ABSTRACT

This study investigated management of skill-oriented subjects and goal attainment in private secondary schools in Ikom Education Zone, Cross River State, Nigeria. To achieve the purpose of the study, two research questions were raised and converted to two null hypotheses to guide the study. Literature review was done based on the variables of the study. Survey research design was adopted for the study. The population of the study comprised 127 private secondary schools in Ikom Education Zone, Cross River State. All the 127 administrators of the schools were used for the study through census approach. The instrument for the study was the researchers-developed questionnaire titled: Management of Skill Oriented Subject Questionnaire (MSOSQ) and School Goal Attainment Questionnaire (SGAQ) designed on four-point Likert scale format. The MSOSQ measured 6 items, while SGAQ measured 18 items. The instrument was validated by two experts in Test, Measurement and Evaluation Department, University of Calabar. After the trial test, the reliability coefficient range of 0.72 to 0.91 were obtained which were considered reliable. The data collected were analyzed using Descriptive Statistics and Pearson Product Correlation Analysis at 0.05 level of significance with 125 degree of freedom. Findings revealed that management of Agricultural Science and Introductory Technology subjects did not have a significant relationship with secondary school goals attainment in terms of higher education opportunity, knowledge acquisition and learning outcome. It was recommended among others that Principals should ensure adequate management of skills oriented subjects in order to make students employable rather than job seekers.

KEYWORDS: Management, Skill-Oriented Subject, Goal Attainment, Computational Content, Introductory Technology

INTRODUCTION

Secondary education is expected to achieve the goals of preparing the individuals for useful living within the society, and for higher education as well as equipping secondary school leavers with the needed skills for effective living within the society (Federal Republic of Nigeria, 2013). Management of schools at this level is expected to be of good quality in order to enhance effective teaching of skill-oriented subjects and promote the smooth attainment of secondary school goal. The school goal attainment was divided into three categories namely: opportunity for higher education,
knowledge acquisition and teaching/learning outcome. It is expected that during and just before a student leaves secondary school, he or she must have acquired adequate knowledge and skills that will make him or her admissible or employable. Vocational skills can help the post-primary school leavers to be gainfully employed when they leave the secondary schools. This is one of the reasons skill-oriented subjects are taught in the secondary schools.

Management in this case is concerned with a set of activities classified as planning, organizing, leading and controlling the formulation of strategies, plans, policies and programmes with a view of achieving set organizational goals, (Peretomode & Peretomode, 2008). Management of skill-oriented subjects like Agricultural Science and Introductory Technology, acquired by students to become employable and useful in the society is aimed at the attainment of secondary school goal. The realization of these depend on the ability of school management to properly plan, organize and allocate resources for managing these skill-oriented subjects. But observation and experience showed that the school goal is hardly attained in some private secondary schools. However, it is quite appalling that some students in this education zone find it difficult to perform well in academics. Some prefer examination malpractice as a short-cut to acquire the needed number of credits to advance into the higher institution for learning. Some of the students cannot read, write, spell or pronounce words and sentences correctly. Some cannot answer simple questions, do class or take home assignments, pass internal and external examinations, relate well with fellow students and teachers, obey simple rules and regulations and constituted authorities. These can result in unemployment, over dependent on parents for stipend rather than making life meaningful for themselves and the society. It is a matter of concern today because many students come out of the schools and become criminals. Some come out without employable and life skills.

Agricultural Science is one of the skill-oriented subjects that can help school leavers to be gainfully employed if they take the study of the subject seriously. Managing of Agricultural Science in any school is a huge venture. The administrator and the teachers concerned have to plan, organize, coordinate and control all the resources for the proper implementation of the programme in school. As pointed out by Bliss (2019), those who manage farms (Agricultural Science subject) have to be well versed with, “current information on prices, markets, soils, seeds, fertilizers, control of weeds, insects, diseases, rations and breeding, agricultural engineering for information on farming building, irrigation, crop drying, drainage and erosion control”. These managers are to make sure that the subject is well handled by teaching both the theory and practical aspects in the classroom and in the farms for proper skill acquisition by the students. Students should be allotted portions of the school land for practicals, either individually or on class basis, to make them committed to ensuring that the knowledge acquired is practically seen in the end products in the farm. Based on the foregone discussion, the researchers wonder if the school goal attainment relates to management of skill-oriented subjects in secondary school in Ikom Education Zone in Cross River State.

Empirical literatures on skill-oriented subjects exist, some of these are reviewed based on their relevance to this study. Anyanwu and Ansa (2017) examined the determinants of academic success in Agricultural Science among senior secondary school students in Oru L.G.A. of Imo State, Nigeria. Cross sectional data generated from 200 students drawn from two secondary schools randomly selected from the lists of secondary schools in Oru L.G.A of Imo State was used. Descriptive statistical tools such as percentages and frequency tables, as well as regression analysis were used in analyzing the data. Results of the analysis showed that likeness or interest in Agricultural Science subject by the students, occupation of the parents of the students, type of accommodation which symbolized environmental influence on the students, the level of teaching experience possessed by the teachers, level of class attendance by the students, togetherness of the parents and the educational level of the parents of these students were statistically significant determinants of academic success in agricultural science subject among senior secondary school 1 and 2 students in the State.

Famiwole (2014) investigated the impact of the computational skills of teachers of Agricultural Science on student’s learning outcomes in secondary schools in Nigeria. The descriptive research design of the survey type, ex-post-facto was adopted in the study. The sample used comprised of 60 teachers and 300 students of Agricultural Science who were randomly selected from the 320 secondary schools in Ekiti State, Nigeria, using purposive
sampling technique. Two sets of well structured questionnaire were used for data collection. The data collected were analyzed using frequency counts, percentages, mean, standard deviation, t-test and ANOVA. Hypotheses were tested at 0.05 level of significance. The findings revealed that the teachers often avoided teaching computational contents of the curriculum. The students were found to be faced with poor Mathematical problem solving skills in Agricultural Science.

Ogutu and Makee (2014) conducted a survey study at Mandlethu FET School in Mpumalanga Province of South Africa to determine factors that affect teaching and learning of Agricultural Science at the school. The study also sought to identify possible support from the learners’ view point that is needed to improve on the teaching and learning of Agricultural Science at the same school. Face-to-face interviews with the learners and one educator using questionnaire, was used to collect data for this study. The study identified several factors that hinder effective delivery of teaching, and these include: educators’ poor attendance of classes, lack of parental support, inadequate government support for learners and educators, poor social skills on the part of the learners and lack of resources like study materials. According to the learners, measures that are needed at the school so as to improve on their teaching and learning experience include: learners being given extra assignments and questions to do after school, the school offering extra classes to reinforce what has been taught during school hours, timely delivery of resources like text books by the Department of Education and provision of a library.

Ogbuilijah (2014) investigated the effects of students’ agricultural field trip on their performances in Agricultural science in selected secondary school in Rivers State, Nigeria. Three research questions and three hypotheses were postulated to guide the study. An ex post facto research design was adopted for the study. A sample of 300 was used for the study, while a validated questionnaire on a four point Likert scale type was used for data collection with a reliability coefficient of 0.88. Data collected were analyzed using descriptive statistics and Chi square at .05 level of significance. The findings of the study revealed that learning experience in which Agricultural field trips expose students include, broadening of knowledge and exposure of students to modern methods of farming. Field trip enhances knowledge on Agricultural processing methods, improves farm products utilization, and contributes to species improvement and genetics. The performance of students in senior secondary three examinations and their overall performance in O’level examination certificate improved significantly.

Temitope, Temisan and Abiodun (2016) examined agricultural experiences as correlates of secondary school students’ achievement and career decisions in agricultural science. Survey research design was adopted for the study. Simple random sampling technique was employed in selecting six hundred (600) senior secondary schools (SS II) Agricultural Science students. Instruments used were Career Decision Questionnaire, Agricultural Experience Questionnaire and Students Achievement Test in Agriculture. Four research questions were formulated to guide the study. Data were analyzed using Pearson Product Moment Correlation and Multiple Regression. The results revealed that poultry, fishery and cashew farming had significant correlation with students’ achievement (r=-0.093, -0.127 and -0.127) and career decision (r=0.155, 0.136 and -0.132) in Agricultural Science respectively. The findings showed that there were significant joint contributions of agricultural experiences to students’ achievement (F(3,600) = 3.992; P<0.05) and career decision (F(3,600) = 22.807; P<0.05) in Agricultural Science. The findings further revealed that fishery (β=-0.79) was the greatest predictor of students’ achievement in agriculture while poultry (β=0.333) mostly predicted students career decision in Agricultural Science.

Amadi and Solomon (2018) examined the impacts of supervision on Agricultural Science Teachers in Senior Secondary Schools in Port Harcourt Local Government Area, Rivers State, Nigeria. The sample size used for the study was 26 (13 males & 13 females) randomly selected Agricultural Science Teachers in the study area. A structured questionnaire was used to gather data from the respondents. To ascertain the reliability of the instrument, Cronbach Alpha Reliability Coefficient method was used to measure the internal consistency of the instrument, which yielded a reliability coefficient of 0.83. Data were analyzed with the use of mean and standard deviations, while t-test statistical tool was used to test the hypotheses at 0.05 level of significance. The findings revealed that guidance and counseling of agricultural students, keeping farm records, preparation of budget for demonstration farm were some of the roles
expected of Agricultural Science teachers. The findings revealed that supervision helps to stimulate good teaching practice and motivate the teacher for effective use of instructional materials.

Basic Technology Notes (2013) defined technology as the process of using scientific knowledge to solve physical problems through the use of machines in an easy way. The study of technology leads to empowerment; it enhances the ability to use tools, machines and computer effectively, self reliance; it knowledge can help learners to maintain and repair appliances easily, safety; it teaches learners to be safety conscious, comfort and pleasure; it makes it possible to operate some equipments, machines and appliances for easy, faster and safer work, dream realization; it makes it possible for students to realize their careers and other fields of interest.

Introductory technology, as the name implies, is subject offered at the junior secondary schools designed to introduce students to basic components of technical and technological studies, to sensitize them on the importance of technology in the development of the society. The basic components of Introductory Technology are metal work, wood work, basic electronics/electrical installations and technical drawing. These subjects would create awareness in the minds of students for choice of career for those who may wish to enter into careers in technical and technological fields of study, while others may wish to continue with academic, science and professional disciplines.

To actualize the objectives of Introductory Technology in junior secondary schools, the subjects must be well managed and coordinated by the school administrator. For example, there must be trained and technologically qualified teachers to teach each component of the subjects. There must be well-equipped technical workshops for practicals to be taught and carried out by the students to gain practical experience. Adequate funds must be provided for purchase of necessary materials for practicals to be carried out by the instructors and students. Equipping the workshop has to be accompanied with it proper maintenance so as to ensure that the facilities maintain near original state of usefulness. It also means that the broken down equipment have to be repaired or replaced.

The teachers of these skills-oriented subjects are to be supervised regularly for effective teaching and learning to take place. The principals can recommend teachers that are less competent for retraining, so that they can become current in the application of instructional materials and equipment as well as be equipped with skills in teaching these subjects. This can only take place if the principals observe what the teachers are doing with the students in the classroom, farm and workshops. Ndem (2016) also pointed out that provision of incentives, regular training and retraining can boost teachers’ job performance in introductory technology class.

Igberadja (2015) conducted a study to identify the factors that influence students’ performance in basic technology. Four research questions guided the study and four hypotheses were tested at the .05 level of significance. The study used the survey research design method with 218 principals of secondary schools in Delta South Senatorial District in Delta State of Nigeria as the target population. The stratified random sampling technique was used to select 65 principals (32 from public and 33 from private secondary schools) as sample of the study. The instrument for data collection was a questionnaire which was content and face validated by three lecturers. The test-retest method was used to ascertain the reliability based on 20 principals who were not part of the population under study with estimated reliability index of 0.73. Data was collected personally by the researchers and was analyzed using ANOVA (Analysis of variance). The result revealed that multiple factors such as schools’, students’, government and parents’ factors influenced students’ performance in basic technology, with lack of resources underlying these factors.

Ogbuagu, Eyi and Okoli (2015) examined the challenges encountered in the teaching and learning of Basic Technology in the junior secondary schools in Anambra State. It employed a survey design. The study used a five-point Likert scale questionnaire, which contains a total of 25-items, as a major instrument. In all, three hundred and eighty seven (387) students and fifteen (15) Basic Technologgy Teachers made up the sample for the study, giving rise to a total sample of four hundred and two (402). Arithmetic mean and standard deviation were the major statistical tools used for the data analysis. The result showed that non availability of standard and functional instructional materials, workshop and textbooks, lack of tools and equipment, poor teacher qualification, insufficient time, poor funding and non chalant attitude of the government towards education were some of the challenges
encountered in the teaching and learning of Basic Technology.

STATEMENT OF THE PROBLEM

Goal attainment in secondary school has become a subject of great concern in recent time. One may wonder if the rate of failure in internal and external examinations and the inability of the students to achieve its goals (secondary school) are attributed to poor management of skill oriented subject in secondary school. As spelt out in the national policy on education, two broad goals of secondary school include preparation of the child for higher education and preparation of child for useful living within the society. Regrettably, observation and researchers’ experiences show that the training acquired at the end of secondary education has failed to equip school leavers with the appropriate knowledge and skills to proceed to tertiary institutions or to engage in work. It was observed also that many students cannot read, write, spell or pronounce words correctly. Some cannot cope with academic work, hence they do their assignment at will, come to school when they like, some cannot do well in internal and external examination.

However, both federal and state government have made several attempts by reviewing the secondary school curriculum, providing learning resources as well as organizing seminars and workshops to enhance the training of school personnel on the management of skill oriented subjects in school but the problem persisted. This has attracted the researchers’ attention and concern, hence this study.

Purpose of the study

The purpose of this study was to examine the extent to which principals’ management of skill-oriented subjects relate to private secondary schools goal attainment in Ikom Education Zone.

1. Management of agricultural science subject relate to private secondary schools goal attainment.
2. Management of introductory technology subject relate to private secondary schools goal attainment.

Research questions

Two research questions guided the study:

1. In what ways do management of agricultural science subject relate to private secondary school goal attainment?
2. In what ways do management of introductory technology subject relate to private secondary school goal attainment?

Statement of hypotheses

The following hypotheses were formulated and tested the study:

1. There is no significant relationship between management of Agricultural Science and private secondary school goal attainment.
2. There is no significant relationship between management of Introductory Technology and private secondary school goal attainment.
3.

METHODOLOGY

This study employed survey research design which involves the collection of data to accurately and objectively describe existing phenomena in terms of management of skilled oriented subject and goal attainment in private secondary school in Cross River State. The population of the study comprised all the one hundred and twenty seven (127) principals in private secondary schools in Ikom Education Zone of Cross River State. The sample of this study constituted the entire one hundred and twenty seven (127) principals in private secondary schools in Cross River State. Also, in order to elicit information from the principals, 297 teachers (3 teachers per school) were randomly selected to assess the principals. The instrument for the study was the researchers-developed questionnaire titled: Management of Skill Oriented Subject Questionnaire (MSOSQ) and School Goal Attainment Questionnaire (SGAQ) designed on four-point Likert scale format. The MSOSQ measured 6 items, while SGAQ measured 18 items. The instrument was validated by two experts in Test, Measurement and Evaluation Department, University of Calabar. After the trial test, the reliability coefficient range of 0.72 to 0.91 were obtained which were considered reliable. The data collected were analyzed using Pearson product correlation analysis at 0.05 level of significance with 125 degree of freedom.

RESULTS AND FINDINGS

Hypothesis one

There is no significant relationship between management of Agricultural science subject and secondary school goals attainment.
The independent variable in this hypothesis is management of Agricultural science subject while the dependent variable is secondary school goals attainment assessed in three perspectives which are higher education opportunity, knowledge acquisition and teaching/learning outcome. The variables were measured continuously. To analyze this hypothesis, Pearson product moment correlation was used. The result showed that there is a significant relationship between management of Agricultural science subject and higher education opportunity ($r=.199^*, p<.05$), a significant relationship between management of Agricultural science subject and knowledge acquisition ($r=.916^*, p<.05$) and significant relationship between management of Agricultural science subject and teaching/learning outcome ($r=.135^*, p<.05$). A perfunctory observation at the p-values shows that p(.000) is less than p(.05) for the three dimensions. The null hypotheses was rejected and the alternate accepted. This implies that there is a significant relationship between management of Agricultural science and secondary school goals attainment for the three dimensions assessed. The result is presented in Table 1.

### Table 1

Pearson product moment correlation analysis of the relationship between management of Agricultural Science and secondary school goals attainment (N=127)

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>df</th>
<th>r-cal</th>
<th>p-val</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Agricultural science</td>
<td>127</td>
<td>12.3618</td>
<td>2.98076</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subject (X)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education opportunity ($Y_1$)</td>
<td>127</td>
<td>12.0041</td>
<td>2.49162</td>
<td>125</td>
<td>.199*</td>
<td>.002</td>
</tr>
<tr>
<td>Knowledge acquisition ($Y_2$)</td>
<td>127</td>
<td>12.2398</td>
<td>2.74111</td>
<td>125</td>
<td>.916*</td>
<td>.000</td>
</tr>
<tr>
<td>Learning outcome ($Y_3$)</td>
<td>127</td>
<td>11.6260</td>
<td>3.68316</td>
<td>125</td>
<td>.135*</td>
<td>.034</td>
</tr>
</tbody>
</table>

*Significant $p<.05$.

**Hypothesis two**

There is no significant relationship between management of Introductory Technology subject and secondary school goals attainment. The independent variable in this hypothesis is management of Introductory Technology subject while the dependent variable is secondary school goals attainment assessed from three perspectives which are higher education opportunity, knowledge acquisition and learning outcome. The variables were measured continuously. To analyze this hypothesis, Pearson Product Moment Correlation was used and the result showed that there is significant relationship between management of Introductory Technology subject and higher education opportunity ($r=.393^*, p<.05$), a significant relationship between management of Introductory Technology subject and knowledge acquisition ($r=.240^*, p<.05$) and a significant relationship between management of Introductory Technology subject and learning outcome ($r=.166^*, p<.05$). A cursory look at the p-values shows that p(.000) is less than p(.05) for the three dimensions. This implies that there is a significant relationship between management of Introductory Technology subject and secondary school goals attainment for the three dimensions assessed. Hence, the null hypothesis is rejected. The result is presented in Table 2.

### Table 2

Pearson product moment correlation analysis of the relationship between management of Introductory Technology subject and secondary school goals attainment (N=127)

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>df</th>
<th>r-cal</th>
<th>p-val</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of Introductory technology</td>
<td>127</td>
<td>12.0407</td>
<td>3.01668</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>subject (X)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher education opportunity ($Y_1$)</td>
<td>127</td>
<td>12.0041</td>
<td>2.49162</td>
<td>125</td>
<td>.393*</td>
<td>.000</td>
</tr>
<tr>
<td>Knowledge acquisition ($Y_2$)</td>
<td>127</td>
<td>12.2398</td>
<td>2.74111</td>
<td>125</td>
<td>.240*</td>
<td>.000</td>
</tr>
<tr>
<td>Learning outcome ($Y_3$)</td>
<td>127</td>
<td>11.6260</td>
<td>3.68316</td>
<td>125</td>
<td>.166*</td>
<td>.009</td>
</tr>
</tbody>
</table>

*Significant $p<.05$
The implication of these findings is that with the recruitment of competent Agricultural Science subject teachers and provision of other farm implements and resources for Agricultural Science education, the students will be encouraged to work towards knowledge acquisition, better learning outcome and as well securing opportunities for higher education. This finding is in agreement with Anyanwu, Anyanwu and Ansa (2017) who found that likeness or interest in Agricultural science subject by the students, occupation of the parents of the students, type of accommodation which symbolized environmental influence on the students, the level of teaching experience possessed by the teachers, level of class attendance by the students, togetherness of the parents and the educational level of the parents of these students were statistically significant determinants of academic success in Agricultural science subject among senior secondary school 1 and 2 students in the State. The findings also tallies with Ogbuilijah (2014) whose findings revealed that learning experience in which Agricultural field trips expose students include broadening of knowledge and exposure of students to modern methods of farming. Field trip enhances knowledge on Agricultural processing methods, improves farm product utilization, and contributes to species improvement and genetics. The performance of students in senior secondary three examination and their overall performance in O'level examination certificate improved significantly ($p<0.05$).

The findings also agrees with Temitope, Temisan and Abiodun (2016) whose results revealed that poultry, fishery and cashew farming had significant correlation with students’ achievement. Agricultural education teaches students about agriculture, food production at subsistence and commercial levels, animal husbandry and natural resources preservation in an ecosystem. Through these curricular, Agricultural educators teach students a wide variety of ‘skill’, including science, math, communications, leadership, management and technology. Agricultural Education is the teaching of agriculture, natural resources, and land management to prepare students for survival at the higher levels and for employment in the agricultural sector.

The implication of these findings is that the staffing of competent Introductory Technology with subject teachers and provision of other powerful technology tools for transforming learning can help affirm and advance relationships between teachers and students, reinvent the approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the need of all learners towards secondary school goals attainment. This finding agrees with that of Igberadja (2015) who revealed some multiple factors such as schools’, students’, government and parents’ influenced students’ performance in Basic Technology with lack of resources underlying these factors. Furthermore, this finding is in consonance with that of Ogbruagu, Eyibe and Okoli (2015) whose findings showed non availability of standard functional instructional materials, workshop and textbooks, lack of tools and equipment, poor teacher qualification, insufficient time, poor funding and non chalant attitude of the government towards education, were some of the challenges encountered in the teaching and learning of Basic Technology. In this regard, to enhance effective management of skill-oriented subjects there is a dire need for the provision of adequate and relevant instructional materials in secondary schools. In Technology education, teachers cover topics related to technology processes, concepts and knowledge such that students learn best by doing, so the curriculum adopts an activity-based and project-driven approach especially at the secondary school level.

**CONCLUSION**

Based on the findings of the study, it was concluded that management of Agricultural Science and Introductory Technology subjects have significant relationship with secondary school goals attainment in terms of higher education opportunity, knowledge acquisition and learning outcome. Also, the result showed a significant joint and relative contribution of management of skill oriented subject variables (Agricultural Science and Introductory Technology) on secondary school goals attainment in private secondary schools in Ikom Education Zone in Cross River State.

**RECOMMENDATIONS**

Based on the findings made and conclusion drawn, it was recommended that:

1. School administrators should provide funds for procurement of the necessary instructional materials and equipment for
effective teaching and learning of skill-oriented subjects.

2. Parents should encourage their children to offer Introductory Technology by providing some of the needed instructional materials.

3. School administrators should supervise their teachers regularly to ensure that effective teaching and learning of skill-oriented subjects.

4. Teachers of Agricultural Science should groom their students on how to calculate and rear animals as a problem-solving approach in their studies from year one in secondary school.

REFERENCES


