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## Instructional Material: It's Availability, Suitability and Utilization in Teaching Biology at G.S.S, Hong

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### ABSTRACT

This is a survey on the use of instructional materials in teaching Biology at Government Senior Secondary School, Hong. The study aimed at documenting on the availability, suitability/relevance and the utilization of instructional materials in the school among senior secondary two (2). 81 respondents comprising of 2 biology teachers and 79 students were given a structured questionnaire to complete after seeking due consent from the school authority and the respondent in person. Over 80.0% of the responses indicated that there were adequate instructional materials for teaching Biology in the school. More than 85% inked that the instructional materials were relevant and that they understood better when they were used in teaching and slightly above 53% agreed that the instructional materials available were utilized during lesson delivery. It was recommended that there should be teacher training/retraining in the uses of modern instructional materials in teaching biology  
**Keywords:** Instructional Materials, Availability, Suitability/Relevance, Utilization, Hong

### INTRODUCTION

The teaching profession is a noble and exciting task to be involved in, it aims at bringing a positive behavioral change in the learner by providing information and training the mind in problem solving. This process of bringing a change can greatly be enhance when devices, methods or practice that aid the memory to picture and grasp these ideas and concepts are employed and correctly utilized. This model is useful in teaching different subjects and the devices employed can be very simple like the use of mnemonic, images, diagram or other advanced electronic gadget to present learning objectives to student. All these calls for the adequate and appropriate use of instructional materials or instructional aid in the teaching profession. Instructional material according to Ajani (2016) are tools, devices or means that helps in the easy dissemination of learning objectives such as knowledge, skills, concept, idea, values etc. to the students. It refers to all resource and sundries that helps to impart

positive learning by making learning objectives visible, clearer, impress on the mind and understandable (Dhakal, 2017). It include things like textbooks, charts, newspapers, life specimens, images, recordings, videos etc.

The importance of instructional materials among many others is to arouse the interest of learners, concretize learning experiences in the students, improves teaching method and develops the teacher's manipulative skills (Brown *et al* in Arisa, Imeh, and Ekpo, 2015). It also saves time by explain complex issues which would have taken longer period to do so. The performance of students in qualifying exams such as the senior secondary certificate examination (SSCE) is generally not good especially among science students attending state owned government schools. One of the factors might be the lack of adequate and appropriate teaching aid that helps in simplifying and concretizing learning objectives to the student's memory. In a study conducted by Ajani (2006) on the use of instructional materials, it was discovered that there is a statistically significant difference in the performance of students that were taught using instructional materials compared to those that were not taught using same. Hence the need for this study which is to determine the Availability, Relevance/Suitability and Utilization of Instructional Materials in Teaching Biology at Government Senior Secondary School, Hong.

## REVIEW OF RELATED LITERATURE

### Availability of Instructional Materials

Instructional materials have been shown to be of significant importance in the attainment of educational goals (Djono, 2013 and Ajani 2016), hence it is a worthy exercise to investigate and document to see whether there are available instructional materials in schools. From experience most public schools in Nigeria do not have sufficient instructional materials but some institutions usually of higher learning were reported to have had sufficient resources for teaching and learning (Pakka, 2018). Pictures and graphical instructional materials are the most common instructional materials seen in school while audio, visual and audio-visual are not commonly available (Dhakal, 2017). Teachers are well informed on the imperativeness of instructional aid according to Lawrence (2016) which in



many cases they do not have and many of the teachers do not make effort to improvise the needed teaching aid which leads to the failure in attaining educational goals. There have also been report of the over reliance of obsolete methods devoid of any technological advancement in schools (Arum, 2015). A great means of salvaging the situation of the acute shortage of teaching aid in schools is by government providing them and for teachers to be more resourceful by improvising the teaching materials where they are not available (Arisa, Imeh, and Ekpo, 2015). Effort should be made both by the state and private bodies to prioritize the availability of instructional in secondary school so that effective learning that will stick to the memory of secondary school students will be achieved. A resourceful instructor must not rely on expensive or foreign teaching aid, but should be able to look at his immediate environment and come up with a thing, idea or method of communicating his mind/idea or thinking to his students (Ajani, 2016). To say it in few words, Tuimur and Chemwei (2015) reported that instructional materials are grossly insufficient in school.

### **Relevance of Instructional Materials**

It is one thing to have instructional materials available in schools and it is another different thing to have relevant, suitable, specific and appropriate of these materials, i.e it is possible to have materials that are not too relevant or to the specification of subject matters being taught in class by the teachers. The right tool must be used for the right job, a spanner should be used to lose a bolt and not a plier. A material is only said to be relevant when it facilitate and assisted in the understanding, assimilating and concertizing the learning objectives in the students mind (Arisa, Imeh, and Ekpo, 2015). Textbooks, charts and graphs are the most common types of instructional materials seen in school libraries and at times owned by students but internet access to smart boards, projectors and others means that support audio visual learning and e-learning is hardly found in most schools therefore, the teaching process have not significantly advance with the evolving world even in this age of information technology (Dhaka, 2017). Furthermore, beside the shortage in the amount of available instructional material in general and the difficulty of finding the most relevant and fitting among the range of instructional materials available, Arum (2015) stressed the need to

organize, workshops, seminar, training and retraining of instruction on the use of instructional materials.

### **Utilization of Instructional Materials**

Suppose all the relevant instructional materials needed for teaching and learning are available but were not properly utilized, there will not be the achievement of our educational goals, therefore effort must be made to ensure instructional aid are always put to the right use. Research have shown that students that were taught using an instructional aid had better understanding, comprehension and performance in their academic when compared with them that do not (Arisa, Imeh, and Ekpo, 2015 and Ajani, 2016), which naturally agrees with our common sense. The teaching and learning process in higher education was practically oriented according to a survey by Pakka (2018). Therefore, effort should be made to ensure that at all levels of learning in the secondary schools, suitable teaching aid should be deployed and utilized. In the utilization of teaching aid, a major responsibility is laid on the shoulder of the teacher to identify the suitable and appropriate materials that might be available in the natural setting instead of eyeing the once that may not be available in the locality (Dhaka, 2017). It is well known that there is insufficient teaching aid in most Nigerian schools, this usually translate in the complete absent of teaching aid in a lesson presentation to the use of outdated once not to mention the technical knowhow of the teachers that are supposed to guide using these materials (Arum, 2015). There is therefore the need to have an in-depth survey and documentation on where we stand so as to have the true picture of things in our secondary school and make necessary corrections that we may provide quality education to our secondary school students in teaching Biology and other subjects in our schools.

### **METHODS AND STUDY AREA**

This work involves the use of structured questionnaires to access data on the perceived state of things as it relates to the use of instructional materials at Government Senior Secondary School, Hong, Adamawa State, Nigeria. Hong local government area is located within the central zone of Adamawa State. Hong local government is surrounded by Mubi, Michika and Maiha to the East, Song to the South, Gombi to the West



and Borno State to the North. The language of the people is Kilba and they farm a lot of arable and stable food but they are mostly know for farming and consuming groundnuts. The questionnaire for this survey was divided into various segments based on the three (3) area of the research interest i.e on the availability, relevance and the utilization of instructional materials in teaching biology in the school. The results was analyzed using simple percentages base on the survey responses.

## RESULT AND DISCUSSION

### Availability of Instructional Materials

Questions	Strongly Agreed (%)	Agreed (%)	Undecided (%)	Disagreed (%)	Strongly Disagreed (%)	Total (%)
There is a human skeleton in our School's Biology Lab	51 (62.9)	21 (25.9)	1 (1.2)	6 (7.4)	2 (2.4)	81 (100)
We have preserved specimens of animals and plant in our laboratory	39 (48.1)	26 (32.1)	1 (1.2)	14 (17.3)	1 (1.2)	81 (100)
We have pictures of animals and plants in our biology laboratory	55 (68.0)	23 (28.4)	1 (1.2)	2 (2.5)	0 (0)	81 (100)
I have seen or used a biology textbook in the school library	52 (64.2)	21 (26.0)	4 (5.0)	2 (2.5)	2 (2.5)	81 (100)

The table above shows the various response on the availability of instructional in the school, the response have overwhelmingly shows that there are available materials for teaching biology in the school with 88.8% of the respondents indicating that they have a skeleton, 80.2 responded as having preserved specimen, over 96% responded as having charts and

pictures for teaching biology and about 90.2% attested to having biology in the school library.

### Relevance of the Instructional Materials

Questions	Strongly Agreed (%)	Agreed (%)	Undecided (%)	Disagreed (%)	Strongly Disagreed (%)	Total (%)
I understand better when instructional aides are used	49 (60.5)	29 (35.8)	1 (1.2)	1 (1.2)	1 (1.2)	81 (100)
My teacher make use of the skeleton when explaining bones, joints etc	43 (53.1)	20 (24.7)	1 (1.2)	15 (18.5)	2 (2.5)	81 (100)

Table two (2) present the responses on the relevance of the materials, about 80 to 96% responded that they understand better when instructional aid were used for teaching various topics.

### Utilization of Instructional Materials

Questions	Strongly Agreed (%)	Agreed (%)	Undecided (%)	Disagreed (%)	Strongly Disagreed (%)	Total (%)
My teacher present a poster/picture or video during every one of his lesson	22 (27.1)	21 (26.0)	7 (8.6)	23 (28.4)	8 (9.9)	81 (100)
My teacher take us on field trip or round the school at least once every term for field study	23 (28.4)	21 (26.0)	5 (1.2)	23 (28.4)	9 (11.1)	81 (100)
There was a time we were asked to bring	30 (37.0)	21 (26.0)	7 (8.6)	15 (18.5)	8 (9.9)	81 (100)



plants, seed, frog, insects, lizard etc to the class						
<b>My teachers has a biology text book</b>	48 (59.3)	24 (29.6)	3 (3.7)	2 (2.5)	4 (4.9)	<b>81(100)</b>

Table three (3) shows the response as it concerns the utilization of instructional aid. 53% responded that teachers utilized is lesson presentation while 38% say otherwise, 54% inked that the teachers periodically adopt field trip or excursion to show the students the world around then while 39% reported otherwise. 61% agreed that they were asked at a point to bring life specimen to the school for class while 28% said they were never asked to do so. Are sounding 91% of the students said their teachers have a biology textbook.

## CONCLUSION AND RECOMMENDATIONS

This study is on the use of instructional materials in teaching biology at Government Senior Secondary School Hong. The result indicated that there are sufficiently available relevant instructional materials for teaching biology in the school. The respondents' responses also indicated that textbooks, charts and diagrams, live and preserves specimens and skeletons were available for teaching biology and periodically the students were taken out for field study outside the walls of the class rooms. Despite the good image about the state of things as regards to the availability, relevance and utilization of instructional materials in teaching biology at government day secondary school, Hong, there is still a big room for improvement. The following are some recommendations in doing so;

- i. the use of audio visual aid should be increased
- ii. outdoor learning like excursion, field trip and environmental study should be encouraged
- iii. teachers should be trained and retrained on the use of modern instructional materials
- iv. more relevant instructional materials for teaching biology should be provided

- v. improvisation should be encourage whenever the ideal aid is not available

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