

Using Observational Techniques as Assessment Instruments to Improve Learners' Performance at Nkawkaw, Ghana

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Abstract: Educational objectives can be achieved successfully through gradual assessment of students and the feedback used to instruct the students more effectively. This research was set forth to investigate how observational techniques can be used as assessment instruments to improve pupils' performance in learning at Nkawkaw in the Kwahu West Municipality of Ghana. It further assessed the extent of Junior High School teachers' knowledge of observational techniques and identifies some of the benefits and uses of the data gathered through the application of these techniques. The basic research designs used were descriptive statistics and participant observation among 250 respondents, who were selected through simple random sampling. The findings from the study showed that, teachers in the study area preferred employing unstructured observational technique, followed by structured observational technique to collect data on students with limited emphasis on the clinical and global impression techniques. Again, only a few preferred the application of other instruments and approaches such as the use of anecdotal records, norm-referenced tests, rating scales and checklists to gather data. Based on the findings, the work concluded that unstructured observational technique was very useful to apply and does not involve the use of sophisticated equipment to record data. The study therefore recommends the use of these observational techniques and instruments to learn more about the strengths and weaknesses of the students. It was also recommended that, government should support training and appointing of personnels to undertake observational studies on regular basis to ensure effective teaching and learning.

Keywords: Observation, Assessment Instruments, Educational Objectives, Learning Outcomes,

Date of Submission: 26-11-2018

Date of acceptance: 10-12-2018

I. Introduction

In order to obtain data that will serve as feedback for assessment to improve students' academic performance, educators have developed several instruments that can be employed to obtain the needed data. These instruments may include written tests, questionnaires, observation and the uses of checklists and rating scales (Boateng-Ennimful, Eminah, Eshun, Jarvis & Pontefract, 2011). The selection of a particular or all of these instruments to provide data for assessment in the school has been a major concern. Following this, Boateng-Ennimful et. al. (2011) are of the view that one of the factors which determines whether or not a particular method of assessment will be used frequently is the ease with which it can be developed. To provide an immediate feedback in natural settings, which could serve the purpose of assessment and based on it prepare the students towards their end of term examinations as well as the national examinations, application of observational techniques as means of gathering data become crucial.

The dictionary of education as cited by Owusu, Appiah-Boateng, Nunoo & Mensah (2012) define observation as astute perception by the teacher of multi-faceted student behaviour, attitudes and learning problems while in the midst of a dynamic classroom situation. Kothari (2004) also defines observation as a technique that involves recording the behavioural patterns of people, objects, and events in a systematic manner to obtain information about the phenomenon of interest. Spradley (2016) also put it as the systematic activities of witnessing and recording the behavioural patterns of objects, people, and events without directly communicating with them. In using observation as research studies, Gorman & Clayton (2005) are with the view that, observation studies involve the systematic recording of observable phenomena or behaviour in a natural setting. It is noticed that all these definitions agreed on common characteristics that observation involves systematic recording of data on the behaviour of a subject for a purpose and encompasses just sitting down and watching. In this way, the observer must be constantly aware of what is happening in order to record notes on

the phenomena relevant to the problem under investigation. Numale (2007) indicates that one of the ways of understanding an individual is through constant observation of his/her behaviours in different situations. This constant observation is carried out by teachers in a school settings in order to gather data on the subjects (in this case the pupils) and use the feedback for assessment to ensure effective teaching, learning and improving performance of those pupils'. In this way, the teachers must have knowledge in the types of observational techniques they are likely to employ to gather the needed data on the subjects.

It must be noted however that, observation has also been applied by early scholars in their studies long time ago. To cite some prominent examples, Adler & Adler (1994) have mentioned that Aristotle used observational techniques in his botanical studies on the island of Lesbos and that Auguste Comte, a famous sociologist who has been attributed as the father of sociology, listed observation as one of the four core research methods. In the same way, Charles Darwin who has been described as one of the most influential figures in human history proposed his theory of evolution known as 'natural selection' at Galapagos Island based on observation. This theory called natural selection is still studied in schools today. It is therefore undoubtedly that Ghana as a country needs constant observation in its educational system as Owusu et, al. (2012) notes, with well-developed skills of observation, the teacher is on his way to becoming proficient in the job.

Statement of the Problem

In classroom learning, students can be assessed using various instruments such as tests, quizzes, rating scales and observation. In a school of large number of population size, frequent observation of the students either in groups or individuals becomes indispensable. Observation involves using a number of techniques including the five senses (namely; sight, hearing, taste, smell and touch) to collect data (Baker, 2006). Numale, Ohene & Addison (2012) citing Stephenson (1990) has stated that observational techniques may be casual, guided or clinical. Following this, it is believed that teachers in the study may be using all or some of these techniques to collect data necessary for the school based assessment. Mulhall (2003) has also noted that observation is a useful tool to ascertain whether what people say they do in reality tally. More evidences therefore need to be gathered as to the extent to which the teachers in the study area use the observational techniques and the knowledge they possess in applying them. To this effect, this study has been set forth to investigate how observational techniques can be used as assessment instruments to improve Junior High School (JHS) pupils' performance in learning.

Research Questions

Against this background, the following research questions were formulated;

1. What is JHS teachers' knowledge of observational techniques?
2. What are the kinds of observational techniques used by JHS teachers in the study area?
3. What are some of the benefits and uses of the data gathered through the application of observational techniques in the study area?

Significance of the Study

As far as the issue of academic is concerned, assessment of the students becomes inevitable in the school activities and curricula. It is a crucial catalyst which serves to identify pitfalls, loops and brings about progress both on the side of teachers and the students in teaching and learning. The study identifies and deals with a lot of observational techniques which in the end, would help to gather data and with the appropriate application of the feedback would help to improve pupils' performance and for making pragmatic decisions. As it has been noted by Gillis, West & Coleman (2014), data from assessments provide valuable information for planning whole-group and individualized instruction, for determining program quality, and for communicating with others. It would also be useful for educators and policymakers to formulate appropriate policy interventions for any school which may deem it necessary. Additionally, it would help the teachers in the study to discover what type of observational technique works best in their own school settings and could help them to improve upon it. By becoming aware of these techniques, they can make their lessons more effective and gather meaningful feedback for their assessment. It is also believed that the study would serve as a useful purpose of reference material for the academic society for further research in other related topics.

II. Literature Review

Observational Techniques

Observational techniques are the specific or well defined approaches in which an individual adopts typically by using his/her senses to collect data on a phenomenon, behaviour or subject. According to Stephenson (1990) as cited in Numale et al. (2012) these techniques consist one of the following; casual, guided or clinical. He further classified them according to the level of training and instruments involved in applying each of the technique. In spite of these four techniques provided by Stephenson, Mulhall (2003) shared a similar

view that observation is used in research in two distinct ways (structured and unstructured). This study identifies another technique known as global impression by following the works of Attah-Boison & Mensah (2003). They explained that, in this technique, the observer involved looks and describes what he/she sees and further mentioned that it is a useful first step in the development of more sophisticated approaches. Filling of reports cards often rely on this technique. Data obtained by employing any of these techniques can therefore serve as baseline for assessment, in particular, for formative assessment which occurs during lesson delivery. This helps to identify gaps and immediate remedy provided as Gillis et, al. (2014) put it, data from assessments provide valuable information for planning whole-group and individualized instruction, for determining programme quality, and for communicating with others.

Unstructured and Structured Observational Techniques

Unstructured observational technique deals with a case where a person considers all aspects of the events, situations, subjects or phenomena and record data relevant to the problem under investigation without any predetermined specifications. Unstructured implies it does not follow the approach of strictly checking a list of predetermined behaviours such as it would occur in structured observation. Instead, observers using unstructured methods usually enter 'the field' with no predetermined notions as to the discrete behaviours that they might observe (Mulhall, 2003). He further provides four reasons for using unstructured observation technique, that is; it provides insight into interactions between individuals and groups; illustrate the whole picture; captures context/process and informs about the influence of the physical environment. This approach of collecting data is unplanned and can be carried out by nearly everyone. The observer here does not need any special training or instrument to help him gather information about the subject.

Structured observational technique on the other hand, deals with the specifications of events, situations, subjects or phenomena to be observed and the steps to be followed in the process of data collection without necessarily interacting with the participants. In positivist research, structured observation is a discrete activity whose purpose is to record physical and verbal behaviour. Observation schedules are predetermined using taxonomies developed from known theory (Mulhall, 2003). This approach is also in line with Stephenson (1990) as cited in Numale et al. (2012) which has been termed as guided observation. He further explains that it is a planned and directed observation for a purpose. It requires some period of training and uses simple instruments such as checklists and rating scales to direct the observer as he/she looks for a particular behaviour. The third technique known as clinical which according to Stephenson (1990) cited by Numale et al. (2012) is a prolonged and frequently done under control conditions. It requires sophisticated techniques and instruments and some level of training and mostly carried out in the medical settings.

The Approaches to Conduct Observation

Werner and Schoepfle (1987), as cited in Angrosino & Deperez, (2000) mention three ways of conducting observations and explain them as follows:

1. The first is descriptive observation, in which one observes anything and everything, assuming that he/she knows nothing; the disadvantage of this type is that it can lead to the collection of minutiae that may or may not be relevant to the study.
2. The second type, focused observation, emphasizes observation supported by interviews, in which the participants' insights guide the researcher's decisions about what to observe.
3. The third type of observation is considered the most systematic and selective type of observation, in which focuses on different types of activities to help delineate the differences in those activities (Angrosino & Deperez, 2000).

Guidelines for Collecting Useful Observational Data

In determining on how to collect useful observational data and how to gather reliable field notes, Mack (2005) in her study on participant observation offers these suggestions;

1. Each note book should begin with entry of the date, time, place, and type of data collection event.
2. Space must be left on the page for expanding the notes, or planning to expand them on a separate page.
3. Notes should be taken strategically. It is usually practical to make only brief notes during data collection. Direct quotes can be especially hard to write down accurately. Rather than try to document every detail or quote, write down key words and phrases that will trigger the memory of the researcher when he/she expands notes
4. Use shorthand because the notes will be expanded and type the notes soon after writing them, it does not matter if you are the only person who can understand your shorthand system.
5. Abbreviations and acronyms can be used to quickly note what is happening and being said.

6. Cover a range of observations, in addition to documenting events and informal conversations, people's body language, moods, or attitudes, the general environment, interactions among participants, ambiance, and other information that could be relevant should be noted.

The need to Use Observation to Collect Data

Observation as a means of collecting data has received much recognition by many researchers in the field of academia especially in the scientific methods of inquiry. Researchers such as Mulhall (2003) notes that the way people move, dress, interact and use space is very much a part of how particular social settings are constructed. Observation is a key method for collecting data about such matters. Realizing the importance of observation, Kothari (2004) describes, observation can be conducted on nearly any subject matter, and the kinds of observations to be conducted by a researcher depend on the research questions. According to Erlandson, Harris, Skipper & Allen (1993) observations enable the researcher to describe existing situations using the five senses, providing a written photograph of the situation under study. Again, observation methods provide researchers with ways to check for nonverbal expression of feelings, determine who interacts with whom, grasp how participants communicate with each other, and check for how much time is spent on various activities (Schmuck, 1997 cited in Kawulich, 2005). As already mentioned in the background of the study, Aristotle, Charles Darwin and Auguste Comte all used observation to collect data and based on the data obtained, proposed their theories. Comte specifically mentioned observation as one of his method of inquiries and that every theory must be based upon observed facts.

Ethical Conducts in the Process of Observation

One of the major factors associated with observational studies is ethics. While observation is generally seen as the least intrusive data collection method, it can also be an abuse of an individual's privacy (Chatman, 1992, Adler & Adler, 1994). In observational research, the complexity of field work in which the researcher is engaged make it difficult, if not impossible, to adopt a single set of standards (Spradley, 2016; Mays & Pope, 1995). Using this guideline, the participant observer realizes that he or she is between two different cultures: the world of persons under study and the scientific community. In order for the investigator to meet the requirements of the scientific community, a degree of objectivity in reporting data is required (Chatman, 1992: in Baker, 2006). To maintain certain specific ethical conducts, Spradley (2016) also suggests the following;

- a. Study participants come first
- b. Their rights, interests, and sensitivities should be safeguarded by the researcher
- c. Participants have the right to know the aims of the researcher
- d. The privacy of the participants must be protected
- e. The participant should not be exploited or harmed in any way
- f. Reports should be made available not only to sponsors but also to the participants and the general public.

Validity and Reliability of Observational Data

As is the case with all research, researchers must address the issues of validity and reliability. Bashi, Afzal et al. (2008) defines validity as research that is plausible, credible, trustworthy, and, therefore, defensible. One threat to observation validity is researcher bias that may result from selective observation, selective recording of information, or the subjective interpretation of situations. To address bias, researchers can use multiple observers, actively engage in critical self reflection (reflexivity), or look for negative cases that disconfirm expectations and explanations (Adler & Adler, 1994; Johnson, 1997).

Chatman (1992) on the other hand sees validity in observational studies as concerning whether the researcher is given a true picture of the phenomenon under investigation. She mentioned three types of validity: face, criterion, and construct. Face validity involves whether the observations make sense and fit into an expected or plausible frame of reference. Criterion validity refers to the accuracy of findings and can be addressed by using more than one data collection technique. Finally, construct validity refers to the analysis stage of field work when the researcher determines how well the phenomenon studied fits with the conceptual framework guiding the study.

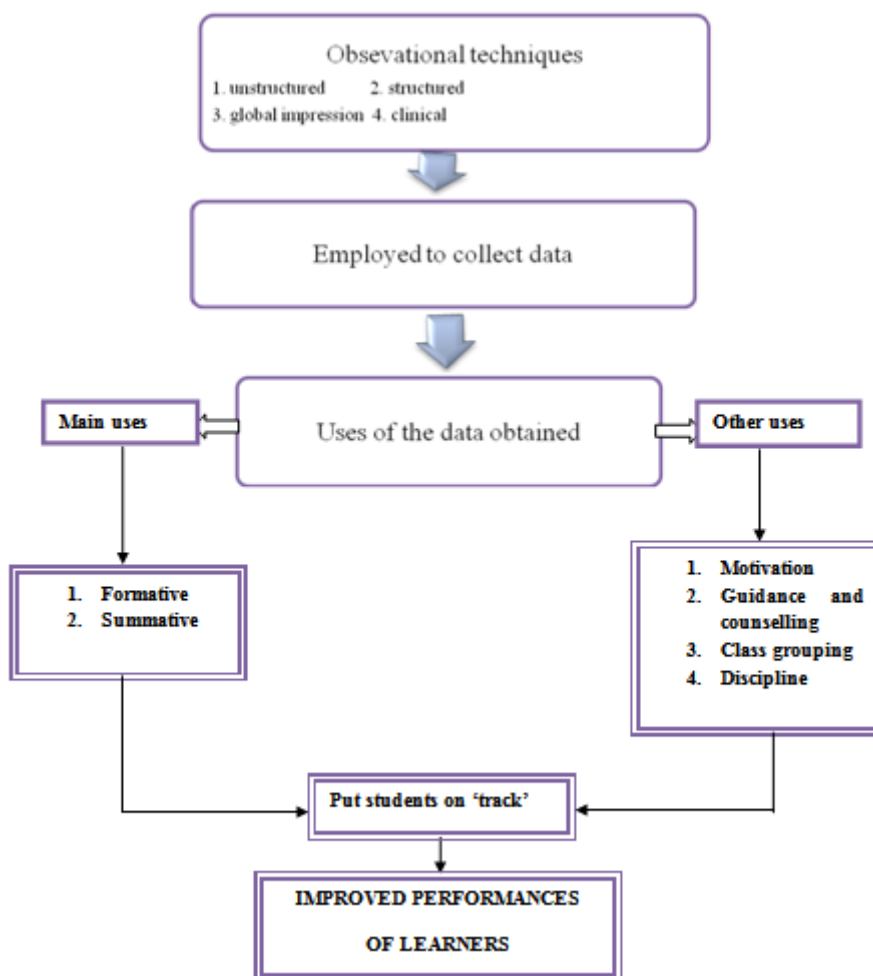
Qualitative research is often criticized for lacking reliability. While many qualitative researchers may not be interested in generalizing their results, they must address the reality of their findings. To do so, Adler & Adler (1994) suggested that researchers should conduct their observations systematically and repeatedly over varying conditions that is, varying the time and the place in order to ensure the widest range of observational consistency.

Conceptual Framework

Observation is a technique used for gathering information about behaviour of people, objects or events of interest. Within this framework, the independent variable is the type of observational technique (unstructured,

structured, global impression or clinical) adopted by the teacher while the dependent variable is learners' improved performance and the intervention variables are motivation, guidance and counselling, discipline and class groupings.

Figure 1: The Conceptual Framework of the Observational Techniques



This figure shows the path analysis of observational techniques depicting how they can be used to generate data and subsequently use the data to improve pupils' performance. The type of observational technique employed by the teacher and the kind of motivation, Guidance and counselling services, discipline and class grouping learners receive will put them on track for improved performance in school.

III. Methodology

Research Design

The research design used was a mixed method, involving both quantitative and qualitative approaches. The Participant observation and descriptive statistics designs were adopted for the study.. The rationale for chosen participant observation was that, it enables the researcher to obtain insight by taking part of activities of the group under study. In this way, the researchers directly had access to what actually happened in the field and decided on the aspects that were relevant to the research objectives. As Lacono, Brown & Holtham (2009) note, participant observation, which is predominantly qualitative, involves participating in a situation, while, at the same time, recording what is being observed. It offers the chance to obtain unique insights into the organization or social group. The method requires the researcher to spend some period of time in the field, participating in the activities of the people and writing detailed field notes (Kawulich, 2005).

According to Fraenkel & Wallen (1993) descriptive statistics is a technique enabling the researcher to meaningfully describe data with numerical indices or in graphic form. This approach adopted by the researcher enabled him to present the findings in a form of tables, percentages, charts and graphs.

Population and Sampling Techniques

The target population for the study was all the teachers and JHS pupils. Eight out of sixteen JHS were selected for the study, representing 50 per cent of the total number of schools in the study area. The sampled size was therefore made up of 50 teachers and 200 pupils. During the collection of these data, simple random sampling technique was employed to select the schools and students. By application of this sampling technique, the effect of being biased to select a particular school or respondent was eliminated.

The Research Instruments

The main instrument used to collect data was direct observation, employing overt participant observation approach. By acting as a participant observer, the researcher was guided by the suggestions put forward by Merriam & Tisdell (2015) that the researcher should; be unobtrusive in dress and actions, become familiar with the setting before beginning to collect data, be honest, but not too technical or detailed in explaining to participants what he/she is doing and keep the observations short at first from becoming overwhelmed. These guidelines boosted the confidence level of the researcher and enabled him to obtain all the data relevant to the various specific objectives.

Structured questionnaire and interview guide were also used. Primary data were collected mainly by the use of self-developed questionnaire. The items in the questionnaire were well structured asking the views of the teachers on their knowledge on the types of observational techniques they commonly employed, what they used the results for and their perception on whether the application of the feedback contributed to the improvement of pupils' performance. Secondary data concerning the total population of the students and teachers in the study area were also obtained from the schools' administration.

Methods of Data Analyses

Data were analysed dominantly using descriptive statistics which include percentages, means, ranking and tables. The binomial probability test of proportions was also employed to determine whether a given proportions are significantly different from the hypothesized proportion of fifty percent (50%). The analyses were arranged on the basis of the research questions. This was followed by the personal interview with the respondents which were described qualitatively.

Description of the Area of Study

The study area, Nkawkaw falls within the Kwahu West Municipal Assembly of the republic of Ghana (KWMA, 2013). It is also the capital for the municipality. The town is located on the Accra - Kumasi main road and about 241km North-West of Accra, the capital of Ghana. Junior High Schools in Nkawkaw were selected from the municipality based on the high level of academic performance, presence of experienced teachers, large number of students' population, proximity and time required to reach this study area.

IV. Results and Discussion

This part begins by analysing the results obtained from the observations made, questionnaire used and the interview conducted. It first presents the analyses of the response obtained on the teachers' knowledge of observational techniques and further examines the kinds of the observational techniques identified as being employed by the respondents in the study. It also discusses some of the benefits and uses of data obtained through the application of those techniques.

Research question 1: What is JHS teachers' knowledge of observational techniques?

This research question was set forth to find out JHS teachers knowledge of observational techniques and specifically focused on their understanding. The results are shown in the Table 1.

Table 1: Binomial Test of Proportions for the Meaning of Observational Techniques

The meaning of observational techniques	N	Observed proportion	Test proportion	P-value
Observational techniques refer to a case where a researcher uses specialized and sophisticated instruments to gather data.	63	0.28	0.50	0.0327
Observational techniques are specific approaches in which a researcher adopts to gather data on a phenomenon typically by using his/her senses.	187	0.72	0.50	0.9673

As shown from Table 1; the observed proportion of twenty-eight per cent (28%) for the first item of the meaning of observational techniques is less than the hypothesized proportion of fifty per cent (50%). It can therefore be concluded statistically that it is not significant. Thus, less than half of the respondents in the study

were with the view that observational techniques refers to a case where a researcher uses specialized and sophisticated instruments to gather data. On the other hand, seventy-two per cent (72%) of the respondents' responses for the second item have the idea that observational techniques are the specific approaches in which a teacher adopted to gather data on a phenomenon typically by using his/her senses. In this way, one can argue that teachers in the study carry out their observations without the uses of sophisticated instruments or consider the level of training involved.

Research question 2: What are the kinds of observational techniques used by JHS teachers in the study area? Respondents in the study were asked to indicate the kinds of observational techniques they normally apply to gather data for their assessment to ensure effective teaching and learning for improved pupils' performance. The findings have also been arranged in order of the one that received the highest frequency as shown in Table 2.

Table 2: The Kinds and Proportion of Observational Techniques Identified in the Study

Observational techniques	Number (N)	Percentage (%)
Unstructured observational technique	152	61.11
Structured observational technique	56	22.22
Clinical observational technique	28	11.11
Global impression technique	14	5.56

As seen from Table 2, the findings indicated that majority of the respondents, 152(61.11%) employ unstructured observational technique in obtaining their data. By working together as a team, the researchers observed and evaluated the appropriateness of this technique and agreed that it was a good mechanism for gathering data and helped the teachers to further improve upon their teaching quality and effectiveness. The respondents through the interview explained that since this technique does not require sophisticated instruments and predetermined specifications, it could be carried out at any point in time during the school hours to obtain the needed data. They also emphasized that it is very useful for formative assessment due to its ability to provide immediate feedback. This immediate feedback has practical implication in the school based assessment because the students could take the opportunity to ask questions, contributes or make suggestions as teaching progresses. The teacher on the other hand could therefore provide further explanation or suggests appropriate remediation based on the feedback received. This way of employing the data gathered from unstructured technique for formative assessment is to ensure effective teaching and learning and improvement of pupils' performance is by and large in line with what has already been mentioned by Roskos & Neuman (2012) that formative assessment involves identifying gaps between where students are now and where they need to go in their learning development; creating feedback loops that generate information about changes in performance gaps; involving students in meaningful, productive self-assessment; and chatting from point A to point B to shape, mould, form and develop understanding in the desired direction.

The next technique indicated by the respondents was structured. This consisted 22.22% in relation to the other techniques. This percentage though low is laudable due to the fact that a lot of materials are required to make the observation systematic and structured. Through the interview, respondents noted that, structured observational technique is purposeful and were guided by the use of instruments such as checklists, rating scales, require some level of training and predetermined specifications. The observer also needs to possess some level of training, prepare very well, make his/her scales ready and specify the behaviours to be observed.

Clinical observational technique did not receive much attention from the respondents. Only 28 of them responded positively to it, representing 11.11% of the total proportion. The respondents explained that this technique although reliable, is complex and require high level of technical know-how. The study also revealed that the instruments utilized in this technique were not available. These findings support what has been already established by Stephenson (1990) that clinical observation requires sophisticated techniques and instruments and some level of training and was mostly carried out in the medical settings.

Global impression observational technique which was the least technique considered requires that the observer looks and describes whatever he/she sees. This by implication means that the materials for making the description should always be readily available to the observer. The respondents' responses showed that 5.56% prefer to employ this technique. This was attributed to the fact that, in this technique, all the materials needed for making the immediate recording are not always available within a given stipulated time of observation. By implication the observer has to wait till all the materials needed to observe and record data become ready or make the observation and record the data later. Undoubtedly, the teachers in the study have little or no interest in the application of clinical and global impression observational techniques in gathering of data. This is in line with the findings of Pretzlik (1994) and Mulhall (2003) who found that, teachers sparingly used the clinical and global impression observational techniques in their work.

Research question 3: What are some of the benefits and uses of data gathered through the application of observational techniques to improve pupils' performance?

This question sought to find out from the respondents some of the benefits and uses of data gathered as a result of applying observational techniques. The results are shown on Table 3, 4 and 5.

Table 3: Ranking of some of the Benefits of Applying Observational Techniques by the Respondents in the study

Benefits derived from the application of observational techniques	Mean	Rank
To ensure maximum concentration during lesson delivery.	3.87	1
To offer an assistant to a student who needs help of any kind.	3.11	5
To detect an exceptional students in class and report or provide their needs.	3.20	4
To help use specific teaching-learning materials.	3.65	2
To ensure that each student gives his/her all.	3.55	3

From Table 3, it is observed that ensuring maximum concentration during lesson delivery received the highest ranking. This highest ranking has practical implications in teaching practices because when the teachers are delivering their lessons, they are required to manage the class in such a way that each student concentrates on the lesson. In other words, the teacher is responsible to 'catch' the attention of all the students taking part in the class activity. To ensure clarification on this, the researchers as participant observers proceeded to the classroom to observe how it works. It was beyond expectation that each student not just concentrated but also participating in the lesson activity. This finding was therefore consistent to the high ranking provided by the respondents.

It is also seen that the respondents ranked using the data obtained through the application of observational techniques as a basis for using teaching-learning materials second. This can be explained that whether or not, to use a particular teaching-learning materials in classroom for teaching depends on the type of the objective the teacher wants to achieve and do not necessary depend on the observational data.

The third ranked according to the respondents was to ensure that each student gives his/her all. By virtue of the professional training and experiences possess by teachers in the study, they are expecting each student to give his/her all when studying. The possible conclusion one can draw from these rankings is that teachers in the study prefer the students to exhibit high level of concentration during lesson delivery and class activity, and give his/her all when studying.

Fourth ranked was detecting an exceptional students in class and report or provide their needs. In any classroom, there are always exceptional students be it a handicapped or extraordinary performance. They therefore need to be identified and guided as possible. Teachers in the study ranked this as the third highest benefit of employing the data obtained through application of observational techniques. This ranking typically must be acknowledged and commended due to the introduction of mainstreaming in the Ghana educational system.

It is also clear from the Table 3, that offering assistance to students who needed help of any kind received the least ranking. It can therefore be argued that the kind of help a student would need may not fall under school activities or objectives and this may make it difficult to offer such assistant. However, the respondents informed the researchers during the interview that assistants are provided when it deemed necessary.

The other aspects which deal with the uses of data gathered through the application of observational techniques are shown in the Table 4:

Table 4: Uses of the Data Gathered through Application of Observational Techniques

Uses	Frequency (f)	Percentage (%)
Motivation	111	44.44
Guidance and counselling	69	27.78
Class grouping	14	5.56
Discipline	56	22.22
Total	250	100.00

Table 4, also gives some of the other uses of data obtained through application of observational techniques to improve teaching and learning and consequently pupils' performance. It can be seen that motivation received the highest proportion of (44.44%). This finding indicates how paramount majority of the teachers in the study placed emphasis on motivation of the students. It can therefore be argued that motivation of the students becomes the 'driver' of all the activities carried out in the school. It is also seen from the same table that guidance and counselling received the second highest value of 27.78% whilst discipline received 22.22%. Class grouping on the other hand received 5.56%. This low value could be interpreted to mean that the data

gathered from the application of observational techniques have minimum effect of informing the teachers in the study to use the data for class grouping. In this situation, it could be translated to say that, in practice, class grouping typically is not of paramount importance to the teachers in the study. Similarly, Boateng-Ennimful et, al. (2011) found that generally teachers perform assessment to expose problems or weaknesses in the instructional process, reveal the strengths and weaknesses in the learners' knowledge, forecast the learners' future success in a course or programme, classify learners in terms of their individual skills and abilities, aid learners in their choice of subjects or courses, prompt learners to improve upon their performance and measure specified skills and abilities.

V. Conclusion

In this study four main types of observational techniques have been addressed. However, most teachers in the study area preferred employing unstructured and structured observational techniques to collect data for school based assessment. As findings indicated, this preference is based on simplicity, complexity, level of training or the instruments involved in applying the techniques. Unstructured observational technique was found to be very simple to apply and does not involve the use of sophisticated equipment to record data. The data obtained by applying any of the technique can be used to provide immediate feedback for an assessment typically for formative assessment. Various benefits of employing observational techniques were also identified and based on the perception of the teachers and their own understanding ranked students' concentration as paramount importance during the period of lesson delivery whilst assistant of any kind for a student was ranked lowest with the view that some assistant which may be requested by a student may not fall in the school objective domain.

VI. Recommendations

The following recommendations are put forward based on the findings of the study for further actions.

- There are a variety of ways of assessment instruments and approaches such as anecdotes, the use of norm-referenced tests, portfolio assessment, rating scales and checklists which can also be integrated with the observational techniques and employed to learn more about the strengths and weaknesses of the students.
- Based on the information obtained from the application of the observational techniques, teachers should make an effort to identify the interest, abilities, needs and experiences of the students in order to structure the curricula and their teaching strategies to meet the interest of the students. Aacha (2010) citing Farrant (1997) noted the engines of human motivation are interest and desire; hence the curriculum should be restricted based on careful observation of students' interest and needs.
- Motivation of the students, guidance and counselling, and class grouping should be given priority in schools because findings revealed that when they are incorporated in the assessment process would improve pupils' performance and achievements.
- Observational techniques such as clinical and global impression need to be studied, supported and justified by further empirical research since they received low attention from the respondents.

References

- [1]. Aacha, M. (2010). "Motivation and the Performance of Primary School Teachers in Uganda: A Case of Kimaanya-Kyabakuza Division, Masaka District." Unpublished thesis submitted for the MA degree at Makerere University.
- [2]. Adler, P. A. and Adler, P. (1994). Observational techniques. In Denzin N. K. & Lincoln Y. S. (Eds.), *Handbook of qualitative research* (pp. 377–392). Thousand Oaks, CA: Sage Publications.
- [3]. Angrosino, M. V. & Mays DePerez, K. A. (2000). Rethinking Observation. from Method to Context. In Norman K. Denzin and Yvonna S. Lincoln (Eds.), *Handbook of Qualitative Research* (2nd Ed. pp.673-702), Thousand Oaks, CA: Sage.
- [4]. Attah-Boison, G. K. & Mensah, S. K. E. (2003). *General methods, Techniques and Skills of Teaching*. Institute for Educational Development & Extension. Centre for Teacher Development and Action Research, University of Education, Winneba.
- [5]. Baker, L. M. (2006). *Observation: A Complex Research Method*. Vol. 55, No. 1, University of Illinois.
- [6]. Bashir, M., et al. (2008). "Reliability and validity of qualitative and operational research paradigm." *Pakistan journal of statistics and operation research* 4(1): 35-45.
- [7]. Boateng-Ennimful, E., Eminah, J. K., Eshun, V., Galyuon, I., Jarvis, A. & Pontefract, C. (2011). *Instructional Methods in Science*. Institute for Educational Development and Extension, University of Education, Winneba.
- [8]. Chatman, E. A. (1992). *The information world of retired women*. Westport, CT: Greenwood Press.
- [9]. Erlandson, D. A., Harris, E. L., Skipper, B. L., & Allen, S. D. (1993). *Doing Naturalistic Inquiry. A Guide to Methods*. Newbury Park, CA: Sage.
- [10]. Farrant, J. S. (1980). *Principles and practice of education*. London, England: English Language Book Society.
- [11]. Fraenkel, J. R. & Wallen, N. E. (1993). *How to Design and Evaluate Research in Education* Data Definitions Adapted from the Glossary.
- [12]. Gillis M., West T. and Coleman M. R. (2014) *Assessment in Early Childhood*, National Center for Learning Disabilities, Inc
- [13]. Gorman, G. E. & Clayton, P. (2005). *Qualitative research for the information professional* (2nd Ed.). London: Facet.
- [14]. Johnson, R. B. (1997). Examining the validity structure of qualitative research. *Education*, 118(2), 282–292.
- [15]. Kawulich, B. B. (2005). Participant Observation as a Data Collection Method. Vol. 6, No.2 Art. 43.
- [16]. Kothari, C. R. (2004). *Research methodology: Methods and techniques*, New Age International.
- [17]. Kwahu West Municipal Assembly (KWMA), 2013. Annual District Report, Nkwakwa-Kwahu.

- [18]. Lacono, J. Brown, A. & Holtham, C. (2009). Research Methods – a Case Example of Participant Observation. *The Electronic Journal of Business Research Methods*, 7(12009), .39 - 46
- [19]. Mack N. (2005). *Qualitative Research Method. A Data Collector's Field Guide Participant Observation Module 2*
- [20]. Mays, N. & Pope, C. (1995). "Qualitative research: observational methods in health care settings." *Bmj* 311(6998): 182-184.
- [21]. Merriam, S. B. & Tisdell, E.J. (2015). *Qualitative research: A guide to design and implementation*, John Wiley & Sons.
- [22]. Mulhall, A. (2003). "In the field: notes on observation in qualitative research." *Journal of advanced nursing* 41(3): 306-313.
- [23]. Numale, M. K., Ohene J. and Addison, A. K. (2012). *Psychological Basis for Teaching and Learning*. Institute for Educational Development and Extension, University of Education, Winneba.
- [24]. Numale, M.K. (2007). *Guidance and Counselling in Education*. Cape Coast. Yaci Publication.
- [25]. Owusu, Appiah-Boateng, Nunoo and Mensah. (2012). *General Methods of Teaching* Institute for Educational Development and Extension, University of Education, Winneba.
- [26]. Pretzlik, U. (1994). *Observational Methods and Strategies*. *Nurse researcher* 2(2), 13-21.
- [27]. Roskos, K.& Neuman, S. B. (2012). *Formative Assessment: Simply no additives*. Retrived on April, 17, 2018 from <http://onlinelibrary.wiley.com/doi/10.1002>
- [28]. Spradley, J. P. (2016). *Participant observation*. New York, USA: Waveland Press.

Kennedy Baah Ameyaw¹ "Using Observational Techniques as Assessment Instruments to Improve Learners' Performance at Nkawkaw, Ghana" *.IOSR Journal of Research & Method in Education (IOSR-JRME)* , vol. 8, no. 6, 2018, pp. 87-96.