cows were black, 3/5 of the cows were white and 3/20 of his cows were a mixture of black and white. Find out how many of each colour of cows Mr. Obeng had"

Students who had difficulty reading this question had challenge pronouncing these words; "Obeng", "were", "3/5" [was read as "three is to five"], "white", "mixture", "out", "many", "each" and "colour".

*Question 4 "Kojo* buys 2kg of apples at GH¢3.60 a kilogram and 3 packets of tea at GH¢2.40 a packet. How much does he pay altogether?

Students who had difficulty reading this question had challenge pronouncing these words; "tea," "kilogram", "apple", "packets", "altogether", "how", 'he", "pay" etc. Those were mainly students from the low achieving schools.

*Question 6: "The sum of the ages of two brothers Kofi and Kweku is 35. Kofi's age is two-thirds Kweku's age. Find their ages."*

Students who had difficulty reading this question had challenge pronouncing these words; "sum" and "two-thirds".

Table 6 presents results on the classification of students' linguistic difficulties based on Cummin's (1981) classification of language proficiency, namely Basic Interpersonal Communication Skills (BICS)/Everyday Language and Cognitive Academic Language Proficiency (CALP). The results in Table 6 show that students who had difficulty reading the questions had challenges with both BICS and CALP. Some of these JHS 2 students, especially from below-average achieving schools had difficulty reading three and four letter words like "out", "tea", "pay", "many", "were" and "each". Reading of words specific to Mathematics such as "sum" and "two-thirds" was also difficult for students.

**Table 6: Classification of Students' Linguistic difficulties based on Cummin's (1981) categorisation of two levels of language Proficiencies**

| Everyday English/BICS | Cognitive Academic Language/CALP |
|---|---|
| "Obeng", "were", "white", "mixture", "out", "many", "each", "colour" "tea," "apple", "packets", "altogether", "how", 'he", "pay" | "3/5" (was read as three is to five), "kilogram", "sum" and "two-thirds" |

*Errors associated with Comprehension*

A number of the students who were able to read the questions were not able to explain the demands of the questions. Those who could not read the questions with understanding read the text several times and used a phrase or two from the word problem to explain how they understood the question. In answering Question 4, for example, Cee, a student from a below-average school, explained the demands of the question as; "the question wants me to add the two amounts of money together because the question wants the money altogether."

In answering Question 6, Dennis, a student from an average school, interpreted the demands of the question after reading it fluently as; "The question says Kofi's is two-thirds and we are to find Kweku's.", which was an inaccurate interpretation of the demands of the question. Others, were frank about their lack of understanding of

the question they had read fluently. Agabus, a student from a below-average school, for example, said "I do not understand the question", when the interviewer asked him to explain the demands of the question.

However, a few who read the questions fluently were also able to interpret the demands of the questions correctly. For example, Kweku, a student from an average-achieving school explained the demands of Question 2 as "Mr. Obeng has 80 cows. He wants us to find out the number of cows, which are white, number of cows which are black and number of cows which are mixture of black and white".

*Errors associated with Transformation and Process*

The majority of the students also had challenge decoding the questions and applying the appropriate mathematical procedures to solve them. The wrong interpretation of the questions, often informed by certain phrases within the questions, resulted in transformational errors and meaningless manipulation of numbers. The students did not only have difficulty in the process of forming mathematical sentence from the problems but they also had difficulty with basic arithmetic. Correct use of basic operations was a big problem for many of the participants.

For example, Dennis, explained how he transformed Question 6 (*The sum of the ages of two brothers Kofi and Kweku is 35. Kofi's age is two-thirds Kweku's age. Find their ages.)* and the processes he followed as "The question did not give Kweku's fraction so Kweku's is 1/3, but I did not use the 1/3 for Kweku. I multiplied 2/3 by 35 and had 23.33 and subtracted it [23.33] from 35 which gives 11.97, and gave 11.97 to Kweku." (see Figure 1)

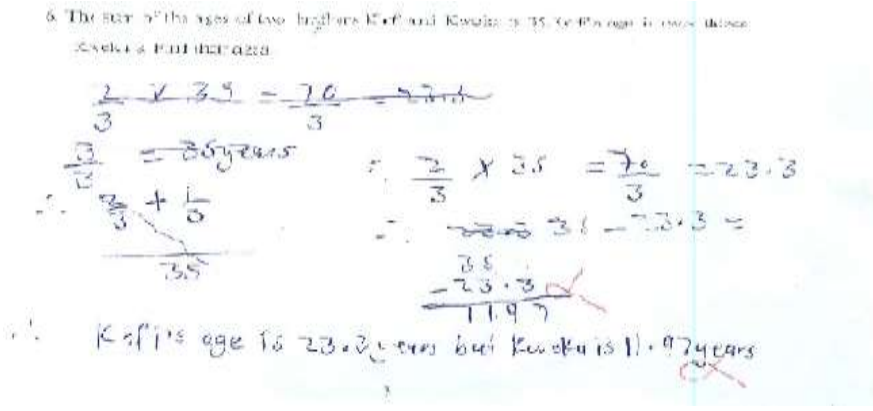


*Figure 1:* Dennis' solution to Question 6

Dennis transformation and process skills were wrong, because writing two-thirds times thirty-five minus thirty-five is not the correct transformation and process to follow to solve the question. Thirty-five is the sum of the ages of the two boys. It is therefore wrong to multiply 35 by two-thirds to obtain Kofi's age. The correct transformation and processes should have been $\frac{2}{3}x + x = 35$, where $\frac{2}{3}x$ = Kofi's age and $x$ = Kweku's age. Simplifying this equation, Kweku's age will be 21years and Kofi's age is 14 years.

Alberta, a student from a below-average school had extreme difficulty reading, transforming and proceeding with the solution to Question 6. She presented her solution as shown in Figure 2.

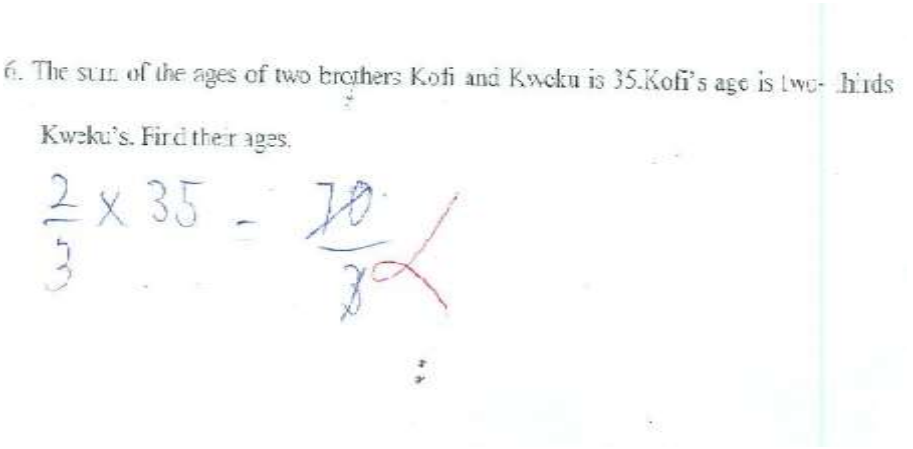


*Figure 2:* Alberta's wrong transformation and process in solving Question 6

Alberta's solution shows clearly that she was just manipulating numbers without understanding what she was doing.

Problems associated with transformation errors and processing skills errors were not limited to only students who could not read and understand the word problem but also those who did not have problems with comprehension. After correctly explaining the demands of Question 4 as; "Kojo buys 2kg of apples at ¢3.60 and three packages of tea is ¢2.40. What is the total cost?", Gohan, a student from an average achieving school had extreme difficulty transforming and proceeding with the solution to the question. Gohan presented his solution as shown in Figure 3.

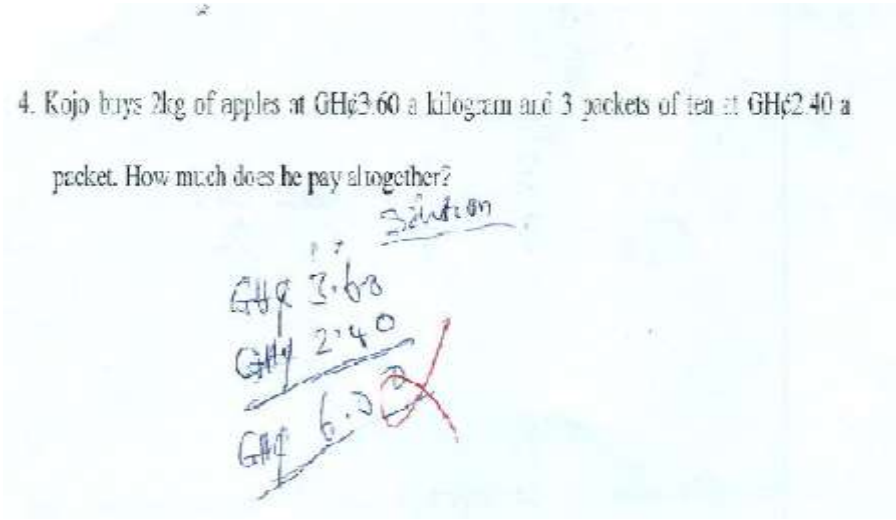


*Figure 3:* Gohan's wrong transformation and process in solving Question 4

Gohan simply added the unit cost of each of the two commodities and obtained Gh₵ 6.00 as the answer. Gohan's transformation and processing skills were wrong. Gohan could have transformed and proceeded to solve Question 4 as Gh₵3.60 x 2 + Gh₵2.40 x 3 = Gh₵7.20 + Gh₵ 7.20 = Gh₵ 14.40 or used another reasonable approach that would have led to the correct solution to the question.

Generally, students who were able to solve the problems correctly were those who were able to read and interpret the demands of the question correctly and also transformed them correctly. Kojo, for example, read Question 2 (*Mr. Obeng has 80 cows, 25% of the cows were black,* $\frac{3}{5}$ *of the cows were white and* $\frac{3}{20}$ *of the cows were mixture of black and white. Find out how many of each colour of cows Mr. Obeng had.*) with understanding and transformed the question correctly. He proceeded with the solution without difficulty, as shown in Figure 4.

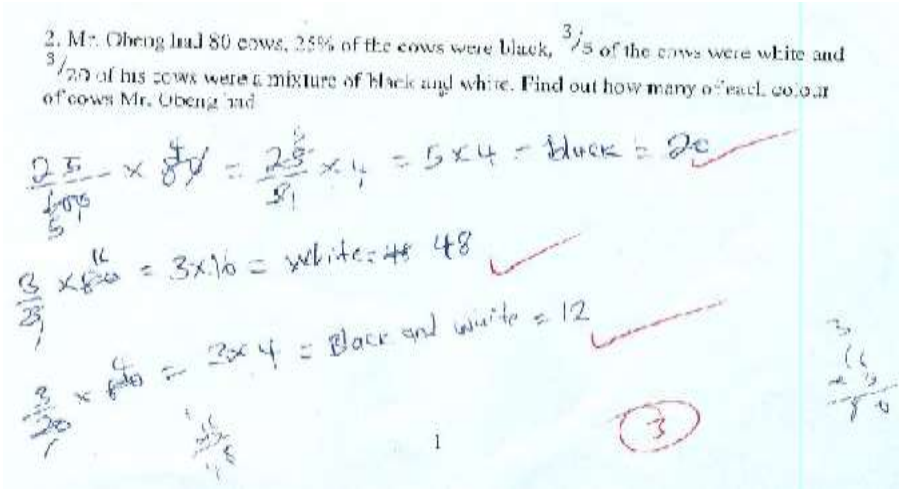


*Figure 4:* Kojo's solution to Question 2

In solving Question 6, Joda explained the demands of the question as "there are two brothers, when their ages are added together it gives 35. Kofi's age is when divided by two will get 2/3 (sic). Find out everyone's age." It is evident that Joda had partial understanding of the question from his explanation but was able to transform the question and solve it to arrive at the correct answer as shown in Figure 5.

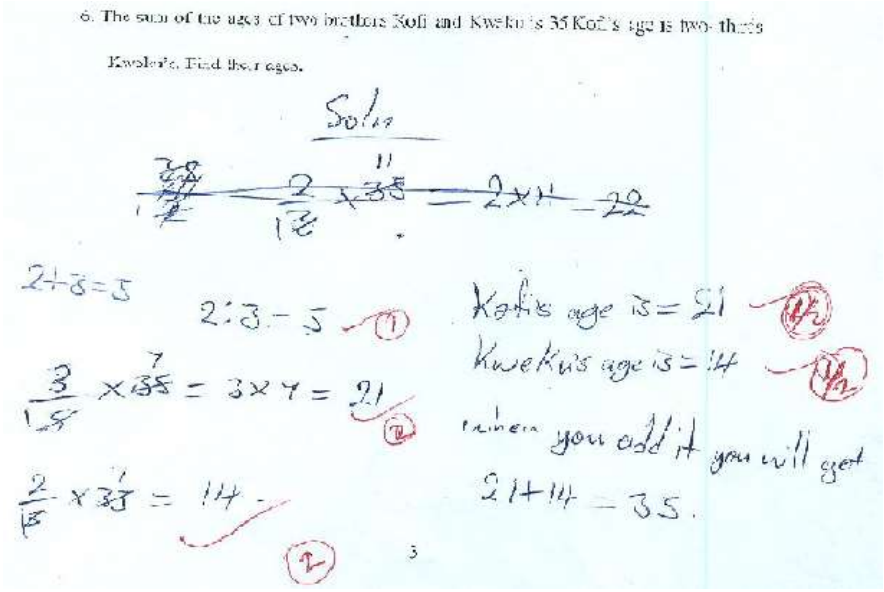


*Figure 5:* Joda's Solution to Question 6

*Errors associated with Encoding*

Throughout this research, the researchers observed that students, both those who had the correct and the wrong answers did not spare a moment to look back to check the reasonableness of their answers. For example, after Dennis had obtained 23.3years as Kofi's age and 11.97years as Kweku's age, he did not find it necessary to check whether 23.3years, which was Kofi's age was indeed two-thirds of 11.97years, which was Kweku's age (see Figure 1). Encoding would have drawn Dennis' attention to the fact that 11.97years is smaller than 23.3years, so Kofi age cannot therefore not be 23.3years because 23.3years is not two-thirds of 11.97years. In Figure 3, Gohan also obtained Gh₵ 6.00 as his answer without looking back to ascertain the reasonableness of the answer.

**Discussion**

The results from the study showed that very few of the JHS 2 students exhibited some level of proficiency in solving word problem in Mathematics. This was reflected in the overall pass rate of less than 5% on the whole test, the mean score of 11.9% (2.37 out of 20 marks) and Standard Deviation of 3.07. The vast majority (95.2%) of the students failed the test with almost two-thirds (41.7%) scoring zero on the whole test. Granted that the test comprised two items each from Primary, JHS 1 and JHS2 (see Appendix A), one would have expected the research participants to score high on the primary and JHS 1 levels items, which were below their level but that was not the case. The general performance of students on the items at each of the levels tested was very low, that is, Primary (16.1%), JHS1(7.5%) and JHS2(1.6%). The pass rate decreased from Primary through JHS 1 to JHS 2. Majority of these JHS 2 students' proficiency in word problem solving did not even measure up to primary school level. It is therefore not surprising that very few (1.6%) of them passed the JHS 2 level items and the pass rate decreased with increase in the grade level. The results provide a clear evidence that the students did not have enough knowledge and experience to tackle the word problems, even at the primary school level.

Analysis of the results across the various school contexts, that is, above-average, average and below-average achieving schools showed that the phenomenon of students' poor performance in word

problem was common to all the three categories of schools. None of the students from the below-average achieving schools passed the whole test, 1.6% of the students from the average achieving schools pass the test, while 9.6% of the students from the above-average achieving school passed the test. It is evident that less than 10.0% of the students passed in each of the school types (see Tables 2, 3 and 4). None of the students from the below-average and average achieving school was able to pass the JHS 2 level items (see Tables 3 and 4). This is an indication that none of them was proficient in word problem solving at the JHS 2 level. The results show that as compared to the above-average achieving schools, the situation was more serious in the below-average and average achieving schools. It was evident from the study that the few students who were able to pass the test were mainly from the above-average achieving schools. The one-way ANOVA confirmed a significant difference in performance in word problem in Mathematics among the students from each of the three categories of schools ($F = 26.\ 904$, $p<0.05$). However, while the performance of the students from above-average achieving schools was significantly higher than the average ($t_{(124)} = 5.430$, $p < 0$) and below-average ($t_{(121)} = 6.13$, $p < 0$) achieving schools, the performance of the students from the average achieving schools was not significantly higher than those from below-average achieving schools ($t_{(123)} = 0.814$, $p > 0$). This implies that the performance of students from the average achieving schools in word problem in Mathematics was similar to those from the below-average achieving schools.

While the finding between the above-average achieving schools and other school contexts is not surprising, the one between the average and below-average achieving schools appears to challenge the observation of Davis et al. (2019) about significant difference in achievement of students from average and below-average achieving schools in Mathematics. The finding of similar achievement between the below-average achieving schools and average achieving schools in word problem in Mathematics reported in this study and those from Davis et al. (2019) suggests that while school type has effect on students achievement in the average and below-average achieving schools in Mathematics in general, the effect of school type does not seem to affect achievement in word problem solving in Mathematics in the two context of schools. This finding appears to show that the proficiency

level in word problem in Mathematics in the below-average achieving schools is similar to the average achieving schools.

The majority of students were able to read the questions. The few who were not able to read the questions, mainly from the below-average achieving schools, had very low English language proficiency. This was evident in their inability to read two letter words like "he" and three letter word like "pay". Their challenge was not limited to only Everyday Language but also Cognitive Academic Language. Words such as "sum", "Kilometers" and "two-thirds" were difficult to read (see Table 6). Although the majority of the students read the questions with understanding, a number of those who read the question without difficulty had challenge understanding the demands of the questions. Such students often looked at the key words or phrases in the question to guess the demands of the questions. Students' inability to read simple two and three letter words in English language at JHS 2 and their inability to read the relatively simple word problems with understanding could be attributed to the bilingual education being carried out in Ghana, where local language is used as medium of instruction from primary 1 to primary 3 and English language is used as medium of instruction from primary four onwards.

The students' linguistic difficulties could also be a problem that might have been carried from the primary school level. A study carried out in the research locale on linguistic influences on primary school pupils' word problem solving revealed that a number of them had difficulty reading the relatively simple word problems given to them with understanding. The study revealed that a number of the primary school pupils had difficulty pronouncing simple words in English language (Davis, 2010). The system of whole sale promotion in the Ghanaian school system where students who do not measure up to the grade level in which they are, are promoted to the next grade level without providing them with any remedial teaching support targeted at bringing such students up could contribute to this situation. It is evident that even though the student participants in the present study were in JHS2, they were operating far below that level.

Transformation of word problem constituted a major challenge that affected the processes students followed to solve the word problems. All students who could not read the questions such as Alberta and some of the students who were able to explain the demands of the

questions correctly such as Gohan had challenges transforming the word problem into the correct mathematical equation (see Figures 2 and 3). They were therefore unable able to follow the correct processes to solve the word problem. This suggests that apart from linguistic difficulties which affected the ability of students who could not read the question at all and those who read the question without understanding its import, some of the students who read the question with understanding also lacked the skill of decoding the Mathematics from the word problem and proceeding with the solution. This suggests that such students were not able to solve the word problems not because of linguistic challenges but because of lack of knowledge and skills involved in decoding the mathematical equations/expressions from the word problems and proceeding with their solution. This finding appears to strengthen existing literature. Barton (2008), for example, observed that sources of difficulty bilinguals encounter in the study of Mathematics in their second language may not only be linguistic but may also be related to the understanding of the mathematical content itself. Again, encoding was not observed throughout the research. None of the students who were interviewed questioned the reasonableness of their answers and looked back to check whether their answers adequately addressed the word problems they set out to solve.

The challenges the students faced in solving the word problems could also be pedagogical. The literature suggests that prospective Ghanaian primary and Junior high School teachers struggle with non-routine word problem solving even before they enter the teaching profession. Wilmot, Davis and Ampofo (2015), found that the performance of Ghanaian pre-service teachers at the Colleges of Education in Ghana in word problem declined from primary school level through junior high school level to senior high school level. The study found that they had difficulty transforming and processing non-routine word problems in Mathematics. Again, Wilmot et al. (2015) also made similar observation about encoding. Their study found that the pre-service teachers hardly looked back to ascertain the reasonableness of their answers. One could therefore infer that since the challenges related to transformation, processing skills, encoding and trends in performance of the students in the present study reflected those faced by the research participants in Wilmot et al. (2015), some of the teachers who are teaching these children themselves might have

similar problems as the children. This might therefore affect students' opportunities to learn word problem in Mathematics.

**Conclusion and Implications**

The JHS 2 students from all the three categories of schools, namely above-average, average and below-average achieving schools exhibited extremely low proficiency in word problem in Mathematics. They exhibited low proficiency in word problem solving at each of the levels tested, that is, primary, JHS1 and JHS 2. Very few of them were able to tackle JHS 2 level word problems in Mathematics. However, the study found a significant effect of school type on students' ability to solve word problem in Mathematics. The performance of the students from above-average achieving schools was significantly higher than those of the average and below-average achieving schools. However, the performance of students from Average achieving school was not significantly higher than those of the below-average achieving schools. In other words, their performance was similar. None of the students from the average and below-average achieving schools passed the JHS 2 level items in the word problems in Mathematics. This implies that none of the students from these two school types measured up to JHS 2 level in solving word problem in Mathematics even though they were in JHS 2.

Linguistic challenges associated with both Everyday English language (BICS) and Academic Language (CALP) affected understanding, transformation and solution processes of a number of students in solving the word problems. Students who either had difficulty reading the questions or read the questions without understanding them had extreme difficulty with transformation of the questions into the Mathematics expressions or equations and proceeding with their solution process. Such students often ended up with wrong transformation of the word problem based on their interpretation of the problem. However, it can be concluded from the results of the study that, apart from linguistic difficulties that affected students' solution processes, there was also evidence of difficulties associated with decoding the Mathematics from the word problems. Some of the students who read the word problem with understanding still had difficulty transforming the problem and proceeding with their solution. The study also found that encoding was a major problem. Both

students who had the correct and wrong answers to the problems they solved during interviews were not observed looking back to check the reasonableness of their solution. Encoding was simply absent.

The findings from the study have implications for teacher education, especially in-service teacher education, curriculum delivery in Mathematics in the research locale and future research. Teacher education programmes, especially in-service programmes should pay particular attention to the teaching of word problem since application of Mathematics in real life situations is often presented as word problems. For example, business Mathematics involving profit and loss, taxation and discounts are often presented as word problems. Curriculum delivery should pay attention to differentiated teaching. This study has shown that the situation in which teachers progress from one topic to another based on the absorption rate of the average students does not provide the opportunity for students who are operating below the grade level to catch up. It rather exacerbates the cognitive deficit. Teaching and assessment should therefore target the ability levels of students in word problem in Mathematics. For example, JHS 2 students who are struggling with primary level word problem in Mathematics should be given the opportunity to learn word problem at that level and be tested with primary school level word problem. Such students should not be made to study the same content and take the same examination as their counterparts who can solve JHS 2 level word problem.

This study also calls for the need for a debate on mass promotion of students from one level to another which is currently done in public schools in Ghana since the findings from this study has shown that it appears to have adverse effect on quality of students' learning outcomes. As suggested in Davis et al. (2013), the language of instruction policy being currently practiced in public/state schools in Ghana where the language of instruction is switched from a local language to English language from primary four onwards should be looked at again. A gradual shift from the use of the local language as a medium of instruction based on the linguistic needs of students may help improve the performance of students in word problem solving in Mathematics specifically and application problems in Mathematics in general. The researchers will agree with the suggestion of Boonen, Koning, Jollies and Schoot (2016) on the need for attention to be paid on both reading comprehension skills and mental representation skills

in teaching of word problem solving to students. Attention should therefore not be paid only on transformation, process skills and encoding but also on reading comprehension skills.

Although the findings from this study cannot be generalised across the whole of Ghana because of its scope, it may point to what could be happening in schools in the country. Further studies are therefore needed to be carried out in the various regions of the country to ascertain the national picture and inform policy on curriculum development and implementation at the national level and in other sub-Saharan African countries that share similar situation as Ghana.

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**Appendix A**

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University of Cape Coast
Cape Coast

Word Problem Solving Test for Junior High School 2 Students

Time Allowed: 1 Hour

1. Kwesi's father's foot is 280mm in length. Kwesi's foot is 120mm in length. Write down the ratio of the length of Kwesi's foot to that of his father's.
2. Mr. Obeng has 80 cows, 25% of the cows were black, $\frac{3}{5}$ of the cows were white and $\frac{3}{20}$ of the cows were mixture of black and white. Find out how many of each colour of cows Mr. Obeng had.
3. The mass of each book of an encyclopaedia is $1\frac{3}{4}kg$. There are 20 books in the encyclopaedia. Find the total mass of the encyclopaedia.
4. Kojo buys 2kg of apples at Gh₵ 3.60 a kilogram and 3 packets of tea at Gh₵ 2.00 a packet. How much does he pay altogether?
5. In a dining hall, 25m by 12m, an area $8m^2$ is kept clear for cooking. What area is there for dinning?
6. The sum of the ages of two brothers Kofi and Kweku is 35. Kofi's age is two-thirds Kweku's age. Find their ages.

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# Reforming the Public Universities Financing Scheme: The Case of Ghana's Higher Education Transformation Agenda

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## Abstract

Public higher education institutions in Ghana are confronted with unending financing constrains every academic year thus affecting the financial health of these institutions. The financial sustainability of these institutions has become increasingly critical due to the persistent reported funding gaps and the weak funding allocation regime. Countries the world over have begun implementing reform programmes to deal with issues of financial sustainability of higher education. The study employed quantitative research methodology with a well-validated research instrument. This correlational study attempts to measure the relationship between the financing scheme variables and financial sustainability. The outcome of the study revealed that there was statistically significant relationship between the combined effects of the variables while three variables out of the seven were found to be significant in predicting best fit equation for financial sustainability. The study recommends to the Ministry of Education (MOE) and the National Council for Tertiary Education (NCTE), a review of the funding policy direction with a precise focus on addressing Ghana's higher education infrastructural deficit, skills gap, improving research, science and technology.

**Key words:** Financial Sustainability, Financing Scheme, Funding, Ghana Public Universities, Higher Education Institutions.

## Introduction

African countries in recent time have adopted innovative and brave measures to guide government policies in identifying pragmatic solutions to challenges of higher education financing. Some of the

measures as stated by Carnoy, Froumin, Loyalka, and Tilak (2014) include, improved use of public cost sharing, promotion of private sector participation in education, developing income generating activities, and the implementation of distance education programmes. Noticeably, these measures failed to recognise the importance of the reliability and interrelationship between government policy, the accounting, and costing systems and policy regime in measuring the cost per student as a prelude to determining the funding gap per student.

Funding of higher education in Ghana has evolved over the years. As stated in the NCTE (2012), sustainable financing of tertiary education: building Ghana's future, higher education was fully funded by government between 1948 to the 1970s, and in the 1980s partial funding by way of academic facilities and residential user fees were introduced owing to a barrage of challenges faced by public higher education at the time. Most higher education institutions in sub-Saharan Africa (SSA) are confronted with financial challenges (Teferra, 2013) as it is in Ghana. The government of Ghana direct funding of public tertiary institutions has in recent years witnessed general decline in relative terms. Government funding focus is gradually shifting towards infrastructure provision while systematically reducing funding for recurrent expenditure. For instance, public higher education recurrent expenditure as a percentage of total government expenditure to public tertiary institutions decreased from 96.60% in 2012 to 77.30% in 2014. Whereas higher education capital expenditure as a percentage of total government expenditure to public tertiary institutions experienced considerable increase, from 1.40% in 2012 to 22.70% in 2014 (UNESCO Institute for Statistics, 2018). Table 1 provides the details.

**Table 1:** Public Tertiary Institutions Recurrent and Capital Expenditure as a % to Total Tertiary Expenditure

| Description | Academic Years | | |
|---|---|---|---|
| | 2012 | 2013 | 2014 |
| Current Expenditure as a % of total Expenditure on Public Tertiary Institutions | 96.60 | 93.60 | 77.30 |
| Capital Expenditure as a % of total Expenditure on Public Tertiary Institutions | 1.40 | 6.40 | 22.70 |

Source: Researcher's own Analysis with data from UNESCO Institute for Statistics.

Despite the remarkable investment in higher education over the years there still exists a significant level of funding gap which cannot be financed by government alone (Bloom, Canning, & Chan, 2014). As stated in Tilak (2015), most countries continue to subsidise the provision of higher education while gradually drifting towards larger contributions from students, parents, and industry. The government of Ghana consequently launched a host of funding sources as a means of gradually mobilising the needed financial resources to finance the gap.

**Cost sharing policy**

The most common and perhaps visible funding mechanism is the cost sharing policy introduced in 1996. As (Teferra, 2013) rightly stated, the efficiency of cost sharing in many countries largely depends on the allocation of dedicated funds by government in addition to effective management. In Ghana, the cost sharing distribution is largely 70% government, 10% from students' fees, and the remainder of 20% mainly coming from institutions and private donations (Atuahene, 2014). The introduction of the cost sharing recorded some funding gains (Famade, Omiyale, & Adebola, 2015) by public universities. The policy was however stifled with ineffective, ill equipped, and non-committed management, lack of policy enforcement, ineffective fees collection systems, poor working environment and lack of staff motivation. Secondly, the cost sharing policy did not address the infrastructure-funding requirement of the public higher education Institutions. The policy further failed to adequately postulate solutions for prospective students' inability to pay anticipated increases in fees resulting from the introduction of the policy. Newman and Duwiejua (2015) intimated that the higher education funding gap between 2011 and 2015 was within the range of 39.7% and 41%. Government thinking and recent discussions on cost sharing points to a future reduction in Government contribution towards public higher educational Institutions recurrent expenditure. The future of government Policy direction places premium on investment in infrastructure, enhancing research grants and higher education budgetary allocation mechanism. While acknowledging the challenges of cost sharing, Ghana has made great strides in creating the awareness among Parents, Guardians and Students of the need to contribute towards their education (Knight, 2014).

**Ghana Education Trust Fund (GETFund)**

Prior to the setting up of the GETFund, industries engagements with higher educational institutions were unstructured (Arthur & Arthur, 2016). Collaborations were mostly through the effort of individual academic departments and faculties (Newman & Duwiejua, 2015) with little commitment from industry towards higher education. Act 581 of 2000 to streamline industry contribution to higher education through taxation then established the Ghana Education Trust Fund. The financing arrangement of the fund as prescribed by the Act is 2.5 percent of the Value-Added-Tax rate of 17.5 percent earmarked to provide the base funding. The objectives of the GETFund is to provide financial support for the provision of academic facilities and infrastructure to public educational institutions, students loan scheme, scholarship for needy students through the scholarship secretariat and faculty development and research (Atuahene, 2015; Ghana GETFund, 2000). Public universities in recent times have witnessed marked improvement in infrastructure, academic research, postgraduate studies through scholarship schemes, and the student's loan trust fund with funding support from the GETFund. As stated by Masaiti, Mwelwa and Mwale (2016), the board of trustees of the fund is permitted under the Act to set aside funds to support future contingency as defined by the trustees of the fund. Available data from the GETFund secretariat showed that total funds accruing and released to the fund experienced a steady increase from GH¢459.58 billion in 2011 and GH¢924.75 billion in 2015. Total disbursements by the fund within the same period increased from GH¢90.90 billion in 2011 to GH¢262.70 billion in 2015. Within the past five years GETFund disbursement to critical areas was GH¢819.90 billion. Tables 2 & 3 respectively shows the accrued funds and releases made to GETFund and disbursement made to critical areas in the past five years.

**Table 2: GETFund Releases and Allocations**

| Description | Academic Years | | | | |
|---|---|---|---|---|---|
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 |
| | GH¢ '000 | GH¢ '000 | GH¢ '000 | GH¢ '000 | GH¢ '000 |
| Total Allocations | 376,880 | 545,440 | 691,457 | 739,447 | 843,899 |
| Total Accrued & Released | 459,583 | 505,549 | 608,557 | 731,287 | 924,755 |
| Surplus/(Deficit) | 82,703 | (39,891) | (82,900) | (8,160) | 80,856 |

*Note.* GETFund=Ghana education trust fund. GH¢=Ghana cedi.
Source: Researcher's own analysis with data from the GETFund Secretariat.

**Table 3: GETFund disbursement to Tertiary Institutions**

| Description | Academic Years | | | | |
|---|---|---|---|---|---|
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 |
| | GH¢ '000 | GH¢ '000 | GH¢ '000 | GH¢ '000 | GH¢ '000 |
| Infrastructure Development | 62,898 | 94,133 | 135,772 | 134,900 | 215,700 |
| Students Loans | 14,000 | 15,000 | 16,500 | 21,000 | 26,000 |
| Faculty Development & Scholarship | 14,000 | 15,500 | 16,500 | 17,000 | 21,000 |
| Total Disbursement | 90,898 | 124,633 | 168,772 | 172,900 | 262,700 |

*Note.* GETFund=Ghana education trust fund. GH¢=Ghana cedi.
**Source:** Researcher's own analysis with data from the GETFund Secretariat.

More innovative ways needs to be explored in raising the financial resources required as pointed out by Sazonov, Kharlamova, Chekhovskaya, and Polyanskaya (2015) to expand enrolment as well as maintain quality, whiles ensuring national priorities in education are central to the national discourse on reforms.

**Student Loan Trust Fund**

Several countries in Western Europe, Asia and Africa have introduced reforms in students loan schemes with the aim of addressing the inadequacies and to realign the Schemes in line with national priorities (Afriyie, 2015; Johnstone, 2014; Nyahende, 2013). Until 1966, tertiary students in Ghana were fully funded with the aim of training the needed work force to meet the countries developmental agenda. A number of policy reforms were initiated due to the unsustainable nature of the policy at the time. The current schemes provides varied financial assistance to students based on their programme of studies (Ghana SLTF, 2011; National Council for Tertiary Education, 2012). As Masaiti et al. (2016) rightly pointed out cost sharing without adequate financial assistance would further worsen the existing disparities between the well-off and the poor between the urban and rural population, in Ghana. The scheme in the past four years has disbursed a total of GH¢47.18 million to students in both public and private tertiary institutions in the country despite the marginal decline in the number of students assessing the Scheme Loans (see table 4).

**Table 4: SLTF Disbursement to Tertiary Institutions**

| Description | Academic Years | | | |
|---|---|---|---|---|
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 |
| Total Loan Disbursement (in GH¢ '000) | 13,924 | 10,108 | 7,925 | 15,228 |
| No. of Students Accessing Loans: | | | | |
| Public Institutions | 24,794 | 17,059 | 11,792 | 15,079 |
| Private Institutions | 2,162 | 1,546 | 2,041 | 2,016 |
| Total No. of Students Accessing Loans | 26,956 | 18,605 | 13,833 | 17,095 |

*Note.* SLTF=Students loan trust fund. GH¢=Ghana cedi.
Source: Researcher's own analysis with data from the SLTF Annual reports for 2011, 2012, 2013, and 2014.

Whereas in the public universities the scheme support significantly covers user fees and living expenses, the releases are woefully inadequate in the private tertiary institutions. The success of the scheme should be assessed based on the specific objectives setting

up the scheme and their financial sustainability (Botlhale, 2015; Knight, 2014; Power, Millington, & Bengtsson, 2015). The NCTE's sustainable financing of tertiary education 2012 report articulated a number of useful recommendations to government aimed at resourcing the scheme whiles addressing issues of equity and loan recoveries to make the scheme much more sustainable.

**Purpose of the Study**

The purpose of this study is to assess the level of influence of the following individual statements relating financing scheme: Government Grants allocations are discretionary, Government Grants allocations promotes students' enrolment, Government Grants allocations promotes Graduate Research, Government Grants allocations provides facilities for research, science education, ICT and Library materials, Government Grants allocations promote Staff/Faculty development, good governance and industry collaborations, and Students Loans and Grants adequately support students', and the extent to which these statements influence financial sustainability in public universities in Ghana. The study further seeks to test the relative importance of these statements combined influence on public universities financial sustainability.

**Research Questions/Hypotheses**

The study focused on addressing the following three research questions and the related hypotheses namely: (a) what is the level of the relationship between the individual statements relating to financing scheme in achieving financial sustainability? (b) what is the level of the relationship of the combined financing scheme statements and public universities financial sustainability? and (c) what is the relative combined financing scheme statements contribution in achieving best fit equation model for public universities financial sustainability?

The related Hypotheses are: $\mathbf{H_0}$: there is no relationship between the combined effect of the financing scheme statements and public universities financial sustainability, and $\mathbf{H_1}$: there is a relationship between the combined effect of the financing scheme statements and public universities financial sustainability.

## Methodology

### Research Design

The study utilized quantitative research technique to analyse the cause and effect of the variable and to test the hypothesis between the dependent and independent variable. Similar studies in the past on higher education financial sustainability (Bhayat, 2015; Cernostana, 2017; Chatama, 2014; Sazonov et al., 2015) have confirmed the appropriateness of the research technique and the significance of the independent variable, financing scheme and the dependent variable. The research design technique took into consideration the relative short duration nature of the study and its minimal tolerance for ambiguity (Creswell & Creswell, 2017).

The study data collection was undertaken through a survey instrument (questionnaire) using emails and experts mainly made up of vice chancellors or their deputies, finance, internal audit and registry departments of the sampled public universities. The instrument validation was carried out among subject area experts. The modified instrument based on the suggestions received was further tested among 10 other independent subject area experts. All feedbacks were incorporated thus validating the instrument before administering.

A test-retest reliability was undertaken among 10 respondents from the sample over a 7-day period in order to test the consistency of responses. The reliability test results produced a coefficient of $r = .723$, well above the acceptable consistency limits of $r = 0.5$ (Creswell & Creswell, 2017).

A five-point Likert-scales web-based survey instrument was used for the data collection. Prior telephone conversations with respondents was undertaken followed by email despatched with an electronic link for respondents to access the web-based survey instrument. According to Schoenherr, Ellram, and Tate (2015), this approach was more convenient and faster than the use of mailing, telephone or physically administering the questionnaire. The data analysis comprised correlation and multiple regression analysis to establish the relative strength of the statements relating to financing scheme on higher education financial sustainability. The study settled on these statements to analyse the level of influence using multiple regression analysis mainly due to emphasis from previous studies which consistently highlighted their importance to financial

sustainability (Amir, Auzair, Maelah, & Ahmad, 2016; Erins & Erina, 2017;Marovah, 2015; Moghadam, Jorge, & Pirzade, 2017).

## Population and Sample Strategy

The target population for the study comprised vice chancellors, pro vice chancellors, registrars, deputy registrars, finance directors, deputy finance director, directors of internal audit, deputy directors of internal audit, management accountants, budget officers, systems accountants and quality assurance officers of the seven sampled public universities established on or before the year 2005 or have been in existence for over 20 years. The study settled on these category of respondents due to their substantial expertise in HE management and finance. The computed target sample size at 95% confidence level for this research was 85. The response rate was 62.35% (53 valid responses). The sample size of 85 thus give sufficient representation of experts.

## Results

### Demographic Statistics

The study demographics were in two-fold namely respondents and institutional demographics. The key respondents' demographics comprised academic or professional qualifications, and their relevant professional experience. The participating institutional demographics included the institutions students' enrolment and accreditation status.

A greater number of participants ($n$ = 32) representing 60% had 11 or more years of relevant professional experience. 3 (6%) had relevant experience between 6 to 10 years of whiles 13 and 5 had either 5 years or below and over 20 years of relevant professional experience respectively. Majority of participants ($n$ = 33) representing 62% had both undergraduate, masters and professional level qualifications, 13 (25%) had undergraduate and master's level qualifications whiles 6 (11%) had undergraduate, masters and PhD/Doctorate qualifications. Only 1 participant (2%) had master's level and other qualifications (see table 5).

**Table 5: Respondents Demographics**

| Demographics | Frequency | Percent | *N* |
|---|---|---|---|
| Work Experience | | | |
| 1-5 Years | 3 | 6 | 53 |
| 6-10 Years | 13 | 25 | 53 |
| 11-20 Years | 32 | 60 | 53 |
| Over 20 Years | 5 | 9 | 53 |
| Academic/Professional Qualifications | | | |
| Degree & Masters | 13 | 25 | 53 |
| Degree, Masters & Professional Qualifications | 33 | 62 | 53 |
| Degree, Masters & PhD/Doctorate | 6 | 11 | 53 |
| Degree, Masters & Other qualifications | 1 | 2 | 53 |

UEW had the highest number of undergraduate students' population of 56,612 (32.96%) whiles the KNUST had the highest postgraduate students' population of 5,806 (28.53%). GIMPA had the lowest students population of 5,109 and 2,612 undergraduate and postgraduate students respectively but recorded the highest (2,554) number of students studying diploma/certificate programmes. The UG had the lowest number of diploma/certificate students of 200. Table 6 gives summary position of the institutional students' enrolment statistics.

**Table 6: 2017/2018 Students Population of Participating Institutions**

| Programme/Course | Students Enrolment | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | UG | KNUST | UCC | UDS | UEW | GIMPA | UPSA | Total |
| Diploma/Certificate | 200 | 2,443 | 1,200 | 2,049 | - | 2,554 | 1,585 | 10,031 |
| Undergraduate | 33,503 | 35,508 | 18,746 | 15,347 | 56,612 | 5,109 | 8,378 | 173,203 |
| Postgraduate | 5,546 | 5,806 | 1,012 | 2,442 | 3,304 | 2,251 | 718 | 21,079 |
| Total | 39,249 | 43,757 | 20,958 | 19,838 | 59,916 | 9,914 | 10,681 | 204,313 |

***Note:*** GIMPA = Ghana Institute of Management and Public Administration
KNUST = Kwame Nkrumah University of Science and Technology
UDS = University for Development Studies
UCC = University of Cape Coast
UEW = University of Education - Winneba
UG = University of Ghana
UPSA = University of Professional Studies

All seven institutions had Ghana national accreditation while six out of the seven institutions had both national and other international accreditations. A significant number of participants, representing 71.70% ($n$ = 38) confirmed that all seven institutions had valid Ghana national accreditation whereas 28.30% ($n$ = 15) indicated that their institutions possess both Ghana accreditation and other international accreditation status.

**Descriptive statistics**

The results of the descriptive analysis showed that the statement, Government Grants allocations are discretionary was significantly higher among the participants ($M$ = 3.74, $SD$ = 0.858). The mean values of the rest of the statements, Government Grants allocations promotes students' enrolment, Government Grants allocations promotes graduate research, Government Grants allocations provides facilities for research, science education, ICT, library materials, Government Grants allocations promote Staff/Faculty development, good governance & industry collaborations were fairly distributed ($M$ = 3.36, $SD$ = 1.06), ($M$ = 3.13, $SD$ = 1.08), ($M$ = 3.17, $SD$ = 1.14) and ($M$ = 3.30, $SD$ = 1.12),while the statement, students loans and grants adequately support students ($M$ = 2.26, $SD$ = 1.30) had the lowest among the participants. The variance and range of the statement, students' loans and grants adequately support students was significant at ($Var$ = 1.70, Range = 4.00*)* and a dispersion of 1.30 compared to the rest of the statements. The test of skewness between the statements adequately normal for the purpose of this study. Table 7 provides the details.

**Table 7: Respondents overall Response Ratings**

| Variable | *N* | *M* | *SD* | *Var* | Skewness | Range |
|---|---|---|---|---|---|---|
| Government Grants allocations are discretionary | 53 | 3.74 | 0.858 | 0.737 | -1.539 | 4 |
| Government Grants allocations promotes students' enrolment | 53 | 3.36 | 1.058 | 1.119 | -0.574 | 4 |
| Government Grants allocations promotes Graduate Research | 53 | 3.13 | 1.075 | 1.155 | -0.079 | 4 |
| Government Grants allocations provides facilities for research, science education, ICT, Library materials | 53 | 3.17 | 1.139 | 1.298 | -0.265 | 4 |
| Government Grants allocations promote Staff/Faculty development, good governance & industry collaborations | 53 | 3.30 | 1.119 | 1.253 | -0.292 | 4 |
| Students Loans and Grants adequately support students' | 53 | 2.26 | 1.303 | 1.698 | 0.786 | 4 |

## Correlation Analysis

The correlation analysis results showed varied levels of positive correlation between the independent variable statements relating to financing scheme, and the dependent variable of financial sustainability. The Pearson's rank correlation results revealed that two statements, Government Grants allocation is discretionary and Government Grants allocation promotes graduate research showed medium positive correlation effect of $r$ = .318 and $r$ = .360 respectively, while the statements Government Grants allocations provide research facilities, science education, ICT and library materials, and Government Grants allocations promote Staff development, good governance and industry collaborations revealed minimal correlation effect of $r$ = .258, and $r$ = .294 respectively. Two statements namely, Government Grants allocations promotes students' enrolment and adequacy of students' loans and grants returned

correlation effect of $r = .113$, and $r = .085$ respectively well below the linear correlation threshold of $r = .196$. The relative degree of association between the statements relating to the independent variable and the dependent variable was significant at $p < .05$ (see table 8).

**Table 8: Summary of correlation Analysis**

| Variable | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *M* | *SD* |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Financial Sustainability | - | 0.318 | 0.113 | 0.360 | 0.258 | 0.294 | 0.085 | 22.77 | 4.705 |
| 2 | Q1 Gov't Grants allocations discretionary | 0.318 | - | 0.233 | 0.184 | 0.184 | 0.125 | -0.022 | 3.74 | 0.858 |
| 3 | Q2 Gov't Grants allocations and student's enrolment | 0.113 | 0.233 | - | 0.769 | 0.715 | 0.703 | 0.083 | 3.36 | 1.058 |
| 4 | Q3 Government Grants allocations promotes Graduate Research | 0.360 | 0.184 | 0.769 | - | 0.830 | 0.813 | 0.084 | 3.13 | 1.075 |
| 5 | Q4 Gov't Grants allocations and research facilities, science education, ICT, Library materials | 0.258 | 0.184 | 0.715 | 0.830 | - | 0.788 | 0.034 | 3.17 | 1.139 |
| 6 | Q5 Gov't Grants allocations and Staff development, good governance & industry collaborations | 0.294 | 0.125 | 0.703 | 0.813 | 0.788 | - | 0.313 | 3.30 | 1.119 |
| | Q6 Adequacy of students | | - | | | | | | 2.26 | 1.303 |
| 7 | Loans and Grants | 0.085 | 0.022 | 0.083 | 0.084 | 0.034 | 0.313 | - | | |
| *M* | | 22.77 | 3.74 | 3.36 | 3.13 | 3.17 | 3.30 | 2.26 | | |
| *SD* | | 4.705 | 0.858 | 1.058 | 1.075 | 1.139 | 1.119 | 1.303 | | |

**Regression Coefficient**

Regression analysis was undertaken using SPSS version 25. The regression results further enabled a derivation of a regression equation for financial sustainability ($Y_{FS}$). The coefficient of determination ($R^2$) and the $p$ value further enabled the best-fit model to be determined. A test of significance using multiple regression analysis yielded a coefficient of $r = .542$, $F(6, 46) = 56.31$, $p = .001$, $R^2 = .293$. From the analysis (see table 9), three statements (government grants allocation is discretionary, government grants allocations promote students' enrolment and government grants allocation promotes graduate research) were significant in predicting financial sustainability with $p$ values $p = .018$, $p = .022$, $p = .025$ and beta weights of .315, .483 and .629 respectively. The statements, government grants allocations provide research facilities, science

education, ICT and library materials ($p$ = .723), government grants allocations promote Staff development, good governance and industry collaborations ($p$ = .594) and adequacy of students' loans and grants ($p$ = .788) were not significant and thus could not be considered in determining the best-fit model since their $p$ values were above the threshold of $p$ < .05. The results thus revealed that there was a significant positive relationship between the following statements relating to the independent variable (government grants allocation is discretionary, government grants allocations promote students' enrolment and government grants allocation promotes graduate research) and the dependent variable (financial sustainability) $F$ (6, 46) = 56.31, $p$ = .001, and $R^2$ = .293.

**Table 9: Regression Coefficient**

| Variable | Coefficient | Std. Error | *B* | -95% CI | +95% CI | *T* | *P* |
|---|---|---|---|---|---|---|---|
| (Constant) | 13.814 | 3.095 | | 7.584 | 20.043 | 4.464 | 0.000 |
| Q1 Gov't Grants allocations discretionary | 1.725 | 0.702 | 0.315 | 0.312 | 3.138 | 2.457 | 0.018 |
| Q2 Gov't Grants allocations and student's enrolment | -2.148 | 0.903 | -0.483 | -3.966 | -0.330 | -2.379 | 0.022 |
| Q3 Government Grants allocations promotes Graduate Research | 2.753 | 1.185 | 0.629 | 0.367 | 5.139 | 2.322 | 0.025 |
| Q4 Gov't Grants allocations and research facilities, science education, ICT, Library materials | -0.364 | 1.023 | -0.088 | -2.423 | 1.695 | -0.356 | 0.723 |
| Q5 Gov't Grants allocations and Staff development, good governance & industry collaborations | 0.591 | 1.101 | 0.141 | -1.626 | 2.807 | 0.536 | 0.594 |
| Q6 Adequacy of students Loans and Grants | 0.139 | 0.512 | 0.038 | -0.892 | 1.169 | 0.271 | 0.788 |

*Note.* CI = Confidence Interval

**Results of the regression analysis**

The results of the regression analysis revealed notable similarities with the results of the correlation analysis in relation to the variables with significant outcome and the degree of positive correlation. The best fit regression equation for financial sustainability are;

$Y_{FS}$ = a + $\beta_{GGD}$ + $\beta_{GGE}$ +$\beta_{GGR}$,

Where $Y_{FS}$ = financial sustainability (predictor variable),

a = constant value

$\beta_{GGD}$ = government grants allocation is discretionary (independent variable statement),

$\beta_{GGE}$ = government grants allocations promote students' enrolment (independent variable statement), and

$\beta_{GGR}$ = government grants allocation promotes graduate research (independent variable statement).

Hence regression equation for $Y_{FS}$ = 13.814 + 0.315$\beta_{GGD}$ - 0.483$\beta_{GGE}$ + 0.629$\beta_{GGR}$.

The regression analysis determined the best regression equation by including all statements with coefficient higher than zero and *p* value of $p < .05$ significant level and which subsequently supported the rejection of the null hypothesis ($H_0$), there is no relationship between the combined effect of finance scheme statements and public universities financial sustainability.

**Discussion**

The results of the study showed that participants were optimistic about the level of influence of the individual statements relating to financing scheme on financial sustainability and institutional set objectives. Whereas past studies stated similar sentiments ((Afriyie, 2015; Lucianelli & Citro, 2017; Sazonov et al., 2015; Amir et al., 2016; Bhayat, 2015; Brandas & Stirbu, 2013; Chatama, 2014; Collins, 2014) the study results surprisingly presented statistical evidence to support three out of the seven statements as having statistically significant relationship. Previous studies relating to HEIs funding allocation focused on its relevance to institutional performance and growth but fell short of addressing the level its effect on financial sustainability (Newman & Duwiejua, 2015; Emmanuel Newman, 2013; Sam, 2016; Tilak, 2015; Williams, 2015). This study sought a deeper understanding of the depth of the relationship of these statements to HEIs financing scheme and financial sustainability of public universities. Another disturbing challenge confronting financing schemes and financial sustainability of public universities in Ghana is the extent to which government grants allocations promotes students' enrolment (Estermann, 2015; Jongbloed et al., 2015). This work established a clearer understanding of the relationship between government grants allocations influence on students' enrolment and

how it affects financing scheme and financial sustainability of public universities in Ghana. The study further concluded from the many previous research findings that funding allocation mechanism that targeted the student as the unit of determining output emerged as the preferred and reliable funding allocation mechanism (Newman & Duwiejua, 2015; Newman, 2013; Woelert & Yates, 2015) contrary to the discretionary funding mechanism practiced in Ghana. A third significant constrain is the extent to which government grants allocation for graduate research thereby impacting directly on the financing scheme and financial sustainability. This study sought to further enhance the studies conducted by (Kirillov, Vinichenko, Melnichuk, Melnichuk, & Lakina (2015) and Woelert & Yates (2015).

The study research questions sought to determine (a) the level of the relationship between the individual statements relating to financing scheme in achieving financial sustainability, (b) the level of the relationship of the combined financing scheme statements and public universities financial sustainability and (c) the relative combined financing scheme statements contribution in achieving best fit equation model for public universities financial sustainability. The results established a statistical relationship between the financing scheme variables (government grants allocation is discretionary, government grants allocations promote students' enrolment, government grants allocation promotes graduate research, government grants allocations provide research facilities, science education, ICT and library materials, government grants allocations promote Staff development, good governance and industry collaborations and adequacy of students' loans and grants) and financial sustainability. The correlation results established below minimal to medium positive correlation between the variables of financing scheme and public universities financial sustainability. The correlation results provided sufficient basic evidence of the financing scheme variables relationship with financial sustainability as corroborated by past studies (Estermann, 2015; Hoozée & Hensen, (2018); Kirillov et al., 2015). Further analysis to determine combined significance level of the study financing scheme variables to financial sustainability presented results that supported the rejection of the null hypothesis: $H_0$. The regression results illustrated significant relationship between the financing

scheme variables (government grants allocation is discretionary, government grants allocations promote students' enrolment, government grants allocation promotes graduate research) and financial sustainability as supported by Estermann (2015) and Newman (2013) and which further supported the derivation of the best fit equation. The weak relationship established between the financing scheme variables: government grants allocations provide research facilities, science education, ICT and library materials, government grants allocations promote Staff development, good governance and industry collaborations and adequacy of students' loans and grants and financial sustainability contradicts findings from previous studies (Carnoy et al., 2014; Nyahende, 2013; Tilak, 2015; Woelert & Yates, 2015).

The study relevance is the interesting findings which has a positive impact on financing mechanisms for HEIs, governments, government agencies HEIs regulatory institutions and donor agencies. The study affords HEIs to have a deeper appreciation of the financing scheme variables in reforming the funding mechanism into a more robust and sustainable financing scheme for HEIs in Ghana.

## Conclusion

The study identified a statistically positive relationship between the individual statements (Government Grants allocation are discretionary, Government Grants allocations promote students' enrolment, Government Grants allocation promotes graduate research, Government Grants allocations provide research facilities, science education, ICT and library materials, Government Grants allocations promote Staff development, good governance and industry collaborations and students' loans and grants adequately support students') and financial sustainability. The study further established that there is a significant relationship between the combined effect of the statements (Government Grants allocation are discretionary, Government Grants allocations promote students' enrolment, Government Grants allocation promotes graduate research, Government Grants allocations provide research facilities, science education, ICT and library materials, Government Grants allocations promote Staff development, good governance and industry

collaborations and students' loans and grants adequately support students') and financial sustainability (**H1**).

**Recommendations**

The study outcome presents a number of useful practical recommendations relating to the financing scheme variables worth considering by HEIs managers and practitioners and experts.

1) HEIs funding allocation policy review: The government of Ghana through the ministry of education should consider a review of the funding policy direction with a clear focus of addressing infrastructure deficit, skills gap, research, science and technology.
2) Funding allocations based on students' enrolment: The findings of the study further stress the importance of allocating institutional grants and subventions based on student's enrolment into academic programmes. The NCTE and ministry of education should consider reviewing the current funding allocation guidelines in line with study recommendation.
3) Performance based funding allocations: Funding allocation reforms should aim to promote performance, fairness and healthy competition and the realisation of national development policy agenda among HEIs in the country. Performance should focus on achieving science and technology education, equity, good governance, quality assurance and promoting research output among other critical outputs. The findings of the study thus emphasise the importance of this funding allocation approach.
4) Infrastructure funding allocation: The GETFund and ministry of education should consider a review aimed at developing clear and transparent disbursement criteria for both public and private higher educational institutions that are Not-for-Profit by their incorporation.
5) Student loans and grants review: A review of student loans and grants should aim to make sufficient financing available to meet the basic needs of tertiary students, such as academic fees (user fees), hostel or accommodation charges and living expenses in every academic year

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# Assessment of the availability of Facilities and Equipment Influencing the Implementation of Secondary School Physical Education Curriculum in Nigeria

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## Abstract

Curriculum implementation in Secondary Schools in Nigeria focuses on the success of that process of putting curriculum in action for achieving the set goals. The purpose of this study was to assess the availability of facilities and equipment influencing secondary schools physical education curriculum in Nigeria. Survey research design (Ex- post facto) was used for this study. To achieve this, purposive sampling technique was used to select the samples from the Six {6} Geo-political zones and the respondents consisted of heads of Physical Education Teachers in the Public and Private Secondary Schools. The population of the study was all secondary schools comprising fifty four thousand Five hundred and twenty- one (54,521) students with sample size of Six hundred and fifty-six (656). The data collected were statistically analysed by using inferential statistics of One Sample t- test to test the hypothesis. The results of the findings showed that Physical Education facilities and equipment influence the implementation of secondary schools Physical Education curriculum in Nigeria with t- Cal of 3.170 and P val of 0.031. The researcher recommended that Federal Ministry of Education in conjunction with the States Ministry of Education should provide physical education facilities and equipment for the implementation of Physical Education curriculum in Secondary Schools in Nigeria.

**Key words:** B.Ed. Accounting; CIPP Model; Programme evaluation

## Introduction

Curriculum implementation in Secondary Schools in Nigeria focuses on the success of that process of putting curriculum in action for achieving the set goals. This Education is such a powerful instrument for progress and effective development of nations of the world. Nigeria having realized the global trend, developed a curriculum that is expected to facilitate full educational achievements of her set goals. The right to education requires that children of school going age be given such opportunities needed to acquire basic knowledge, skills, and those values to develop appropriate attitudes that will help them live a fulfilling and productive life (Adeshina, 2015). The National Policy on Education (2013) stated that the broad aims and objectives of secondary education include, preparation of youths for useful living within the society and preparing them for higher education amongst others. In order to achieve this, school curriculum ought to be effectively implemented to ensure a positive future for Nigerian youth who are future leaders. Youths ought to be well-equipped with basic skills to drive the national economy (Oliva, 2014). Curriculum is a vehicle through which education can be attained. Education is therefore seen as a tool for the empowerment of the youth in Nigeria (Offorma, 2015).

The National Policy on Education (2013), emphasized equal access to educational opportunities for all citizens of Nigeria be it Primary, Secondary and Tertiary levels and those inside and outside the formal school system. Consequently, the quality of instruction at all levels is oriented towards inculcating and promoting physical, emotional, and psychological development of all children as well as the acquisition of competencies necessary for self-reliance. Though, the policy appears to be well-stated, its implementation seems to be the problem (Oyeyemi, 2015). It was further observed that Nigeria is blessed with good educational policies but inconsistency in policy implementation is affecting the sector.

Physical Education develops series of activities that is done from early age to adulthood to become a whole man which aims at instilling integrated development of mental, cognitive strength, straightens individual's behavior, control emotional and psychological

expressions. Thus, achievements of Physical Education as a subject in schools are predicated on favourable environment and adequate facilities and equipment (Mamser, 2016). Coker (2017) asserted that Physical Education curriculum implementation is dependent on physical facilities and equipment devices. Gregor and Janko (2012), stated that implementation of Physical Education curriculum depends on the following factors: availability of facilities and equipment.

In an up-date on the status of physical education curriculum in schools, a technical report for World Health Organisation (2007) stated that resources like financial considerations have had a number of impacts on physical education curriculum across the globe. The report further stated that failure to refurbish/ reconstruct/ replace/ maintain outdated or provide new facilities and equipment; has had negative impacts on the state of physical education curriculum.

Broad problem of nation building generally involve differences of religion, ethnic groups, language, customs, economic and political interests which become obstacles to national integration and national development. Physical Education curriculum, with its broad relevance to education, social welfare, culture, politics and health, if adequately planned, may serve the purpose of nation building and foster national integration. (Sie, 2008). Increasingly, on the relevance of Physical Education Curriculum to nation building, many nations are pointing to physical education as media most suited for use as a strategy to lift a nation from its backwardness, because physical education and sport not only give pleasure but affects other aspects of life.

Based on the foregoing, it is imperative to assess the availability of facilities and equipment influencing the implementation of secondary schools' Physical Education curriculum in Nigeria.

**Statement of the Problem**

Curriculum in Nigerian schools is determined by the very structure and nature of the schools much of which revolves around daily or established routine. It seems that some hindrances' affecting curriculum implementation may include inadequate qualified teachers, inability to meaningfully interpret performance of objectives, inadequate provision of infrastructure, skipping of unfamiliar content areas by teachers, inability to organize activities for students, skipping activities where materials are not readily available. Others are lack of communication skills, rushing the students to finish the scheme of work

for lack of time, large class size and so on (Coker,2017). For educational goal to be attained and learners to achieve, facilities and equipment play vital role in implementation. Mamser (2016) opined that achievement of Physical Education as a **s**ubject in school is predicated on favorable environment and adequate availability of facilities and equipment. Coker (2017) equally observed that Physical **e**ducation implementation is hinged on physical facilities and equipment.

The researcher's observation and personal interaction with some teachers in Kaduna and Zaria revealed that Physical Education is no longer getting prompt attention by Federal, state ministries of education, and Principals of various Secondary Schools despite the measures taken by setting up of National Education Research Council (NERDC), charged with the responsibility of not only monitoring curriculum implementation process but also see to efforts aimed at effectively implementing content of the curriculum particularly at the Secondary Education level. In the research findings by Coulter and Woods (2016), it was noticed that few sporting equipment purchased in most schools in Nigeria are kept as decorative objects.

It is not clear why most Secondary Schools (Public and Private) in Nigeria do not have the availability of facilities and equipment for the implementation of Physical Education curriculum and while other Secondary Schools in Nigeria possess the available facilities and equipment to implement their Physical Education curriculum. Thus, therefore the researcher tends to find out the gap.

It is against this backdrop that the researcher assessed the availability of facilities and equipment influencing the implementation of Secondary School Physical Education Curriculum in Nigeria.

**Purpose of the Study**

The objective of this study was to assess the availability of facilities and equipment influencing the implementation of Secondary School Physical Education Curriculum in Nigeria.

**Research Hypothesis**

For this study, the following null hypothesis was formulated;

1. Availability of facilities and equipment does not significantly influence implementation of Secondary Schools Physical Education Curriculum in Nigeria.

**Methodology**

Survey research design (Ex- post facto) was used for this study. The research population for this study consists of all the Physical and Health Education Teachers in Secondary schools in the six (6) Geo-Political zones in Nigeria.. The population of all secondary schools, Public and Private in the zone in Nigeria is 54,521. The sample size for this study was 656. According to Research Advisor (2006) for a population of 54,521, a sample size of 656 at 99% degree of accuracy is said to be adequate. To achieve this sample size from the population of the study, a multi-stage sampling procedure was employed. This type of sampling technique requires the use of more than one technique in sampling. Stratified sampling technique was used to study the schools as they spread across the Geo-Political Zones in Nigeria. The zones are North East, North West, North Central, South East, South West and South South. Simple random sampling technique was used to select a state from each of the six Geo-political zones. Cluster sampling technique was used to put the schools into ownership of Public and Private. The researcher grouped the schools into either Public or Private. Furthermore, simple random sampling technique was used to select the number of schools (Public/Private) that formed the sample size for the study because of the fact that many secondary schools (Public/Private) in Nigeria do not implement the curriculum as required. In selecting six hundred and fifty-six (656) teachers, simple random sampling technique was used. In doing this, the "lucky dip" otherwise known as the "blind ballot" technique of random sampling was used in the selection of teachers. To achieve the purpose of this study, a research instrument tagged "Assessment of facilities and equipment Influencing Implementation of Secondary Schools Physical Education Curriculum in Nigeria" (AFEIIPECNQ) questionnaire contained thirty-six (36) items was developed. The respondents were required to respond to all the statements using Five (5) point likert type scale of Strongly Agree (SA) = 5points, Agree (A) = 4points, Undecided (U) = 3points, Disagree (D) = 2 points and Strongly Disagree (SD) = 1. The drafted instrument was submitted to experts for face and content validity. Their suggestions and input were considered, corrected and approved for the study. In order to establish the reliability of the instrument already validated, a pilot study was conducted by using Heads of Physical Education subject teachers in fifty (50) secondary schools in the North west geo-political zone of Katsina State

and South west of Oyo State that was not part of the main study were used. The data obtained from the pilot study were statistically analyzed for the purpose of reliability. In doing this both the Cronbach alpha reliability coefficient and Spearman-Brown Split half reliability coefficient were applied. This reliability coefficient was considered adequate for the internal consistencies of the instrument. The result of Spearman-Brown Split Half, Gutman Split Half and Cronbach alpha reliability are 0.807, 0.771 and .779 respectively. This therefore confirmed the instrument used for this study were highly reliable. Inferential Statistics of One Sample t- test was used for testing of hypothesis and the decision to reject or accept the hypothesis at 0.05 alpha level of significance.

**Results**

Six hundred and fifty-six (656) copies of the questionnaire were administered and Six hundred and fifty-one (651) were retrieved and used for the analysis. The Statistical Package of the Social Sciences (SPSS) Version 22 was used to analyze the data obtained from the respondents. To test the formulated hypothesis for this study, an inferential one Sample t-test statistics was used. The hypothesis was tested at 0.05 alpha level of significance.

**Hypothesis:** Physical Education facilities and equipment does not significantly influence the implementation of Secondary Schools Physical Education Curriculum in Nigeria.

**Table 1: One sample t-test analysis of Physical Education facilities and equipment on the implementation of Secondary Schools Physical Education Curriculum in Nigeria**

| Variables | Mean | Std. Deviation | t-value | df | P-value |
|---|---|---|---|---|---|
| Aggregate mean | 4.0588 | .5439 | 3.170 | 650 | 0.031 |
| Constant mean | 3.5 | 0.00 | | | |

t (650) = 1.645, P value < 0.05

From the result of analysis presented, it showed that the probability value is less than 0.05 level of significance. The t-value 3.170 is greater than the t-critical of 1.645 at the degree of freedom 650, using two tailed significant level. The null hypothesis which states that "Physical Education facilities and equipment does not significantly

influence the implementation of Secondary Schools Physical Education Curriculum in Nigeria" is therefore rejected.

**Discussions**

The null Hypothesis stated that Availability of Physical Education Facilities and Equipment does not significantly influence the implementation of Secondary Schools Physical Education Curriculum in Nigeria. One sample t-test was used to test the hypothesis. The result of the test revealed that t = 3.170 at 0.05 level of significance is greater than the t-critical of 1.645 at the degree of freedom 650. The null hypothesis was therefore rejected that availability of Physical Education Facilities and Equipment significantly influence implementation of Secondary Schools Physical Education Curriculum in Nigeria. This finding is consistent with Green and Hardman (2015) that sporting facilities and its maintenance by the school management makes the quality of lesson to be provided in schools high. Hardman and Marshall, (2013) went further that lack of facilities for teaching physical education is recognized internationally as a constraint in implementing the curriculum. The believe is affecting nationally the impact of implementation. In most of Nigeria secondary schools that are established in rural areas lack facilities, no availability of sport field, because they are sited in and around hills, river banks, where teachers alternate days in school due to distance, makes it impossible to have full implementation of curriculum. Where facilities like gymnastics sport hall, field of play are non-existence in schools, it equally makes it impossible to conduct any practical class that may be part of content to learn. Green and Hardman (2015), viewed that all over Africa, Eastern and Central Europe, quantities and qualities of equipment in schools were said to be inadequate which negates quality of teaching – learning and in essence affects implementation of the curriculum. Daughtrey and Woods (2017) opined that before any meaningful achievement can take place in physical education with respect to skills and knowledge, equipment and facilities to enhance full participation. In schools where fees are paid by students, it is noted that sport fee forms part of what makes the school fees. Where the fee is made free by some states government, provision of necessary items are expected to be provided to enhance full teaching and learning in all subjects as approved by government. In a situation where a Physical Education teacher lacks some items or uses few to teach many students tend to make the teacher

lazy, ignore practical lesson and skip some topics to be taught in the curriculum. Thus makes the curriculum to be partially or not fully implemented. To buttress this point, that teaching and learning cannot take place in a vacuum rather than in an environment where facilities and equipment has direct and indirect impact on activities as sporting facilities in a school constitute the component of these direct and indirect activities in a learning environment.

**Conclusion and recommendations**

Availability of Physical Education facilities and equipment influence implementation of Secondary Schools Physical Education Curriculum in Nigeria. It can equally be concluded that the necessary physical education facilities and equipment in schools are utterly wanting. This situation needs to be addressed if successful training of Physical Education teachers in Physical Education Curriculum has to be done in our Secondary Schools. Recommendations made include:

1) There Is therefore the need for all established secondary schools to have Physical Education facilities and equipment for use in classroom lessons and well in order to implement Secondary Schools Physical Education Curriculum.
2) The Federal Ministry of Education in conjunction with the States Ministry of Education should establish clear policy on physical education equipment and facilities in Secondary Schools in Nigeria.
3) The Federal Ministry of Education in conjunction with the States Ministry of Education should provide physical education facilities and equipment for the implementation of Physical Education curriculum in Secondary Schools in Nigeria.

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# Students' Evaluation of the B.Ed. Accounting Programme in the University of Cape Coast

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## Abstract

The thrust of this study was to assess students' perceptions of the Bachelor of Education (Accounting) programme at the University of Cape Coast. The study adopted the descriptive survey design in which data were collected within the overarching framework of the Context Input Process Product evaluation model. A sample size of 349 Bachelor of Education (Accounting) students participated in the study. Multi-stage sampling, employing stratified sampling, proportionate random sampling and simple random techniques, was used in selecting the respondents for the study. Descriptive statistics (means and standard deviation) and inferential statistics (Mann-Whitney U-test and Kruskal-Wallis test) were used to analyse the research questions / hypotheses. The study found that students perceived the Bachelor of Education (Accounting) programme to be satisfactory to the context rubric of the CIPP model. However, it was found that the programme was not satisfactory with respect to the input rubric of the CIPP model. It was also revealed that students were satisfied with the process rubric of the programme. The study recommended that the programme designers should include courses that will expose students to the use of current accounting software used in Ghana such as Tally Accounting, and the Head

of the Department should ensure that departmental library resources and facilities, current journals in Accounting for the use of both students and lecturers, and teaching and learning materials are adequately available and in right conditions.

**Key words:** B.Ed. Accounting; CIPP Model; Programme evaluation

## Introduction

Evaluating student learning and academic programmes is speedily taking centre stage as the prime measure of higher education's effectiveness (Banta, Griffin, Flateby, & Kahn, 2009). Calls for the overhaul of accounting education have been loud and clear in the accounting literature (Adaboh, 2014). This has led to the recognition that various commitment to teaching and learning should incorporate evaluation on what students are learning and also use such information to improve the educational experiences offered in the universities.

The Bachelor of Education (Accounting) is a first-tier programme that trains learners to become teachers of accounting. In Ghana, accounting as a course is studied at the Senior High School and tertiary levels and the programme seeks to train the requisite manpower and qualified professionals to fill teaching vacancies in the Business Programmes of Senior High Schools. The programme purports to train learners in the latest accounting technological procedures, accountancy-based computer software, electronic methods of account, books balancing, among others. This is because accounting deals with items which are monetary in nature, a lot of diligence and caution is required in undertaking the duty of an accountant, and for that matter, learners are trained to pay attention to details, be attentive, and mathematically savvy, so they would be able to pass these traits on to those they would teach after school (University of Cape Coast, 2014).

Accordingly, the University of Cape Coast introduced the Bachelor of Education (Accounting) programme in 2012/2013 academic year to achieve, among others, the following aims and objectives: to equip students with professional skills in the field of teaching and education; to train students in understanding accounting principles, and methods for institutional management and administration (University of Cape Coast, 2014).

The Bachelor of Education (Accounting) programme apart from training students to take up jobs as teachers of accountancy in schools, also equips graduates to competently take up jobs as accountants, auditors and financial analysts (University of Cape Coast, 2014). The in-depth nature of the Bachelor of Education (Accounting) programme also makes it promising for learners to easily veer into other career areas such as taxation, financial analysts with stockbrokers, among others. Due to their training in the programme, graduates from the programme might be the preferred choice when consultancy firms, in particular, go hunting for professionals to manage their operations. This is as a result of the education component of the programme which enables the students to gain greater competence, confidence and experience in the art of teaching and thereby strengthen their professional practice.

It is to be noted that, over the years, accounting education, which often attracts a huge number of students, has been functioning as part of social sciences programme and this has often posed some challenges pertaining, mainly, to human and material resource allocation. This is evident in the growing number of students seeking admission to the programme since its introduction (For example, the number of students admitted in 2012/2013 academic year was 97. By 2013/2014 academic year, the number had risen to 186, in 2014/2015 academic year it was 181, and for 2015/2016, the number of students was 200). To address these challenges, the University considered it most appropriate to separate accounting education from the mainstream social sciences education. This was to ensure that accounting education receives due attention, and also be recognised as a distinct programme. Despite the growth noted above and the support from the University, there has been an absence of formal independent evaluation of the programme.

Although the official approval of the B.Ed. Accounting programme was granted by the National Accreditation Board which has the duty to periodically assess tertiary institution and their programme, their assessment might offer little evidence of the overall effectiveness of the programme. Again, the academic board of the University which provides recognition and authorization for the programme might not have conducted a formal independent evaluation of the programme which is known to the public. This research aims to help fill this gap by identifying the programme's strengths and weaknesses as perceived by the students and to suggest ways of improving the programme. The

purpose of this research was to assess students' perceptions of the programme at the University of Cape Coast. The CIPP evaluation model developed by Stufflebeam (2003) formed the theoretical basis for this study. The study concentrated on the first three components of the CIPP model. Thus, it focused on the Context, Input and Process components. The product component was excluded because as at the time of the study, the B.Ed. Accounting programme was yet to complete its full course: i.e. the first batch of students were yet to complete on the programme.

**Research Questions**

The research questions/hypotheses for this study were informed and framed by the first three constituents of the CIPP Evaluation Model: Context, Input and Process (Stufflebeam & Shinkfield, 2007) as follows:

1. How satisfactory is the Bachelor of Education (Accounting) programme to the "Context" rubric of the CIPP model?
2. How does the Bachelor of Education (Accounting) programme satisfy the "Input" rubric of the CIPP model?
3. In what manner does the Bachelor of Education (Accounting) programme satisfy the "Process" rubric of the CIPP model?
4. Is there any statistically significant difference between male and female respondents' perception of
    a. Context rubric;
    b. Input rubric; and
    c. Process rubric of the B.Ed. Accounting programme?
5. Is there any statistically significant difference between the perception of respondents at the various levels in terms of:
    a. Context rubric;
    b. Input rubric; and
    c. Process rubric of the B.Ed. Accounting programme?

**Review of Related Literature**

**Theoretical Framework: The CIPP Evaluation Model**

The Context Input Process Product Evaluation Model (CIPP), concurring to Stufflebeam and Shinkfield (2007), "is an all-inclusive framework designed for conducting formative and summative evaluations of programmes, projects, staffs, products, organizations,

and evaluation systems" (p. 325). It is an improvement and accountability model that has its roots in the 1960s when it was developed to improve teaching and learning in inner-city school districts. Its present-day use has gone away from pre-college education to include wide-ranging areas such as community and economic development, international development, government, and university education. The CIPP model is premised on an operational definition of evaluation which perceives it as "the process of delineating, obtaining, reporting, and applying descriptive and judgmental facts about some object's merit, worth, significance, and probity in order to guide decision making, support accountability, disseminate effective practices, and increase understanding of the involved phenomena" (Stufflebeam & Shinkfield, 2007, p. 326). The exceptionality of Stufflebeam's model is in the fact that not only does it describe the procedures that educational facilities and administrators can adapt to effectively select, implement, and evaluate the after-effects of a proposed method but it grants access to administrators with tools to evaluate their level of achievement or success at each stage of the process.

**Components of CIPP**

The acronym CIPP signifies the central concepts of this model. This acronym stands for the context, inputs, processes, and product of an entity. Stufflebeam (1971a) describes evaluation according to the CIPP model as a "process of delineating, obtaining and providing valuable information for judging decision alternatives" (p. 267). In other words, CIPP is based on providing information for decisions (Stufflebeam, 1971b). Moreover, Boulmetis and Dutwin (2005) named the CIPP model as the best decision-making model. Stufflebeam's evaluation framework is intended to serve the informational needs of decision-makers and administrators. The four components of the model are as follows:

a. **Context Evaluation**: This is to provide information for planning decision-making. This involves determining the actual condition and isolating "unmet needs" as well as opportunities that could be utilised. Decision making at this stage helps in defining objectives for a curriculum programme. This evaluation in its most-straightforward description looks at the situation in which the programme operates and the effect of the situation on the programme. Thus, it assesses needs and

environment within which a given programme takes place (Ornstein & Hunkins, 1998).

b. **Input Evaluation**: This aspect of evaluation provides information about alternative strategies for dealing with needs identified as well as available resources. It provides information and determines how to utilize resources to meet programme goals. It is at this stage that an evaluator may point out the best alternative strategy for dealing with the needs (Stufflebeam cited in Tunç, 2010). This also shows that the resources with which the programme is run are also looked into as well as the best strategies or methods to use to cater for the needs investigated. It merely looks at what goes into the programme. In an educational setup, this evaluation, for instance, looks at the available resources or Teaching and Learning Material(s) used for the implementation of the programme.

c. **Process Evaluation**: Information at this stage helps to implement the curriculum or educational programme. The fundamental purpose is to provide feedback about the needed modification if the implemented is inadequate (Stufflebeam cited in Tunç, 2010). Here, the evaluator tries to find out about how well the plan is being implemented, what problems/obstacles are hindering its smooth implementation, what revision or changes can be made for successful implementation. Consequently, this type of evaluation deals with looking into the procedures through which the programme is being implemented.

d. **Product Evaluation**: The primary function of the product evaluation is "to measure, interpret, and judge the attainment of a programme" (Stufflebeam and Shinkfield as cited Tunç, 2010, p. 27). Product evaluation, therefore, should determine the extent to which identified needs were met, as well as identify the broad effects of the programme. The evaluation should document both intended and unintended effects and adverse as well as positive outcomes (Gredler, 1996). This stage of the evaluation process is concerned with the extent to which the programme realised its intended purposes and what could be done with the programme after it has run its full course. This is an evaluation that is meant to examine the level with which the

programme has met its intended outcomes. It is in this stance that Nevo (1983), observed that the CIPP model put forward that an evaluation programme focuses on four characteristics: its goals (the merits of its goals), its design (the quality of its plans), the process through which it is implemented (the extent to which the plans are being carried out), and its results (the worth of its outcomes).

**Research methods**

The study adopted the descriptive survey design in which data were collected within the overarching framework of the CIPP evaluation model. According to Ary, Jacobs, Razavieh and Sorenson (2006), descriptive research studies are designed to obtain information which concerns the current status of occurrence. The use of descriptive research enabled the researchers to bring to light the status of the Bachelor of Education (Accounting) programme at the University of Cape Coast. The population for this study were the Bachelor of Education (Accounting) programme students from Level 100 to Level 400 totalling 664 students.

A sample size of 350 students was used. This number was taken in line with the guideline provided by Krejcie and Morgan (1970) that a population of 664 should use a sample size of 242. However, the researchers increased it from 242 to 350 in order to increase the return rate during data collection. The multi-stage sampling was employed in choosing the sample size from each level. First, the stratified sampling technique was used to select students based on their levels. The proportionate sampling technique was then used to select the sample size (number of the respondent from each level) from each stratum. Next, the number of male and female respondents was determined at each level. The stratified proportionate technique was used. Finally, the simple random technique, precisely, the lottery method was used to select the sample unit in each stratum.

A quantitative method of data collection was employed. Mainly questionnaire was used to survey the students selected for the study. According to Connelly (2008), extant literature recommends that a pilot testing sample should be 10% of the sample projected for the larger parent study. Generally, 10 - 20% of the primary sample size is a reasonable number for conducting a pilot testing (Baker, 1994). Accordingly, before the main research, a pilot study was conducted

with 40 students from Bachelor of Education (Social Sciences) majoring in accounting. This process was to help refine the questionnaire, enhance its legibility, and minimise the chances of misinterpretation.

The reliability of the instrument was estimated using the Cronbach's Alpha. The Cronbach's Alpha coefficient was estimated for the instrument and the overall reliability estimate was 0.825. The obtained coefficient was considered to be adequate enough to ensure reliable responses as suggested by (Pallant 2010; DeVellis mentioned in Adaboh, 2014) that a reliability coefficient of 0.70 or above is considered appropriate for an instrument.

Data were collected using a set of structured, self-administered questionnaire which sought information on students' background characteristics, their perception of how the B.Ed. Accounting programme is satisfying the various rubrics of the CIPP model. Inferential statistics (Mann-Whitney U-test and Kruskal-Wallis test) and descriptive statistics (mean and standard deviation) with a mean cut-off of 2.5 were used to analyse the research questions with the aid of Statistical Product for Social Sciences (SPSS) version 23.

## Results and Discussion

A total of 349 respondents took part in the study. The results showed that the majority (n = 106, 30.4%) of the respondents were first-year students, followed by the third year students (n = 97, 27.8%), second-year students (n = 95, 27.2%), and the final year students were the least respondents (n = 51, 14.6%) (Table 1).

**Table 1: Demographic of Respondents** (*N*=349)

| variables | Sub-scale | | freq | % |
|---|---|---|---|---|
| Gender | Male | | 253 | 72.5 |
| | Female | | 96 | 27.5 |
| | | Total | 349 | 100.0 |
| Level | 100 | | 106 | 30.4 |
| | 200 | | 95 | 27.2 |
| | 300 | | 97 | 27.8 |
| | 400 | | 51 | 14.6 |
| | | Total | 349 | 100.0 |

Source: Field survey, 2016

The results in Table 1 also showed that the majority, (n = 253, 72.5%) of the respondents were male students while 96 (27.5%) were female students.

**Evaluation of the Context of B.Ed. Accounting**

**Research Question 1:** How satisfactory is the Bachelor of Education (Accounting) programme to the "Context" rubric of the CIPP model?

The data gathered in this direction were analysed, and the associated results are shown in Table 2.

**Table 2: The B.Ed. (Accounting) programme satisfying the "context" rubric of the CIPP model**

| Survey items | Mean | SD |
|---|---|---|
| The courses offered in the B.Ed. (Accounting) meet the requirements of the International Federation of Accountants (IFAC). | 3.11 | .545 |
| The courses offered in the B.Ed. (Accounting) meet the requirements of the Institute of Chartered Accountants-Ghana. | 3.21 | .594 |
| The objectives of the B.Ed. (Accounting) are aligned with the mission of the University. | 3.30 | .510 |
| A set of written objectives for each course in the B.Ed. (Accounting) are provided to me. | 3.06 | .789 |
| The objectives of each course in the programme are stated. | 3.20 | .693 |
| The courses offered in the B.Ed. (Accounting) are in line with the goals and objectives of the programme as stated in the prospectus. | 3.16 | .648 |
| The course provides sufficient exposure to students of accounting software currently in use in Ghana (e.g. Tally accounting, etc.). | 1.94 | .879 |
| There is sufficient exposure of students to current accounting standards. | 3.02 | .699 |
| The work experience component of the Programme provides me with adequate exposure to the world of work. | 2.81 | .770 |
| Ethical issues in accounting as a course are taught in the programme. | 2.92 | .697 |
| Ethical issues are identified and highlighted in the other courses taught under the B.Ed. (Accounting) programme. | 2.88 | .639 |

| | | |
|---|---|---|
| The courses in the B.Ed. (Accounting) challenged me to do my best. | 3.27 | .671 |
| The pedagogical skills used for presentation of courses under the B.Ed. (Accounting) programme promotes the development of communication skills. | 2.91 | .772 |
| The programme promotes the development of communication skills through improved writing skills. | 2.72 | .737 |
| The general education components of the programme are relevant to the academic growth of students. | 3.29 | .529 |
| Mean of means/Average standard deviation | 2.987 | 0.678 |

Source: Field survey, 2016

The mean of means (2.987) indicates a general satisfaction the B.Ed. (Accounting) programme provides in terms of satisfying the context rubric of the CIPP model and the average standard deviation (0.678) also indicates the overall homogeneity in the responses of the respondents. This finding in the area of contextual evaluation is in line with that of Omotunde (2015) who found out that the programme at Babcock University was still in conformity with the laid down values and objective of the programme.

Hanchell's (2014) findings for context indicated that there is a lack of familiarity with the mission statement on behalf of the student body. The findings of Akpur, Alci and Karatas (2016) disagree with these findings as they observed that the students, together with the teachers, were not content with the improvement of their language skills. However, results concerning this current study show that the B.Ed. (Accounting) programme satisfies the context rubric of the CIPP model.

**Evaluation of the Input of B.Ed. Accounting**

**Research Question 2:** How does the B.Ed. (Accounting) programme satisfy the "Input" rubric of the CIPP model?

The data gathered in this direction were analysed and the associated results presented in Table 3.

**Table 3: The B.Ed. (Accounting) Programme Satisfying the "Input" Rubric of the CIPP Model**

| Survey items | Mean | SD |
|---|---|---|
| Relevant course books are available at the library. | 2.58 | .846 |
| The relevant course books at the library are current/up to date. | 2.12 | .815 |
| Current professional journals in Accounting are available at the library. | 2.35 | .783 |
| There is online access to journals and books at the library. | 2.71 | .798 |
| Teaching materials are available in sufficient quantities for instruction (e.g. textbooks, supplies, photocopy materials, etc.) | 2.84 | .791 |
| The quality of the teaching materials is of a high standard. | 2.69 | .739 |
| The teaching and learning facilities have technologies comparable to what students will find in the workplace. | 2.39 | .782 |
| The classrooms facilitate instruction (i.e. not overcrowded, comfortable seating, etc.) | 1.97 | .879 |
| The teaching and learning facilities in the lecture rooms are up-to-date. | 2.49 | .801 |
| The library reading area is adequate. | 2.76 | .819 |
| The library operating hours are appropriate. | 2.97 | .750 |
| The library resources can be accessed online. | 2.62 | .816 |
| The library has up-to-date journals in my course area. | 2.28 | .813 |
| The computers in the library are adequate for student research. | 2.02 | .827 |
| The computer laboratory has up-to-date computers | 2.40 | .837 |
| The computers are readily available for student use. | 2.40 | .833 |
| The programme administrative staff demonstrate concern for the academic well-being of students | 2.67 | .801 |
| Mean of means/Average standard deviation | 2.49 | 0.81 |

**Source: Field Survey, 2016**

The mean of means (2.49) and average standard deviation (0.81) imply a general dissatisfaction of the input rubric of the B.Ed. (Accounting) programme. It can be concluded that the input rubric of the B.Ed. (Accounting) programme is not satisfactory. This finding contradicts that of Omotunde (2015). Omotunde (2015) pointed out that the university has measured up to the standard and has provided the physical infrastructure that can help push the mission of the university. The study also indicated that the university has the state-of-the-art teaching infrastructure (electronic starboard for teaching, engaging in video-conferencing and online teaching) that can meet up with its other counterpart in the world and also the University has invested a great deal in providing infrastructures that can enable effective studying.

The findings corroborate those of Akpur et al. (2016) who discovered that the items about audio-visual materials of the curriculum were rated the lowest. It again contradicts that of Azhar (2015) which showed that the input factor of the programme under evaluation was of a higher quality. This dissatisfaction calls for management to re-engineer the inputs needed for teaching and learning of B.Ed. (Accounting) programme. Those that need to be updated should be updated, and those that need to be changed should be changed to ensure that quality inputs are available for transforming students.

**Evaluation of the Process of B.Ed. Accounting**

**Research Question 3:** In what manner does the B.Ed. (Accounting) programme satisfy the "Process" rubric of the CIPP model?

The data gathered in this direction was analysed and the associated results presented in Table 4.

**Table 4: The B.Ed. (Accounting) programme satisfying the "Process" rubric of the CIPP model**

| Survey items | Mean | SD |
|---|---|---|
| The amount of instruction given by lecturers in my courses is adequate to enable me to progress through the curriculum. | 2.91 | .694 |
| The lecturers in the programme have adequate on the-field professional experience | 3.09 | .668 |

| | | |
|---|---|---|
| The lecturers in the programme promote the development of higher-order thinking skills in their teaching. | 3.14 | .625 |
| The lecturers in the programme encourage teamwork in the classroom. | 3.17 | .657 |
| The lecturers in the programme use a variety of teaching methods to facilitate student learning. | 3.06 | .704 |
| For all the various courses, the instruction is in line with the objectives of the course. | 3.09 | .634 |
| The lecturers in the programme are willing to offer extra help to facilitate my learning. | 2.97 | .725 |
| The lecturers in the programme encourage the free expressions of opinions in class. | 3.28 | .608 |
| The lecturers in the programme employ information technology in their teaching. | 2.53 | .815 |
| Lecturers' teachings are continually evaluated by students. | 2.88 | .743 |
| The grading/assessment standards are communicated to me at the beginning of each course. | 3.15 | .720 |
| Where appropriate assignments are graded according to well-defined rubrics. | 2.99 | .650 |
| The programme lecturers use a wide variety of classroom assessment techniques. | 2.94 | .720 |
| I am given immediate feedback after taking assignments. | 2.62 | .831 |
| Assessments are used by the programme lecturers to help me learn better. | 3.06 | .671 |
| The assignments reflect the material covered during instruction. | 3.06 | .656 |
| Progress in my courses is continuously monitored by the department. | 2.64 | .810 |
| My assignments are fairly graded by the lecturers. | 2.97 | .721 |
| I am satisfied with the Programme assessment/grading methods. | 2.90 | .785 |
| Mean of means/Average standard deviation | 2.97 | 0.71 |

Source: Field survey, 2016.

The mean of means (2.97) and the average standard deviation (0.71) imply a general satisfaction for the process rubric of the B.Ed. (Accounting) programme. The finding here is in line with Omotunde (2015), which showed that the school is monitoring students' academic performance and also the performance of lecturers is monitored and improved through the regular monitoring of the teaching progress of the lecturer in the course taught and conducted an assessment of every lecturer by the students. In the same angle, the findings of Lorenzo and Lorenzo (2013) revealed that the iSchools project delivery system was very satisfactory. Again, it was found out that the iSchools project was effective in attaining its objectives of building ICT literacy and interest to the teachers of recipient public high schools in Tarlac, Philippines. The majority (n = 43) of the respondents pointed out that the instructors implemented appropriate teaching strategies. However, the study of Abudu (2003) revealed that there are differences in the middle of the actual implementation of the programme in the classroom situation, and the standard that has been set in the policy document guiding the implementation of the programme. Abudu states that material alternatives were lacking in most Colleges and also established that all implementers should accord a very high level of importance to the objectives and activities of the programme. The study of Azhar (2015) also showed that the process factor was at a moderate level. It can then be concluded that the process rubric of the B.Ed. (Accounting) programme is satisfactory.

**Hypotheses Testing**

A preliminary analysis to test for normality was conducted to find out if the data were normally distributed.

**Table 5: Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Context | .091 | 349 | .000 | .988 | 349 | .006 |
| Input | .055 | 349 | .014 | .989 | 349 | .008 |
| Process | .094 | 349 | .000 | .978 | 349 | .000 |

a. Lilliefors Significance Correction

Source: Field survey, 2016.

It can be seen from Table 5 that, the dependent variables, that is, "Context", "Input" and "Process" rubric were not normally distributed. This is because the Sig. value of the Shapiro-Wilk Test is less than 0.05 so we reject the null hypothesis. The data drastically deviate from a normal distribution. Because of the violations of normality, nonparametric equivalents were used in place of ANOVAs and *t*-tests. The Kruskal-Wallis *H* test was substituted for ANOVA and the Mann- Whitney *U* test for the *t*-test.

*Hypothesis 1*

Is there any statistically significant difference between male and female respondents' perception of

a. Context rubric
b. Input rubric
c. Process rubric of the B.Ed. Accounting programme?

The data gathered for this purpose were analysed and the results presented in Table 6.

**Table 6: Mann-Whitney U-test for the significant difference between male and female respondents' perception**

| | Context | Input | Process |
|---|---|---|---|
| Mann-Whitney U | 12035.000 | 10336.500 | 11641.000 |
| Wilcoxon W | 16691.000 | 42467.500 | 16297.000 |
| Z | -.130 | -2.150 | -.599 |
| Asymp. Sig. (2-tailed) | .897 | .032 | .550 |

a. Grouping Variable: Gender, Source: Field survey, 2016.

A test statistic was conducted to evaluate the hypothesis to find out if any statistically significant difference exists between the male and female B.Ed. Accounting students' perception of (a) Context rubric, (b) Input rubric (c) process rubric of the B.Ed. Accounting programme. The Mann-Whitney U-test shows that the observed difference between both groups of students, the results for context rubric is not significant (p= .897, U=12035.000) which indicates no significant differences between male and female. Therefore, the null hypothesis was retained and also the results for the Process rubric is not significant (p= .550, U= 11641.000) which indicates no significant differences between male and female. Hence, the null hypothesis was retained. The findings corroborate Adaboh's (2014) that no significant differences existed between the four groups in the Bachelor of Business Administration

(BBA) accounting programme in a private university in Ghana, hence retaining the null hypothesis.

However, that cannot be said for the Input rubric of the B.Ed. Accounting programme which the Mann-Whitney U-test shows that the observed differences between the male and female respondents are statistically significant (p=.032, U= 10336.500). Therefore, the researchers rejected the null hypothesis that both samples are from the same population and that the observed disparity is not only caused by the random effects of chance. We can conclude that the difference between the population medians is statistically significant. The finding here contradicts that of Adaboh (2014) which showed that the input factor was of no statistically significant difference between the groups in the Bachelor of Business Administration (BBA) accounting programme in a private university in Ghana thereby making him retain the null hypothesis.

*Hypothesis 2*

Is there any statistically significant difference between the four levels of respondents' perception of

a. Context rubric
b. Input rubric
c. Process rubric of the B.Ed. Accounting programme?

**Table 7: Kruskal-Wallis test result on the Context rubric regarding the four levels of respondents. Each node shows the sample average rank of level**

| Sample1-Sample 2 | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig. |
|---|---|---|---|---|---|
| 100-300 | -11.313 | 14.151 | -.799 | .424 | 1.000 |
| 100-200 | -26.747 | 14.229 | -1.880 | .060 | .361 |
| 100-400 | -49.674 | 17.163 | -2.894 | .004 | .023 |
| 300-200 | 15.434 | 14.537 | 1.062 | .288 | 1.000 |
| 300-400 | -38.361 | 17.420 | -2.202 | .028 | .166 |
| 200-400 | -22.927 | 17.483 | -1.311 | .190 | 1.000 |

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05

In Table 7 a Kruskal-Wallis test was used to test if there is any statistically significant difference between the four-level group's

perception of the Context rubric, Input rubric and Process rubric of the B.Ed. Accounting programme. A Kruskal-Wallis test showed that there was a statistically significant difference in Context rubric of the B.Ed. Accounting programme among the four-level groups (p= 0.023). Therefore, the null hypothesis was rejected. Dunn's pairwise tests were carried out for the four pairs of groups. There was the proof (p< 0.05, adjusted using Bonferroni correction) of a difference between the Level 100 and those in Level 400 group of the B.Ed. Accounting programme. The median for Context for level 100 was 2.8667 compared to 3.0667 for Level 400. There was no evidence of a difference between the other pairs. This finding is in agreement with Brewer (2007), which showed that the study rejected the null hypothesis because there was no statistically significant relationship between the percentage of the evaluation conducted at each of the five levels of evaluation and non-profit sector training practices. In Brewer (2007), the results revealed that a statistically significant positive relationship existed between Level 4 (results) and participants would be able to perform at a set level, and a change in organisational outcomes would result from the programme.

Tables 8 shows the results of the Process rubric concerning the four levels.

**Table 8: Kruskal-Wallis test result on the Process rubric regarding the four levels of respondents**

| Sample1-Sample 2 | Test Statistic | Std. Error | Std. Test Statistic | Sig. | Adj. Sig. |
|---|---|---|---|---|---|
| 100-300 | -2.144 | 14.156 | -.151 | .880 | 1.000 |
| 100-200 | -37.809 | 14.233 | -2.656 | .008 | .047 |
| 100-400 | -49.057 | 17.168 | -2.857 | .004 | .026 |
| 300-200 | 35.665 | 14.542 | 2.453 | .014 | 0.85 |
| 300-400 | -46.912 | 17.425 | -2.692 | .007 | .043 |
| 200-400 | -11.247 | 17.488 | -.643 | .520 | 1.000 |

*Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05*

A Kruskal-Wallis test provided evidence of a difference (p=0.003) between the groups (Table 9) which is statistically significant. We, therefore, rejected the null hypothesis. Dunn's pairwise tests were carried out for the four pairs of groups. In Table 11, there

was the evidence ($p< 0.05$, adjusted using Bonferroni correction) of a difference between the Level 100-200 group (p=.047), Level 100- 400 group (p=.026) and Level 300-400 group (p=.043). The median for Process for level 100 was 2.8889 compared to 3.0000 for Level 200. The median for Process for level 100 was 2.8889 compared to 3.0000 for Level 400. The median for Process for level 300 was 2.8889 compared to 3.0000 for Level 400. There was no evidence of a difference between the other pairs. This is in line with Azhar (2015) research findings, which disclosed that there was no significant difference in the factor of process viewed from teaching experience except project assessment regarding academic qualification. The summary of the hypothesis is presented in Table 9.

**Table 9: Hypothesis Test Summary**

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|---|---|
| 1 | The distribution of Context is the same across categories of level | Independent Samples Kruskal-Wallis Test | .023 | Reject the null hypothesis |
| 2 | The distribution of Input is the same across categories of level | Independent Samples Kruskal-Wallis Test | .777 | Retain the null hypothesis |
| 3 | The distribution of Process is the same across categories of level | Independent Samples Kruskal-Wallis Test | .003 | Reject the null hypothesis |

Asymptotic significances (2-sided tests) are displayed. The significance level is .05

## Conclusions

In the first place students' express positive perceptions towards the programme context, including philosophy, mission, goals, and objectives. This shows that the programme is achieving its intent and as well as meeting the needs of the students. This is projected to push the interest of the students in studying the programme.

The finding indicating that the input rubric was unsatisfactory implies that resources needed to implement the programme entirely are inadequate. This shows that there is bound to be pressure on the few

available material resources such as libraries, ICT centres, lecture theatres among others. Regarding human resources such as the programme implementers (lecturers) are bound to develop high work stress with its attendant health problems.

Even though the current implementation is satisfactory, it is not certain that it will remain so into the unforeseeable future. It is believed that curriculum support (materials and administration support) is crucial to effective programme implementation. Hence, such inputs are needed in the right quantum to drive effective implementation. The inadequacy of the input is therefore likely to affect the process rubric if nothing is done to address such abnormalities.

The test for differences in gender respondents' using Mann-Whitney U – test showed no statistically significant differences concerning the Context rubric of the B.Ed. Accounting programme. The case was not different for Process rubric of the B.Ed. Accounting programme as no statistically significant differences was found among the male and female respondents'. However, the Input rubric of the B.Ed. Accounting programme showed a statistically significant difference in the male and female respondents'.

Findings related to hypothesis 2 of the study unearthed that there exists a statistically significant difference in Context and the Process rubric of the B.Ed. Accounting programme. The case is different for the Input rubric of the B.Ed. Accounting as no statistically significant difference was found among the four levels of the respondents'. This test for differences was possible using Kruskal-Wallis test.

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# Impact of Human Resource Management on Teachers' Productivity in Colleges of Education in North Central Geo-Political Zone of Nigeria

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## Abstract

Colleges of education are established to train teachers for the education sector. This paper assesses the impact of human resource management on teachers' productivity in colleges of education in the North-central geo-political zone of Nigeria. The researchers adopted a descriptive survey research design. The population of the study comprised of all the 11 colleges of education in North-central, with a staff strength of 4,914. The stratified and purposive random sampling techniques were used to select a sample of 495 staff, stratified along academic and non-academic, who participated in the research. A 15-item researcher-developed questionnaire titled "Impact of Human Resource Management on Teachers Productivity Questionnaire (IHRMTPQ)" was used as an instrument for data collection. Three research questions and one null hypothesis guided the study. Data collected were analysed using mean, standard deviation and percentage scores. The chi-square statistic was used to test the null hypothesis at the 0.05 level of probability. The findings revealed that recruitment processes, training and development and staff welfare have a significant impact on teachers' productivity in colleges of education. The conclusion was drawn and it was recommended, among others that administrators of colleges of education in the zone should follow stipulated due process in recruitment, increase staff training and development, and improve on staff welfare so as to motivate teachers to greater performance, which will in turn increase productivity.

**Key words:** Impact, human resource management, teacher productivity, motivation.

**Introduction**

Human resource has long been an integral part of the management process. There is no time in history that educational institutions ever existed without individuals being involved in planning, organizing, and coordinating the activities of such institutions. It is therefore very important, to give much consideration to this facet of the organization, especially in the present dispensation of increasing environmental complexities and organizational sophistication (Tabotndip, 2009). Human resources in colleges of education in this study is grouped into staff (academic and non-academic) and students. Human resource is the most important factor of production in every organization as all others depend on it as the active agent for effectiveness. The maxim that human resource determines where, how, and when the organization moves is evident in the various managerial activities that go on in the organization such as planning, organizing, directing, delegating, reporting, budgeting and managing the use of the other resources, implementing and evaluating them for future improvements. Human resources in any organization are the people who coordinate all other factors of production in the production and the subordinates, (Adler, 1991; Fabunmi, 2003).

This study agrees with the above definition and perceives human resource as paramount and indispensable in every organization. The availability of other resources is to complement human resource efforts. It is the human resource that performs the physical and visible services and tasks that lead to the production of goods and services. Legge (1995) noted that human resource may be tapped most effectively by mutually consistent policies that promote commitment and which, as a consequence, foster a willingness in employees to act flexibly in the interests of their organizations. Armstrong and Baron (2002) posited that people and their collective skills, abilities and experience, coupled with their ability to deploy them in the interest of the organization are recognized as making a significant contribution to organization success and as constituting a significant source of competitive advantage. This implies that human resource can only be useful depending on how it is managed.

Human resources are very effective and capable of changing every situation, be it positive or negative and as such are potential assets to the educational organization. They possess the skills, techniques, experience, wisdom and knowledge on whatever tasks to be performed.

They also make plans, organize and coordinate the activities of the organization. Ekundayo (2012) asserts that in any organization, the human resource is very unique because each human being in the system has their needs which they hope to satisfy through working for the organization. Such needs included the need for food, clothes, shelter, transportation, self-esteem, and self-actualization. Adeoye (2013) exemplified the functions of a human resource manager as follows: "recruitment, selection, training and development; job evaluation with salaries/wages; formulation of manpower policies; provision of data for planning and decision-making; coordination of performance appraisals; promotion of organization communication; industrial relations; personnel resource, health and safety administration, as well as administration of discipline".

Inferring from the above, it is very important to note that staff working for the organization also expect the organization to cater for their needs. The transaction here is reciprocal (planting and harvesting). As human beings, they have unlimited needs to be fulfilled but there are some that are more pressing which the organization has to provide for. In colleges of education, educational administrators are charged with the responsibility of planning, organizing and coordinating the affairs of the institutions. As such, it is their duty to ensure that the needs of staff are met to encourage them to perform better. These needs include training and development, salaries/wages, organization policies, discipline, provision of welfare, recruitment of appropriate staff, promotion when it is due and proper communication with staff on matters that affect them. When the above and many more are satisfactorily done, a better performance is expected from the staff of the institutions; that is, productivity will definitely increase.

Deducing from the various definitions, human resource management (HRM) is the systematic effort of the human resource managers to plan, employ, coordinate, develop, motivate, communicate, evaluate, discipline and direct the staff personnel in colleges of education towards the attainment of its objectives. Hence, it is operationalized in this study as an effective utilization and maintenance of the teaching and non-teaching staff who work in colleges of education for the production of NCE teachers.

Considering the importance of human resource management in colleges of education, NCCE (2010) provided some guidelines on the conditions of service for staff of colleges of education in Nigeria. These

guidelines form part of the benchmark on which this study is hinged. In Nigeria, there are 152 colleges of education, 21 federal, 49 state and 82 private. There are 11 colleges of education in North-central zone, as follows: Benue has 2, Nasarawa has 1, Niger has 1, Kwara has 3, Plateau has 1, Kogi has 2, and FCT has 1 (NCCE, 2018). It is noteworthy that the NCCE is not only the supervising body for the colleges of education, but also responsible for human resource management in the various federal and state institutions in all the colleges. The commission is also saddled with the responsibility of maintaining the minimum standard and ensuring quality in teacher education in all NCE awarding institutions in Nigeria. Consequently, the commission pays accreditation visits to accredit new programmes and re-accreditation visits every four years to ensure that the old ones are still on track.

Management is the process of planning, organizing and coordinating material, financial and human resources in organization purposely to achieve the organizational goals or objective. According to Okafor (2016), management is a social process concerned with identifying, maintaining formally and informally organized human and material resources within a social system. Similarly, Aliyu (2003) sees management as the art of getting things done through people. This implies that management involves human beings that have the capability of planning, organizing and carrying out activities in an orderly manner. It provides people with directions towards attainment of organizational goals. To determine success or failure an assessment of impact is necessary.

Impact assessment is normally used to pass judgment on the entity being assessed; it could be viewed as appraisal, evaluation or assessment. This is probably why Hornby (2000) defines it as a judgment of value performance. It is perceived differently by various writers. For instance, Adeyemi (2009) sees it as a systematic and formal assessment of both employers and employees, made in a prescribed and uniformed manner at a specified time to identify both individuals and group weaknesses and strengths so that weaknesses can be corrected and strengths developed or built upon. Impact assessment focuses on the performance of activities over a period of time. The aim is to improve performance, since judgment will be provided and areas of strengths and weaknesses identified. Therefore, impact assessment in this study is the identification of the strengths and weaknesses of the

management of human resource departments of colleges of education. This implies a close look into the guidelines governing recruitment, placement, training/development, promotion, motivation, discipline and welfare of staff and its impact on teachers' productivity in colleges of education.

Teacher productivity and or performance is conceptualized as the ability of human resource managers to adequately motivate teachers towards increased productivity or vice versa. Orphlims (2002) is of the view that motivated teachers always look for better ways of doing their teaching jobs, they are more quality oriented and are more productive. Therefore, it means that motivated teachers are determined to give their best, to achieve the maximum output (qualitative education). Motivation can be in the form of regular payment of salary, fringe benefits, such as allowances, bonus, on the job training, promotion of the teachers, provision of good working environment, maintaining high degree of relationship and improving the teachers' wellbeing. Hence, any teacher that enjoys the above named items is bound to give all his/her best in discharging of his/her duties, because he/she would derive satisfaction for being a teacher.

Human resource management could be seen as a set of internally consistent policies and practices designed and implemented to ensure that staff contribute to the achievement of colleges of education goals and objectives – hence teachers' performance. Minbaeva (2005) viewed human resource management as a set of practices used by organizations to manage human resource through facilitating the development of competencies that are firm specific, produce complex social relation and generate organizational knowledge to sustain competitive advantage. Suffice it to say that human resource management relates to specific practices, formal policies and philosophies that are designed to recruit, develop, promote, provide welfare services and retain employees who ensure the effective functioning and survival of the organization such as colleges of education.

Apparently, the National Commission for Colleges of Education (NCCE) seems to be more interested in accrediting academic programmes as no major assessment or evaluation, to the knowledge of the researchers, has ever been carried out on human resource management in colleges of education in North-central geo-political zone. This study is therefore interested in the impact assessment of

human resource management in relation to recruitment, training/development, and welfare of staff, and its effect on teachers' productivity in colleges of education in the North-central geo-political zone of Nigeria.

**Statement of the problem**

The poor quality of teacher education in North-central zone of Nigeria is a source of worry to the general public. One of the fundamental ways of achieving the goals and objectives of colleges of education in Nigeria is through effective human resource management. In managing colleges of education, staff recruitment, training and development, and staff welfare are some of the key areas that are most emphasised, and that have a direct impact on teachers' productivity. Serious concerns are being expressed by the general public in North-central Nigeria over the performance of the administrators of the colleges of education which seems to be unsatisfactory; which is also evident in the students' performance or poor quality teacher education in the zone.

A visit to colleges of education in the North-Central revealed poor state of affairs as staff always complain of their poor working conditions which often result in strike actions embarked upon by the staff from time to time demanding better working conditions, which in turn affects teachers' performance. This may be as a result of ineffective human resource management. Despite the fact that there are public service rules, conditions of service for staff in colleges of education articulated by the NCCE as a policy guideline and other expert documentation to regulate the educational administrator's practices of human resource management, the extent to which these administrators comply with these provisions is yet to be known. Over the years, research studies in the area of human resource management strive to improve on it, but it appears that those issues that reveal poor human resource management have not witnessed significant changes in colleges of education in the North-Central. The problem that this study intends to solve is an impact assessment of human resource management in relation to recruitment, training and development, and staff welfare, and its attendant effect on teachers' productivity in colleges of education in North-Central geo-political zone of Nigeria.

**Purpose of study**

The main purpose of this study is to assess the impact of human resource management on teachers' productivity in state-owned colleges of education in the North-Central geo-political zone of Nigeria. Specifically, this study seeks to:

1. determine the extent to which staff recruitment practices affect teachers' productivity in colleges of education in North-Central Nigeria.
2. evaluate the impact of staff training and development on teachers' productivity in colleges of education in North-Central Nigeria.
3. find out the impact of staff welfare on teachers' productivity in colleges of education in North-Central Nigeria.

**Research Questions**

The following research questions guided the study

1. What impact has staff recruitment practices on teachers' productivity in colleges of education in North-central zone?
2. To what extent does staff training and development impact teachers' productivity in colleges of education in North-central zone?
3. In what ways do staff welfare affect teachers' productivity in colleges of education in North-central zone?

**Hypothesis**

The following null hypothesis guided the study, and was tested at 0.05 level of significance:

$H_o$: "Human resource management has no statistically significant impact on teachers' productivity in colleges of education in North-central zone of Nigeria".

**Significance of the Study**

This study intends to conduct an impact assessment of human resource management on teachers' productivity in colleges of education in North-central geo-political zone of Nigeria.

The findings of this study might be of immense benefit to the Ministry of Education, National Commission for Colleges of Education (NCCE), educational administrators, staff, students, researchers and society. The result of the study might be of benefit to the Ministry of

Education because information regarding human resource management will be provided since the government through the Ministry provides social amenities for the welfare of staff in the colleges. This might help them in providing necessary information with regard to compliance with due processes in public service delivery as required by the state government.

The findings of the study might be of benefit to the National Commission for Colleges of Education because it might provide feedback regarding performance of the educational administrators charged with the responsibility of managing the affairs of the colleges, especially as regards human resource management. The findings might help the Commission ascertain whether the right staff for the job are being recruited for the effective implementation of the NCCE minimum standards; which might help them to review

The findings of this study might help educational administrators charged with the responsibilities of spear-heading the affairs of the colleges of education, students, staff of the colleges and the general public to appreciate the problems facing colleges of education in the effective management of human resources; which might consequently stem the trend for conflicts and strike actions in the colleges.

The result of this study might also be of benefit to researchers because the findings might provide additional body of knowledge in the field of research in the educational institutions. The information contained in this research work might also assist other persons wishing to undertake further research in related areas of human resource management.

**Scope of the Study**

This study is on the impact of human resource management on teachers' productivity in State colleges of education in North- central geo-political zone, Nigeria. The scope of the study is the six (6) states in north central zone, which are: Benue, Nasarawa, Kogi, Kwara, Plateau, Niger States and FCT. Particularly the study was delimited to all principal officers, academic and non-academic staff of state owned colleges of education in the six states of the North-central geo-political zone of Nigeria. It will focus on the following variables: recruitment, training and development, and staff welfare.

**Methodology**

The research design adopted for this study is the descriptive survey design. This involves collection of data from a small sample of a large population to enable the researcher to describe and interpret in a systematic manner the characteristic features and facts about things that exist in the population without manipulation.

The population of this study covers all eleven (11) State owned Colleges of Education in the North-central geo-political zone of Nigeria, and the Federal Capital Territory (FCT); with a staff strength of four thousand nine hundred and fourteen (4,914) which is made up of two thousand two hundred and sixty (2,260) academic staff and two thousand six hundred and fifty-four (2,654) non-academic staff (NCCE, 2018).

Stratified and purposive random sampling procedure was used to constitute the number of research subjects of this study from the strata: namely – academic and non-academic staff of state owned colleges of education. Each of the six states in the North-Central, Plateau, Nasarawa, Kogi, Benue, Niger, Kwara and FCT represents a stratum. A total sample of 495 respondents made up of 330 academic staff and 165 non-academic staff of state owned colleges of education. From each of these schools, 45 respondents were sampled, 30 teaching and 15 non-teaching staff; representing 10% of the population. The sample size was statistically derived using the Taro Yamane's formula for sample size for a finite population.

The study employed the use of structured questionnaire constructed by the researcher, for the academic and non-academic staff of all the ten colleges of education in the North-central geo-political zone of Nigeria. A 15-item, three clusters with four points rating scale questionnaire titled: "Impact of Human Resource Management on Teachers Productivity Questionnaire (IHRMTPQ)" constitutes the main instrument used for data collection. The questionnaire consists of two sections (A & B). Section A comprised general information e.g. name of school, State, sex of respondent, age group, category of respondent, etc. Section B contains questions on impact of human resource management on teachers' productivity in colleges of education in North-central zone, Nigeria. The scoring procedure or rating scale used is Likert modified scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1).

The Impact of human resource management on teachers' productivity questionnaire was subjected to face validation by experts in the Faculty of Education, Nasarawa State University, Keffi. The validated instrument was tested with eight teaching and twelve non-teaching staff of Taraba State College of Education, Zing; making a total of 20 respondents, to ensure its reliability. After completion and return, the data were collated and analyzed using the Pearson product moment correlation statistic, and a correlation co-efficient of 0.73, 0.81 and 0.87 were calculated for the three clusters respectively. The instrument was therefore adjudged to possess high reliability.

A total of 495 copies of the Impact of Human Resource Management on Teachers Productivity Questionnaire (IHRMTPQ) was administered through the help of seven (7) research assistants. At the end of the distribution, after two days, a total of 476 questionnaires were retrieved which is 96% rate of return. The data collected from this study was analyzed using descriptive statistic (Mean and Standard Deviation), Chi-square ($X^2$) and percentage scores. Arithmetic Mean of 2.50 was used as the scale mean in answering research questions. The Chi-square was used to test the hypothesis to determine the impact of human resource management on teachers' productivity. All tests were performed at a probability level of 0.05, using Statistical Package for Social Sciences (SPSS), latest edition.

**Results**

Research Question 1: What impact has staff recruitment practices on teachers' productivity in colleges of education in North-central zone?

**Table 1: Summary of mean and standard deviation of teaching and non-teaching staff on the impact of recruitment on teachers' productivity in colleges of education**

| S/N | Description | SA | A | D | SD | M | SD | Decision |
|---|---|---|---|---|---|---|---|---|
| 1 | Recruitment of teaching staff follow due process as stipulated by the NCCE handbook. | 80 | 78 | 143 | 175 | 2.1 | 1.09 | Disagree |
| 2 | Recruitment of qualified teachers has significant impact on productivity in colleges of education. | 181 | 164 | 70 | 61 | 3.0 | 1.02 | Agree |
| 3 | Shortage of teaching staff in colleges of education impact negatively on staff productivity. | 168 | 188 | 73 | 47 | 3.0 | 0.97 | Agree |
| 4 | Excess work load due to inadequate teaching staff, leads to low productivity in colleges of education. | 174 | 169 | 67 | 66 | 2.9 | 1.03 | Agree |
| 5 | Political, traditional and opinion leaders influence who is to be recruited in colleges of education. | 158 | 147 | 89 | 82 | 2.8 | 1.08 | Agree |
| | Cluster Mean | | | | | 2.8 | | |

Scale Mean = 2.5

Table 1 shows that respondents disagree that the recruitment of teaching staff in colleges of education in the North-central zone follows the due process as stipulated by the National Commission for Colleges of Education (NCCE); with a mean of 2.1 and a standard deviation of 1.09. They however agree that recruitment of qualified teachers has a significant impact on productivity in the colleges of education; with a

mean of 3.0 and standard deviation of 1.02. They further agree that a shortage of teaching staff in colleges of education in the zone impact negatively on staff productivity; with a mean of 3.0 and standard deviation of 0.97. They also agree that excess work load due to inadequate teaching staff leads to inefficiency and low productivity in college of education; with a mean of 2.9 and standard deviation of 1.03. They also agree that political, traditional and opinion leaders influences who is to be recruited into the teaching cadre of colleges of education; with a mean of 2.8 and standard deviation of 1.08. With a cluster mean of 2.8 which is greater than the scale mean of 2.5, one can conclude that recruitment practices impact on teachers' productivity in colleges of education in North-central zone.

***Research Question 2:*** To what extent does staff training and development impact on teachers' productivity in colleges of education in North-central zone?

**Table 2: Summary of mean and standard deviation of teaching and non-teaching staff on the impact of training and development on teachers' productivity in colleges of education**

| S/N | Description | SA | A | D | SD | M | SD | Decision |
|---|---|---|---|---|---|---|---|---|
| 6 | Teachers are sponsored to attend workshops and conferences, to improve their skills and knowledge in colleges of education. | 96 | 89 | 162 | 129 | 2.3 | 1.08 | Disagree |
| 7 | Teachers are allowed to attend in-service training to obtain higher academic and professional qualifications. | 127 | 153 | 109 | 87 | 2.7 | 1.06 | Agree |
| 8 | Government through TETFUND do sponsor teachers in colleges of education to further their studies locally and abroad. | 118 | 148 | 111 | 99 | 2.6 | 1.07 | Agree |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 9 | Teachers who attend workshops and training are more productive than those who do not. | 146 | 167 | 90 | 73 | 2.8 | 1.03 | Agree |
| 10 | Teachers who attend further studies are exposed to new teaching techniques and skills which improves productivity. | 147 | 176 | 86 | 67 | 2.8 | 1.01 | Agree |
| | Cluster Mean | | | | | 2.6 | | |

Scale Mean = 2.5

Table 2 shows that respondents disagree that teachers are sponsored to attend workshops and conferences, so as to improve their skills and knowledge in the colleges of education; with a mean of 2.3 and a standard deviation of 1.08. They however agree that teachers are allowed to attend in-service training to obtain higher academic and professional qualification; with a mean of 2.7 and a standard deviation of 1.06. They also agree that the government through Tertiary Education Trust Fund (TETFUND), do sponsor teachers in the colleges of education to further their studies locally and abroad; with a mean of 2.6 and a standard deviation of 1.07. They further agree that teachers who attend workshops and trainings are more productive than those who do not; with a mean of 2.8 and a standard deviation of 1.03. They also agree that teachers who attend further studies are exposed to new teaching techniques and skills which improves their efficiency and productivity; with a mean of 2.8 and a standard deviation of 1.01. With a cluster mean of 2.6 which is greater than the scale mean of 2.5, one can conclude that staff training and development have a significant impact on teachers' productivity in the colleges of education in the North-central zone.

***Research Question 3:*** In what ways do staff welfare affect teachers' productivity in colleges of education in North-central zone?

**Table 3: Summary of mean and standard deviation of teaching and non-teaching staff on the impact of staff welfare on teachers' productivity in colleges of education**

| S/N | Description | SA | A | D | SD | M | SD | Decision |
|---|---|---|---|---|---|---|---|---|
| 11 | Teachers' salaries and allowances are paid in full and promptly too by the state governments. | 98 | 104 | 168 | 106 | 2.4 | 1.05 | Disagree |
| 12 | Teachers are promoted as and when due in colleges of education according to laid down rules by NCCE. | 72 | 84 | 183 | 137 | 2.2 | 1.01 | Disagree |
| 13 | Adequate instructional materials and facilities are provided for teachers to function effectively. | 87 | 92 | 186 | 111 | 2.3 | 1.02 | Disagree |
| 14 | Erring teachers are disciplined according to laid down rules | 143 | 167 | 102 | 64 | 2.8 | 1.01 | Agree |
| 15 | Teachers are provided with health care and staff quarters by government to enhance productivity. | 98 | 102 | 193 | 83 | 2.5 | 1.00 | Agree |
| | Cluster Mean | | | | | 2.4 | | |

Scale Mean = 2.5

Table 3 show that respondents disagree that teaches' salaries and allowances are paid in full and promptly by their various state governments; with a mean of 2.4 and standard deviation of 1.05. They also disagree that teachers are promoted as and when due in colleges of education in the zone; with a mean of 2.2 and standard deviation of

1.01. They further disagree that adequate instructional materials and facilities are provided for teachers to function effectively; with a mean of 2.3 and standard deviation of 1.02. They however agree that erring teachers are disciplined according to laid rules; with a mean of 2.8 and standard deviation of 1.01. They also agree that teachers are provided with health care facilities and staff quarters by government to enhance their performance and increase productivity; with a mean of 2.5 and standard deviation of 1.00. With a cluster mean of 2.4 which is less than the scale mean of 2.5, one can conclude that, though staff welfare has significant impact on teachers' productivity, its practices in colleges of education in North-central zone, Nigeria has negative impact. This means that staff welfare practices in colleges of education is performing below average.

**Testing of Hypothesis**

Ho "Human resource management has no significant impact on teachers' productivity in colleges of education in North-central zone of Nigeria".

**Table 4: Chi-Square analysis of null hypothesis**

| Scale | Frequency | % | $X^2$ Cal. | $X^2$ Crit. | **Remarks** |
|---|---|---|---|---|---|
| Strongly Agree | 1893 | 26.5 | | | |
| Agree | 2028 | 28.4 | | | Null Hypothesis rejected |
| Disagree | 1832 | 25.7 | 1.409 | 12.592 | |
| Strongly Disagree | 1387 | 19.4 | | | |
| TOTAL | 7140 | 100 | | | |

*P= 0.05* *DF = 6* *Chi-Square* = $\frac{\sum (O-E)^2}{E}$

Table 4 is a contingency table of 3 columns and 4 rows which gave a degree of freedom (df) of 6. Table 4 shows that a total of 1,893 respondents representing 26.5% strongly agree; 2,028 representing 28.4% agree; 1,832 representing 25.7% disagree, while 1,387 representing 19.4% strongly disagree. The table show that the Chi-square ($X^2$) calculated is 1.409 while the Chi-Square critical or table value at 0.05 level of probability stood at 12.592. Going by the decision rule, since the chi-square calculated is less than the chi-square critical, the null hypothesis which state that Human resource management has

no significant impact on teachers' productivity in colleges of education in North-central zone of Nigeria is not accepted.

**Discussion of Findings**

The results of this study reveal that recruitment processes in the colleges of education in North-central zone of Nigeria impact significantly on teachers' productivity. This conforms with Bakwo (2004) who found out that influence based on personality/group and ethnic origin of applicants play over-riding role in matters of staff recruitment in organizations and that the adoption of non-objective criteria for staff recruitment is responsible for low productivity.

The finding also reveals that training and development of staff, which is a core mandate of human resource management, impacts significantly on teachers' productivity in colleges of education in the zone. This is in consonance with Ukpere and Naris (2009) who found out that organizing training and development activities with the purpose of enhancing staff competencies is the best option to improve staff performance.

The finding of the study further reveal that teachers' welfare practices, which is key in human resource management, impacts significantly on teachers' productivity. This is in agreement with Akani (1993) who posit that welfare services serve as moral boosters to staff and when staff morale is boosted, they perform their duties effectively and efficiently, thus productivity is increased. The finding is also in agreement with Ugwunangu (2001), who discovered that staff welfare service is a motivational phenomenon in the work environment, which is concerned with why people do (or refrain from doing) things; also that when working condition is conducive to the needs of workers, high employee productivity would be expected.

The study also reveal that human resource management has significant impact on teachers' productivity in colleges of education in North-Central geo-political zone of Nigeria.

**Conclusion**

This study has provided evidence to suggest a link between undergraduates' creativity, locus of control and risk tolerance on the one hand, and their entrepreneurial inclination on the other. This implies that students who are creative and exhibit strong risk tolerance propensity are more likely to be inclined towards entrepreneurship.

**Recommendations**

Based on the findings, the following recommendations are put forward.

1. Recruitment of teaching staff in colleges of education in the North-Central zone should follow due process as stipulated in the laws establishing the schools and National Council for Colleges of Education guidelines. This will help to recruit quality teachers which will enhance productivity.
2. Teachers in colleges of education in the zone should be sponsored by State governments and the FCT in collaboration with their Institutions, to attend workshops and conferences so as to improve their skills and knowledge, thus high productivity is envisaged.
3. States under the zone and FCT should endeavour to pay teachers in colleges of education their salaries and allowances in full and promptly, so as to spur them towards higher performance and or productivity.
4. Teachers in colleges of education in the zone should be promoted as and when due to encourage them to function effectively and efficiently.
5. Government must strive to adequate instructional material and facilities in colleges of education in the zone, to enhance teaching and learning, which will in turn, improve productivity.
6. Government must improve on teachers' welfare generally by increasing budgetary allocation to education in the zone; this will make teachers happy, healthy, prosperous, satisfied, dedicated, committed and motivated; thus organizational equilibrium is achieved and high productivity is envisaged

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# Students' Perception of Difficulty Levels of Senior Secondary School Civic Education Curriculum Content in Osun State, Nigeria

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## Abstract
The learnability of school curriculum has been attributed to students' perception of different school subjects which also determines the level of students' performance and ultimately the achievability of the intended curriculum objectives. Studies had been conducted in other subject areas. However, studies of that type are not common in Civic Education which is relatively new in the Nigerian Secondary School curriculum. This paper examines students' perception of difficulty levels of the Nigerian Senior School Civic Education Syllabus (SSSCES) and the factors associated with their perception. The population for the study comprised all Civic Education students in Osun State, Nigeria. Descriptive survey design was adopted for the study and a researcher-designed instrument titled Civic Education Syllabus Perception Questionnaire (CESPQ) was administered to 487 students drawn from 25 Senior Secondary Schools in Osogbo, Osun State, Nigeria. The three research questions raised for the study were answered using percentage, mean and standard deviation statistics. The results showed that the Senior Secondary School Civic Education Syllabus (SSSCES) topics are perceived by students to be of varying difficulty levels ranging from difficult to very simple with an absolute of them being predominantly very simple. The observed difficulty levels were associated with inadequate textbooks, teachers' presentation of lessons and wide content coverage. These imply that Civic Education is learnable and curriculum objectives are achievable. Based on these findings, it was recommended that teachers should enhance the learnability of the few perceived difficult topics by students through the use of predominantly learner-centred strategies and more learner-friendly strategies to teach the subject.

**Key words:** Civic Education, Students' perception, Difficulty levels, Curriculum contents.

**Introduction**

The introduction of Civic Education into Nigeria's Secondary School curriculum education in 2007 was as a result of the numerous problems that led to the decline in effective citizenship education and deterioration of cultural values among Nigerian citizens (Ali, Hayatu & Badau 2015). Among these problems are the anti-social activities, poor democratic behaviour, and lack of patriotic behaviour among Nigerian youth (Fan, Ekpo & Ita, 2008). Civic Education is therefore a problem solving curriculum in the Nigeria educational system in order to cultivate national values and democratic culture, arrest apathy, promote effective citizenship, national security and fight youth involvement in terrorism and violence in Nigerian society (Federal Ministry of Education, 2008; Okunloye, 2014a & Okunloye & Omolekan, 2016). Its introduction has been traced to the inherent weaknesses in the Social Studies curriculum implementation which hindered it from adequately achieving the objectives of civic-cultural re-orientation, democratic participation, the cultivation of basic values and development of skills for effective and responsible Nigerian citizenship (Ajibade, 2011, Okunloye 2016b). Finkel (2000) posited that, Civic Education primary objectives are to provide learners with adequate and relevant information on their rights, duties, responsibilities and conditions for political engagement with the aim of encouraging the citizens to engage themselves in meaningful contribution to the political system.

Its introduction has been adjudged as a step in the right direction to actualise the five major thrusts of the Nigerian educational system which are sine qua non for nation building and problem-solving. These include the building of: a free and democratic society; a just and egalitarian society; a great and dynamic economy; a united, strong and self-reliant nation; and a land of full and bright opportunities for all citizens (FGN, 2014). Ali, Hayatu and Badau (2015) reported that, for effective implementation of any curriculum, teachers with requisite qualification or formative experience are key to curriculum transaction with the targeted learners. Given the nonexistence of Civic Education specialist teachers in Nigeria, Social Studies teachers have been saddled with the responsibility of teaching Civic Education at all basic and senior secondary levels. This is due to the close affinity between Social Studies and Civic Education as a specialized school subjects that focused on citizenship education. Indeed, Civic Education

was a product of curriculum reform in Citizenship Education which evolved from the 'womb' of Social Studies curriculum (Okunloye, 2014a). Therefore, ascertaining students' perceived difficulties in learning Civic Education in lessons taught by Social Studies teachers and others without formative experience in Citizenship Education becomes imperative. Indeed, as observed by Okonkwo (2002), the subject teacher is the most important facilitator of learning who is equipped as a problem-solver in learning difficulties through the use of simplified, interest sustaining and learning motivating strategies.

In curriculum development, the learners are as important as the teachers for determining the realisation of the curriculum objectives. More importantly, for a subject that is relatively new in the school curriculum, it is necessary to ascertain learners' perceptions of the learnability of the subject in the field of implementation as a follow-up to the initial situation/needs analysis that gave birth to the subject (Okunloye, 2014a & 2014b). Furthermore, the Annual Chief Examiners' Report by the West African Examination Council (WAEC) had shown that students wrongly attempted some questions and performed woefully in some questions from 2014-2016 (WAEC Chief Examiners' Report, 2014 – 2016 and Preliminary Team Leaders and Assistant Examiners' Reports, 2014 – 2016)

Studies on topics covered in the various subject areas at the Secondary School level in Nigeria thus, (Oyedeji, 1992 and Akanni, 2015) in Mathematics; (Adedoyin, 1998 ) in Geography; (Ibrahim, 1999) in Hausa Language; (Oyedokun, 2002) in Biology; (Adegbite, 2004) in Social Studies; (Jimoh, 2010) in Chemistry; and (Okunloye & Awowale, 2011) in Christian Religious Studies have shown that some topics are not too easy to learn by students due to their demanding and abstract nature. Therefore, since these researches investigated students' perception of difficulty levels in the aforementioned existing subjects, it becomes necessary to find out students' perception of difficulty levels in Civic Education for effective curriculum implementation. This current study was conducted on Civic Education Senior Secondary School Curriculum. Examining Students' perception of difficulty level of the subject is in order to improve on the content, methods, instructional materials evaluation procedures, and students' achievement in Civic Education. Therefore, this study examined the Students' perception of difficulty levels of Senior Secondary School Civic Education syllabus in Osogbo, Osun State, Nigeria.

The following research questions were raised to guide the study.

1. What are students' perceived difficulty levels of the Senior Secondary Certificate Examination syllabus topics of Civic Education?
2. What are students' perceived difficulty levels of the three major thematic components of the Senior Secondary Certificate Examination syllabus topics of Civic Education?
3. What are students perceived associated factors with the observed difficulty levels of the Senior Secondary Certificate Examination syllabus topics of Civic Education?

**Method**

This study employed the descriptive survey design. This design was used in order to explain the variables in the study based on information gathered. The research was conducted in selected secondary schools in Osogbo, Osun State, Nigeria. The population consisted of all Civic Education students in Osun State. However, purposive sampling method was used to sample five hundred Senior Secondary School Civic Education students in Osogbo. A questionnaire titled "Civic Education Students' Perception Questionnaire" (CESPQ) was used for data collection. The questionnaire was divided into two sections. Section A dealt with difficulty levels of SSCE Civic Education topics. It contained 23 items on content of the subject with structured response of a four point Likert-type scale as Very Difficulty (VD) 4, Difficult (D) 3, Not Difficult (ND) 2 and Very Simple (VS) 1. Section B contained structured response of two point scale on items or reasons for difficulty levels of Civic Education topics namely, Most Associated (MA) and Not Associated (NA). The instrument was face and content validated by experts in Social Studies in the Department of Social Sciences Education, University of Ilorin. Its reliability was established using test-retest technique and a reliability index of 0.83 was obtained. Percentage, mean and standard deviation were used to answer the three research questions.

**Results**

**Research Question 1:** *What are students' perceived difficulty levels of the Senior Secondary Certificate Examination syllabus topics of Civic Education?*

The data on students' perception of the difficulty levels of the SSCE Civic Education syllabus are shown in the table 1.

**Table 1: Students' Perceived Difficulty Levels of the SSSCES Topics (National Ethics Discipline)**

| N/S | National Ethics Discipline | Difficulty levels | | | | | |
|---|---|---|---|---|---|---|---|
| | | N | VD (%) | D (%) | ND (%) | VS (%) | DECISION |
| 1 | Rights and Obligations | 487 | 16 (3.3%) | 47 (9.7%) | 209 (42.9%) | 215 (44.1%) | Predominantly very simple |
| 2 | Values | 487 | 2 (0.4%) | 14 (2.9%) | 214 (43.9%) | 257 (52.8%) | Predominantly very simple |
| 3 | Citizenship | 487 | 04 (0.8%) | 19 (3.9%) | 204 (41.9%) | 260 (53.4%) | Predominantly very simple |
| 4 | Nationalism | 487 | 20 (4.1%) | 40 (8.2%) | 204 (41.9%) | 223 (45.8%) | Predominantly very simple |
| 5 | Human rights | 487 | 10 (2.1%) | 22 (4.5%) | 191 (39.2%) | 264 (54.2%) | Predominantly very simple |
| 6 | Universal Declaration of Human Rights | 487 | 22 (4.5%) | 39 (8.0%) | 199 (40.9%) | 227 (46.6%) | Predominantly very simple |
| 7 | Law and Order | 487 | 18 (3.7%) | 29 (6.0%) | 198 (40.7%) | 242 (49.7%) | Predominantly very simple |
| 8 | Responsible Parenthood | 487 | 23 (4.7%) | 35 (7.2%) | 196 (40.2%) | 233 (47.8%) | Predominantly very simple |
| 9 | Traffic regulations | 487 | 22 (4.5%) | 17 (3.5%) | 201 (41.3%) | 247 (50.7%) | Predominantly very simple |
| 10 | Interpersonal Relationships | 487 | 26 (5.3%) | 42 (8.6%) | 177 (36.3%) | 242 (49.7%) | Predominantly very simple |

Where VD, D, ND VS stands for Very Difficult, Difficult, Not Difficult and Very Simple respectively

**Table 2: Students' Perceived Difficulty Levels of the SSSCES (Emerging issues in society)**

| N/S | Emerging Issues in the Society | N | Difficulty levels VD (%) | D (%) | ND (%) | VS (%) | Decision |
|---|---|---|---|---|---|---|---|
| 11 | Cultism | 487 | 35 (7.2%) | 20 (4.1%) | 204 (41.9%) | 228 (46.8%) | Predominantly very simple |
| 12 | Drug and drug abuse | 487 | 26 (5.3%) | 20 (4.1%) | 173 (35.5%) | 268 (55.0%) | Predominantly very simple |
| 13 | Human Trafficking | 487 | 34 (7.0%) | 17 (3.5%) | 187 (38.4%) | 249 (51.1%) | Predominantly very simple |
| 14 | HIV/AIDS | 487 | 37 (7.6%) | 19 (3.9%) | 171 (35.1%) | 260 (53.4%) | Predominantly very simple |
| 15 | Youth Empowerment | 487 | 39 (8.0%) | 46 (9.4%) | 182 (37.4%) | 220 (45.2%) | Predominantly very simple |

Where VD, D, ND VS stands for Very Difficult, Difficult, Not Difficult and Very Simple respectively

**Table 3: Students' Perceived Difficulty Levels of the SSSCES (Government system and process)**

| N/S | Emerging Issues in the Society | N | Difficulty levels VD (%) | D (%) | N/S | VS (%) | Decision |
|---|---|---|---|---|---|---|---|
| 16 | Structure and function of Government | 487 | 27 (5.5%) | 47 (9.7%) | 170 (34.9%) | 243 (49.9%) | Predominantly very simple |
| 17 | Democracy | 487 | 17 (3.5%) | 24 (4.9%) | 213 (43.7%) | 233 (47.8%) | Predominantly very simple |
| 18 | Constitution features | 487 | 18 (3.7%) | 39 (8.0%) | 217 (44.6%) | 213 (43.7%) | ND |
| 19 | Rule of law | 487 | 19 (3.9%) | 37 (7.6%) | 220 (45.2%) | 211 (43.3%) | ND |
| 20 | Role of democracy | 487 | 40 (8.2%) | 38 (7.8%) | 216 (44.4%) | 193 (39.6%) | ND |
| 21 | Political apathy | 487 | 29 (6.0%) | 41 (8.4%) | 215 (44.1%) | 202 (41.5%) | Predominantly very simple |
| 22 | Civic societies | 487 | 28 (5.7%) | 31 (6.4%) | 230 (47.2%) | 198 (40.7%) | Predominantly very simple |
| 23 | Public service | 487 | 19 (3.9%) | 41 (8.4%) | 210 (43.1%) | 217 (44.6%) | Predominantly very simple |

Where VD, D, ND VS stands for Very Difficult, Difficult, Not Difficult and Very Simple respectively

Table 1, 2, and 3 show the percentage distribution of difficulty levels of SSSCES topics. It shows partly difficult and predominantly very simple of difficulty levels. The partly difficult levels are within

the range of 6.6% to 13.0% of the syllabus. While the predominantly very simple levels are from 44.1% to 52.8% on National Ethics and Discipline. The tables also indicate the various percentages of difficulty levels. They show partly difficult and predominantly very simple difficulty levels. The partly difficult range from 9.4% to 17.0%, while the predominantly very simple levels are from 45.2% to 55.0% on Emerging Issues in the society. The partly difficult range from 8.4% to 13.0%, while the predominantly very simple level range from 91.6% to 87.0% on Government system and process.

From the tables, only 3 topics of the SSCE Civic Education syllabus topics were perceived to be not difficult topics of the syllabus, while 20 topics were perceived as predominantly very simple out of the 23 topics in the syllabus using the benchmark of 50% perception score on all items in the syllabus. The implication of this is that the syllabus topics are predominantly very simple.

**Research Question 2:** *What are students' perceived difficulty levels of the three major thematic components of the Senior Secondary Certificate Examination syllabus topics of Civic Education?*

The responses of the students on difficulty levels of the three major thematic components of the Senior Secondary Certificate Examination syllabus topics of Civic Education are as shown in table 4.

**Table 4: Students' Perceived Difficulty Levels of the Three Thematic Components of SSSCES Topics**

| | Difficulty levels | | | | | |
|---|---|---|---|---|---|---|
| Syllabus Themes | VD (%) | D (%) | ND (%) | VS (%) | Total of Topics | Decision |
| National Ethics Discipline | (1.6%) | (1.4%) | (19.3%) | (63.7%) | 10 | Predominantly very simple |
| Emerging Issues in the Society | (4.6%) | (14.4%) | (23.0%) | (55.0%) | 5 | Predominantly very simple |
| Government System and Process | (0.7%) | (1.3%) | (26.2%) | (63.8%) | 8 | Predominantly very simple |

The results of students perceived difficulty levels of the three major thematic components of the syllabus 23 topics shown in table 4 indicate that the 15 topics under National Ethics Discipline and Emerging Issues in the Society Components on the one hand are very

simple. On the other hand, 3 out of 5 topics under Government System and Process Component of the syllabus are not difficult. On the whole, National Ethics Discipline, Emerging Issues and Government System and Process are perceived as predominantly very simple to learn by Civic Education students.

**Research Question 3:** *What are students' perceived associated factors with the observed difficulty levels of the Senior Secondary Certificate Examination syllabus topics of Civic Education?*

The responses on students' perceived associated factors with the observed difficulty levels of SSSCES topics are shown in the table 5.

**Table 5: Students' Perceived Associated Factors with the observed difficulty levels of the SSSCES Topics**

| S/N | Reasons for Difficulty levels | N | M A_(%) | N A_(%) | Decision | Rank |
|---|---|---|---|---|---|---|
| 1 | Abstract nature of the topics | 487 | 248 (50.1%) | 239 (49.1%) | Responsible | 14th |
| 2 | Historical nature of the topics | 487 | 241 (49.5%) | 246 (50.5%) | Not Responsible | Not Applicable |
| 3 | Teachers' treatment of topics | 487 | 213 (43.7%) | 274 (56.3%) | Not Responsible | Not Applicable |
| 4 | Teacher's inadequate content coverage | 487 | 267 (54.8%) | 220 (45.2%) | Responsible | 6th |
| 5 | Teacher created phobia | 487 | 240 (49.3%) | 247 (50.7%) | Not Responsible | Not Applicable |
| 6 | Learners' phobia for Civic education topics | 487 | 255 (52.4%) | 232 (47.6%) | Responsible | 10th |
| 7 | Senior student-related phobia | 487 | 241 (49.5%) | 246 (50.5%) | Not Responsible | Not Applicable |
| 8 | Senior student-related motivation | 487 | 241 (49.5%) | 246 (50.5%) | Not Responsible | Not Applicable |
| 9 | Perceived career-irrelevance of Civic education | 487 | 253 (52.0%) | 234 (48.0%) | Responsible | 12th |
| 10 | Disrupted academic calendar | 487 | 260 (53.4%) | 227 (46.6%) | Responsible | 8th |
| 11 | Irrelevant teachers subject specialization | 487 | 254 (52.2%) | 233 (47.8%) | Responsible | 11th |
| 12 | Wide content | 487 | 271 (55.6%) | 216 (44.4%) | Responsible | 3rd |
| 13 | Rush for syllabus coverage | 487 | 225 (46.2%) | 262 (53.8%) | Not Responsible | Not Applicable |
| 14 | Extra-mural coaching | 487 | 268 (55.0%) | 219 (45.0%) | Responsible | 5th |
| 15 | Learners' loss of interest | 487 | 243 (49.9%) | 244 (50.1%) | Not Responsible | Not Applicable |
| 16 | Future career preference | 487 | 266 (54.6%) | 221 (45.4%) | Responsible | 7th |
| 17 | Interest in topics | 487 | 250 (51.3%) | 237 (48.7%) | Responsible | 13th |
| 18 | Insufficient explanation | 487 | 266 (54.6%) | 221 (45.4%) | Responsible | 7th |
| 19 | Lack of textbooks | 487 | 267 (54.8%) | 220 (45.2%) | Responsible | 6th |
| 20 | Inadequate textbook | 487 | 281 (57.7%) | 206 (42.3%) | Responsible | 1st |
| 21 | Large class size | 487 | 257 (52.8%) | 230 (47.2%) | Responsible | 9th |
| 22 | Inadequate preparation for examination | 487 | 269 (55.2%) | 218 (44.8%) | Responsible | 4th |
| 23 | Insufficient topic treatment | 487 | 254 (52.2%) | 233 (47.8%) | Responsible | 11th |
| 24 | Teachers' use of abstract terms/concepts | 487 | 276 (56.7%) | 211 (43.3%) | Responsible | 2nd |
| 25 | Textbook use of Abstract words | 487 | 228 (46.8%) | 259 (53.2%) | Not Responsible | Not Applicable |

Where MR stand for Most Responsible and NR stands for Not Responsible

Table 5 showed that 8 out of 25 perceived associated factors with the observed difficulty levels of the Senior Secondary Certificate Examination syllabus topics of Civic Education are not associated with the observed difficulty levels of SSSCES topics on the one hand. On the other hand, 17 out of the 25 students' perceived associated factors are responsible for the observed difficulty levels of the topics. These indicate that students' perception of Civic Education as predominantly simple and not difficult subject are traceable to the 17 factors. Inadequate textbooks, teachers' use of abstract concepts or terminologies and wide syllabus content of the SSSCES are the three highest perceived factors among the 17 associated factors. Results shown in Table 6 indicate that the 17 factors with which students perceived to be associated with the observed difficult levels are classified into 6 categories. Out of the 6, teacher-related, subject-related and instructional material-related factors ranked highest among them.

**Table 6: Mean Rating of Students' Perceived Associated Factors with the Observed Difficulty Levels of the SSSCES Topics**

| S/N | Associated factors | N | Mean | Std. Deviation | Rating |
|---|---|---|---|---|---|
| 1 | subject-matter related factor | 487 | 4.5606 | 1.19150 | 4th |
| 2 | teacher-related factor | 487 | 10.6509 | 2.51524 | 1st |
| 3 | student-related factor | 487 | 7.5791 | 1.84631 | 2nd |
| 4 | student career-related factor | 487 | 3.0657 | .80367 | 5th |
| 5 | School-related factor | 487 | 3.0616 | .80655 | 6th |
| 6 | instructional material-related factor | 487 | 6.1150 | 1.48349 | 3rd |

Table 6 shows six associated factors which students' perceived to be associated with the observed difficulty levels of the SSSCES topics. Teachers-related factor was rated first as the foremost associated factor while the school related factor was perceived as the least associated factor with the observed difficulty levels of the SSSCES topics. Among the six factors, teacher-related, student-related and instructional material-related factors were perceived to more associate with their perception of Civic Education as predominant simple and not difficult topics.

**Discussion of Findings**

From the data analyses, it is evident that most of the Civic Education syllabus topics were perceived by Senior Secondary Students to be predominantly simple, while a smaller proportion is either very difficult or difficult. Also, topics under the National Ethics Discipline and Emerging Issues in the Society were perceived as predominantly very simple. Only 3 topics under Government system and process were perceived as not difficult. In addition, 17 reasons were associated with the students' perceived difficulty levels of the 23 topics in the syllabus, out of which inadequate textbook, teachers' use of abstract concepts or terminologies in Civic Education lessons and wide content scope of the syllabus ranked highest in their perception. In the same vein, teacher-related, subject-related and academic subject-related factors were accordingly identified as the most significant factors for the observed difficulty level of SSSCES topics.

The finding on the perceived predominantly simple difficulty level of the subject is however at variance with the observed difficulty level of the West African Examination Council's Chief Examiners Report (2014 – 2016) which identified that students misinterpreted, wrongly answered and scored very low marks in some Essay paper 2 items that were related to some topics in the SSSCES. The practical reality among Senior Secondary School Students of Civic Education, therefore, has been the existence of some difficult topics. Preliminary Team Leaders and Assistant Examiners Reports actually observed national value, nationalism, pillars of democracy and political apathy-related essay items as difficult and wrongly answered by a sizeable number of candidates (Okunloye, 2016c).

In the same vein, Okunloye (2016c) observed that the violation of instructions on the choice of questions to be answered by students and observed trend of decline in the proportion of students who passed at A1 – B3 grade levels lend credence to students' learning difficulties in Civic Education. It is therefore valid to reckon with the practical significance of the observed reality when statistical significance contradicts practical realities observed with respondents in equivalent sample locale with respondents of similar characteristics. Therefore, it is valid to observe that Civic Education Senior Secondary students have some learning difficulties in some topics which had prevented a greater majority of them from scoring A1 – B3. Indeed, the fact that a

small but significant proportion of candidates that scored D7 – F9 in the Civic Education Examinations in WAEC conducted SSCE from 2014 – 2016 are clear indications that some SSSCES topics are difficult. The observed failure rate is also consistent with experts' views on mastery learning who recognized the possibility of a set of topics of whatever magnitude in a schematized frameworks to constitute a serious problem to learners in learning the holistic component of given scheme of work (Hyman & Cohen, 1979).

The highest perception of teacher-related, instructional material-related (Civic Education Textbooks) and Civic Education syllabus related factors among the 17 associated factors with the observed difficulty level of the SSSCES topics is in agreement with similar trends identified by Oyedokun (2002) in SSCE Chemistry and Okunloye and Awowale (2011) in SSCE Christian Religious Studies. Although, a greater proportion of SSCE candidate writing the WAEC May/June Examinations in Civic Education recorded higher pass rate at A1 – C6 grade levels, the smaller proportion of failure recorded is still a cause for concern, given the potency of Civic Education for democratic culture re-orientation, national value cultivation and tackling of national insecurity and terrorist tendencies among adolescents and young adults citizens.

In the same vein, findings of the study revealed that there is partly difficulty level of Civic Education indicated by minority of the respondents while the majority showed that the subject is very simple as similarly observed by Okunloye (2009) in Government. The small proportion of students' perceived difficult topics in Government seems to have accounted for the observed failure rate in SSCE Government. It should be noted that the attribution of students' perceived difficult level in Civic Education to wide content coverage may not be solely as Civic Education syllabus-related factor, it may in reality be due to school administration/proprietorship factor which often manifest in disrupted school academic calendar occasioned by strikes caused by non-payment of salary arrears, sometimes ranging from 6 to 15 months as experienced in many states in Nigeria (including Osun) since 2015. More importantly, the use of non-specialist teachers to teach Civic Education could have accounted for ineffective content coverage of the syllabus even when it is not as wide as Geography and Government syllabi.

The high ranking of the associated factor of difficulty levels of topics Civic Education as first and second order associated factors with student's perceived difficult topics also agreed with Awowale (2004) on the observed subject-related and student-related causes of learning difficulties in junior school CRS. The prominence of teacher-related and student-related factors as causes of the perceived difficulty levels agreed with Olusola and Falaye (2011) who observed the significance of student's socio-personal factors, including self-efficacy as predictors of academic performance. Although the instructional materials related factor is moderately associated to be influencing the learner ability of Civic Education topics, the fact that the teacher is most important human resource that determines what, when and how to use other instructional resources implicitly point to the teacher factor as a major determinants of teaching-learning effectiveness. Therefore, the perception of teacher-related factor as 1st and student-related factor as 2nd order factors do not in any way undermine the potency of the teacher factor in teaching-learning effectiveness and academic achievement.

## Conclusions

An absolute majority of the 25 topics in the SSSCES are very simple to learn. The very few topics that students perceived as being difficult could pose a challenge to teaching and learning effectiveness in Civic Education classroom.

## Implications

Although, topics in the Civic Education syllabus are generally perceived to be predominantly very simple, students still perceived a few as challenging. This implies they may encounter some learning difficulties in very few topics which could hinder mastery learning and academic achievement of students in the subject.

## Recommendations

In order to address issues raised in this study regarding the difficulty level of the SSCE Civic Education syllabus topics and associated factors, the following measures are suggested:

1. Teachers should enhance learnability of the study through the use of simple concepts, glossary of Civic Education

terminologies or dictionary of politics and predominantly learner-centred strategies.

2. Teachers of Civic Education should pay special attention to the student's perceived area of difficulties in the syllabus and use enquiry or problem-solving strategies that will make them simple to learn in activity centred classroom situations; and
3. Appropriate career counselling should be given to the Civic Education students to sensitize them on the practical utilitarian values and functional learning of the subject and specific topics they found difficult.

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