

Utilization of Observational Techniques in the Formative Assessment of Students in Post Covid-19 Pandemic Era

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Abstract

This paper focused on observational techniques that could be used in the classroom by the teacher to assess learning experiences, learning outcomes, and behavioral exhibitions during teaching and learning. Observational techniques could be used as instruments of formative assessment. Teachers can adopt them as formative assessment techniques to make decisions about what students will achieve at the end of the class, that is, their learning targets. Observational techniques are non-test techniques such as checklist, anecdotal records, rating scales, and technology which are needed by teachers to impart learning, improve learning and measure students' learning. Observation is an assessment tool through which students' learning abilities, learning experiences, and level of performance can increase or be improved. Through observation teachers can facilitate, modify, laud, and stimulate their students. However, in this post COVID-19 era, the hybrid mode of teaching which integrates online and physical methods is mostly adopted. Since observation in classroom requires that the teacher records what he/she directly observes, it can therefore, be done using both online one-on-one encounter. Through observational techniques the gap created by COVID-19 pandemic on the learning and performance level of students can be filled.

Keywords: Utilization, formative assessment, observational technique

Introduction

All students' learning ability are not equal. Some students have high learning abilities, and some have low learning abilities irrespective of the availability of quality teachers and learning facilities. With the closure of schools during the Coronavirus disease (COVID-19) pandemic, a serious gap was created in the learning levels of students generally. Though, some schools adopted online learning, many schools did not. Even the institutions or schools that adopted online learning, not all the students could cope with it. Although, with the end of the pandemic, schools have fully reopened and classroom teaching resumed. Asamoah, Shahrill and Latif (2022) said that pedagogical exercises which involves assessment for learning need the use of teaching instruments or devices such as laptop, smart phones, etc., in online learning. Students who did not have access to these devices during the COVID-19 pandemic may not have participated in learning and assessment

processes. Irrespective of these challenges, an integration of online teaching and one-on-one teaching could be adopted in the post COVID-19 era. The question is how can the gap on the learning and performance level of students who could not participate in online learning during the COVID-19 pandemic be filled in this post COVID-19 era? What strategies can the teachers use to increase students' learning experiences and abilities? This is where the need the formative assessment becomes imperative.

Formative assessment could be considered as different approaches that teachers use to evaluate students' learning, academic progress and their abilities to comprehend during a lesson. This is done by the teacher in order to adjust instruction to students' study requirements. Hence, formative assessment is for learning, both students and teachers gain from it. It helps to identify areas where diagnosis is needed and modification where the student has failed to learn (O'Mara, 2022). Formative assessment makes provision for feedback to the teacher and the student and consequently appraising teaching success. This can be in form of weekly tests, terminal examinations, just to mention a few (Gafoor, 2013). That is the reason why formative assessment process is usually alluded to as 'feedback' (Burgwald, 2021). The effect of formative assessment can be perceived from the power of the response that learners got from the knowledge they acquired, and knowledge got from the teachers (Ozan & Kincal, 2018). Teachers use formative assessment techniques to find out the outcome of what students' have learnt or how well students have achieved learning objectives. Through studies carried out in educational assessment it has shown that formative assessment can take place with the use of formal and informal techniques. Formal techniques require the use of paper and pencil tests while informal techniques consist of assessment conversations and dialogues (Asamoah, Shahrill & Latif 2022). As a technique for assessment, formative assessment becomes an actual moment-to-moment classroom step that leads to specified outcome (Rhalimi, 2018).

Formative assessment provides teachers with the understanding of students' growth when they respond to questions such as: "What is operative?" "What should be enhanced?" and "in what way can it be enhanced?" (Dixson & Worrell, 2016). Formative assessment aids the teacher to know the performance level of students and be able to draw plans for reinforcement, recapturing, and short-term course in post COVID-19 world. It also aims at monitoring students' learning progress to

allow constant positive response to help teachers enhance their teaching and by students to enhance their learning (Ali, 2022).

Observation is an assessment tool through which students' learning abilities, learning experiences, and level of performance can increase or be improved. According to White (2016), observation is necessary for daily learning because while observing their students, teachers are monitoring their mode of thought, activities, and viewpoints. They are watching learning as it evolves, noting the way students resolve issues and acts at different circumstances. Through observation teachers can facilitate, modify, laud, and stimulate their students. They can distinguish instruction and suggest modes of response. As an assessment technique, observation boosts pedagogical dexterity and student contribution, influencing their performance in a very significant way (Hall & Simeral, 2015). This article, therefore, focused on how observation can be used as a technique for the formative assessment of students.

Formative Assessment

In education, 'assessment' applies to every process or exercise that is employed to gather facts concerning cognition, behaviour, and proficiency of a learner (Kellaghan & Greany, 2001). Assessment is indispensable in education process. Assessment is normally classified into three: assessment that is carried out prior to teaching (pre-assessment), assessment that takes place during teaching (formative assessment), and assessment that comes after teaching might have taken place (summative assessment) (Chigonga, 2019). What is mostly done in schools is summative assessment used at the conclusion of the semester or school year to evaluate what learners have learnt, to promote them, and to confirm they have satisfied the requirements for the award of certificates. Hence, summative assessment is systematic way of picking successful students/learners who are qualified for the next level of education.

Assessment also have formative functions. From the point of view of its formative function, it is the steady, synergetic assessment of learners' development and perception in order to pinpoint the needs of the learner and adapt teaching to their needs. Teachers who use formative assessment methods in their teaching are well disposed to confront the various needs of the learners (Centre

for Educational Research and Innovation 2008). Because formative assessment is done within process of learning, it is used to assess students' knowledge as they learn. It helps the teacher to monitor students' progress.

Formative assessment is considered more diagnostic than evaluative, in the sense that it is used to observe the way students learn and their proficiency, to give continuous feedback, to help teachers to ameliorate and modify their instructional approaches, and that learners might enhance their knowledge and quality of learning. Teachers undertake various forms of informal assessment exercises such as formative assessment, formative evaluation, and formative feedback alongside students because they also benefit from it by modifying curricular activities to enhance performance (School Effectiveness Team, n.d.).

Formative assessment is paramount to education. Simply put, it is the nucleus pedagogy. With formative assessment, instruction become interactive and dialogical where both the teacher and students are moving along together. By so doing, both the teacher and the students have room for improvement. Both teacher and students navigate assessment learning by asking:

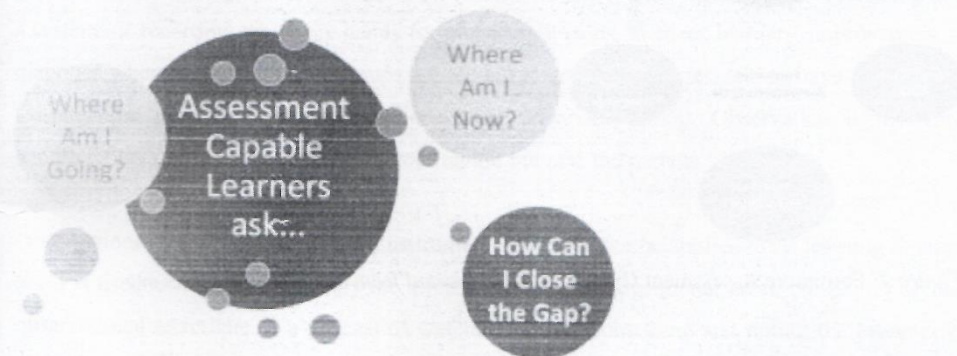


Figure 1: Assessment Learning (Image imported from moedu-sail.com)

For the explanation of the above diagram, the question 'where am I going' points to the goals of the lesson and how do I know if I have reached the goal? The second question, 'where am I now', simply helps me find out where I am in the learning process. The last question, 'how can I close

the gap', is pointing to what I should do next, the decision I should make to improve teaching (for the teacher) or learning (for the student).

The principles of formative assessment are based on observation, questioning, classroom dialogue and responsive teaching. Worthy of note is when the teacher constantly makes use of formative assessment, he/she will have the capacity to perceptively understand the students' capability to perform in subjects/courses taught before the summative evaluation takes place (Skooler, 2018). In other words, formative assessment fosters achievement of students to the next level which is awarding of grades. Formative assessment is an ongoing process since it involves continuous course work. It therefore requires some procedures to achieve targeted objectives of teaching-learning. Formative assessment is an on-going process procedure as shown in the assessment cycle below.

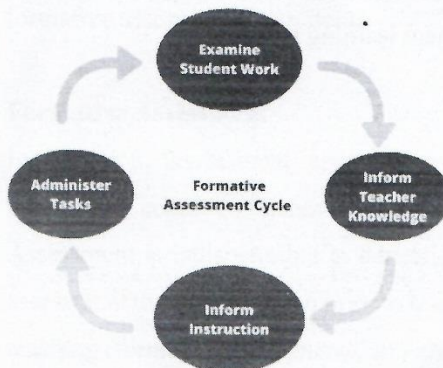


Figure 2: Formative Assessment Cycle - Image imported from socialsci.libretexts.org

Observational Techniques

The prime objective of formative assessment is to collect facts that teachers can employ to teach, effect possible learning patterns and evaluate students' learning. While observation is in progress, data is collected and afterward used to evaluate the students' learning. In order to carry out the observation exercise accurately observations should take place during normal activities carried out in and outside of the classroom (Peterson & Elam, 2022). Constant observation is one of the ways of comprehending students' behaviours in various circumstances. When this constant observation

is done by teachers in a school setting with regards to the collection of information about the learners, they would use the feedback for assessment to make sure that there was improvement in the performance of the learners. In this way, the teacher must be knowledgeable about the types of observational techniques that is adequate for gathering information about the learners (Baah, Ofori, Adjepong & Assem 2018). Observation requires commitment on the part of the teacher.

In observation, information is collected by observing attitudes, paying attention to events within their natural environments. This can be plainly seen by those who are being observed (overt) or it can be hidden from them and the observer remains unnoticed (covert). Observation can also be direct or indirect. Direct observation takes place when you watch interactions, processes, or behaviours as they occur while indirect observation takes place by looking at the results of interactions, processes, or behaviours (Program Evaluation Team, 2018). Observation, therefore, can be regarded as the systematic way of collecting facts concerning objects and events by the five senses of the human person to take note of things that commonly may be ignored (Peterson & Elam 2022). Observation is an assessment technique which allows the teacher to have a picture of the learning process. Observational assessment is a developmental and expansive pedagogical procedure wherein regular monitoring helps both the teacher and learner. To the teacher, it fosters a systematic recording which are handy for preparing lessons, to check learners' improvement, to diagnose where individuals and groups are having learning challenges, and to have forums with learners and parents (Special Education Support Service, 2013). Observation is therefore, beneficial not only to the teacher and those taught but also the parents.

Observational technique is a non-test instrument, though it can be applied in all learning domain, but it is used to measure especially the affective domain of educational level. Oji (2003) defines observational technique as a process of watching out for something and noting the presence or absence of verbal and non-verbal behaviours of students in a natural or simulated setting in order to make valid inferences of the students observed. In observing, attention is given to the overt behaviour of students. Oji (2003) further noted that observation can be controlled (perceived) or actual (naturalistic). In controlled observation, the observer records the impressions of behaviours that are assumed to have been demonstrated by the learners. While in actual observation, the

observer records what he/she sees or hears within the stipulated period of observation. In either case, the observer may not be noticeable and yet records the typical behaviour of the learner.

For classroom observation, direct observation is often used to observe if learners can execute a specific activity or skill accurately. Direct observation can also be employed to checkmate students' conduct on how they carry out the assignments given to them. Direct observation can be used to appraise teacher performance. During observation the observer or teacher writes notes about the observed activities, and these notes are used to give feedback to the students being observed. These notes can include clues on how to enhance a specific ability, outline of things observed, and correlating what was done to other observations as a means of follow up (Centre for Education Innovation 2000-2021). On the other hand, observational assessment is of two ways: it can be incidental and planned. Incidental observation takes place during teaching and learning, including the interactions that place between teacher and students. It is incidental because of unplanned opportunities that are evident within classroom exercises where the teacher detects some aspects of individual student learning. Whereas planned observation requires conscious mapping out of a moment where the teacher can observe certain learning objectives. This planned opportunity can take place during classroom activities on regular basis or it can take place within the period of an assessment (Graham, 2001). To assess students learning experiences, their strengths and weaknesses, their traits and attributes, the following methods can be employed by the teacher:

How to Use Observational Techniques in the Formative Assessment of Students

Before observation is carried out, it is important that the teacher decides the type of skills or exhibitions he/she wishes to watch out for in the classroom. In the assessment plan, according to Special Education Support Service (2013), the teacher should consider the following:

- Plan who and what to observe.
- Plan the particular act of the learner to be observed.
- Record observation after learners have shown what they have learnt.
- Observations are taken note of every time that learning takes place
- What should be observed is significant learning
- Observation should give the observer an idea of what to do next.

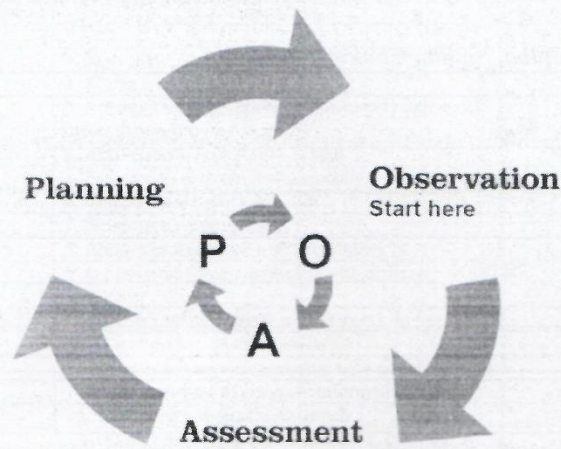


Figure 3: Observational Technique - Image imported from kimmiebrown.weebly.com

Peterson and Elam (2020) noted that there are observational tools that are generally used by teachers. These are Running Record, Checklists, Frequency Count, Anecdotal Record, Work Sample, Learning Story and Technology. Oji (2003) mentioned five types of observational tools, namely, Systematic Observation, Rating Scale, Checklist, Anecdotal Records and Interview. Among these techniques, some are easier to use and less time consuming while others may be difficult for the teachers to use all the time. These techniques have their strengths and limits. Hence, we shall look at four observational techniques which are more appropriate and less time consuming for the formative assessment of students. They are systematic observation, checklist, anecdotal records, rating scales, and technology.

Systematic Observation

In systematic observation, the behaviour of the students are recorded as soon as they are observed. The observer may decide which of the behaviour category expected are to be exhibited by the students. For example, punctuality and regularity, student individual work, student group activity, carelessness, teaching facilitating learning. Forms used for recording should contain the following identification information (Oji, 2003):

Observer's Name _____

Name of Student _____
Date _____ Time _____
Name of Teacher _____
Class _____ School _____
Title of Observation _____

<i>Behaviour Category</i>	<i>Specific Behaviour</i>	<i>Frequency of Behaviour</i>
A. Punctuality and regularity	1. Present before 7.00 am	
	2. Present before 7.30am	
	3. Present before 8.00am	
	4. Absence in school	
B. Student individual work	1. Ask questions	
	2. writes assignments	
	3. Observes events	
	4. Manipulate data	

Checklist

Checklists are mainly used for recording to find out if a feature is present or not, or if an action was taken (Faremi, 2009). Checklists are a practical way to collect information about students' learning in order to assess their performance. Checklists consist of a prepared list of behaviour, traits or characteristics to be observed. Checklists are very useful in measuring complex behaviour that can be divided into more segments. When checklist is used to analyze behaviour, the presence or absence of a trait is marked by +1 or 0 respectively. Undesirable behaviour is scored -1. At the end of assessment, the individual score is summed up (Peterson and Elam, 2022). Checklists, according to Peterson and Elam (2022) are intended to track a child's capabilities in all the areas of human development which consist of physical, cognitive, language, social and emotional. Checklists aid teachers to easily see the capability of a child *and the areas* where he/she requires more attention. Teachers can design observation checklists by themselves or download from a reputable source.

Scale	Statement	Never 1	2	Sometimes 3	4	Always 5
E ²	1. Pays attention in class					
E	2. Works well with other children					
I	3. Attempts to do his/her work thoroughly and well, rather than just trying to get by					
D	4. Acts restless, is unable to sit still					
I	5. Participates actively in discussions					
E	6. Completes assigned seatwork					
D	7. Needs to be reprimanded					
D	8. Annoys or interferes with peers' work					
E	9. Is persistent when confronted with difficult problems					
N	10. Doesn't seem to know what is going on in class					
N	11. Is withdrawn, uncommunicative					
E	12. Approaches new assignments with sincere effort					
I	13. Asks questions to get more information					
D	14. Talks with classmates too much					
N	15. Doesn't take independent initiative, must be helped to get started and kept going on work					
E	16. Tries to finish assignments even when they are difficult					
I	17. Raises his/her hand to answer a question or volunteer information					
E	18. Gets discouraged and stops trying when encounter an obstacle in schoolwork; is easily frustrated					

Notes: E = Effort; I = Initiative; D = Disruptive behavior; N = Inattentive behavior.

1 sample of student engagement observation checklist imported from researchgate.net

Anecdotal Records

Anecdotal records are used for collecting data with regards to different types expected learning results and to other facets of personal and social advancement (Faremi, 2009). An Anecdotal Record or anecdotal notes is "an informal observation technique used by teachers as an aid to understand the behaviour of a learner. Anecdotal records are powerful tools that are used through direct observations to see how a learner acts, interacts and reacts to people or issues. With this, the teacher would be able to analyze the development made by the learner in due course (Peterson & Elam, 2022). These records are continuous genuine written accounts of significant incidents in the behaviours of students as they occur at a given time, place and circumstance. They are continuous in the sense that sequential records are kept of the child's behaviour over relatively long periods of time such as a term, semester or academic session. The records are objective and are recorded as soon as they occur. In anecdotal records, interpretation and evaluation are kept separate from descriptions of the behaviour (Oji, 2003).

The advantageous nature of anecdotal records technique lies in revising the many aspects of learning outcomes. The disadvantage in the use of anecdotal records is what should be assessed with this technique.

WWW.EDULEARN2CHANGE.COM

Figure 4: A sample of Anecdotal Record - Imported from edulearn2change.com

Rating Scale

Rating scale is used to indicate the status or quality of behaviour being assessed. It is organized to provide summary information of the behaviour of individuals or group (Oji, 2003). There are different types of rating scales such as numerical, graphical, comparative and ranking.

Numerical Rating Scale: This contains value description of traits or behaviour.

Example:

5 = Excellent, 4 = Very good, 3 = Good, 2 = Fair, 1 = Poor

The rating scale above is Likert type scale which can be reduced to several points depending on the observer/teacher

Graphic Rating Scale: Graphical rating scale describes behaviour and activity along a continuum.

The points along the continuum are described to aid rating. The scales could be horizontal or vertical and the line is not broken (Oji, 2003).

Example: how punctual is Obi to school?

Always on time	Frequently on time	Occasionally on time	Rarely on time	Never on time
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Comparative Ratings:

In this type of rating scale, the behaviour being assessed is compared against an existing standard. This type of rating scale is preferable for activity centered behaviour rather than affective behaviours. The reason is that affective measures are difficult to obtain a model sample for matching (Oji, 2003).

Ranking:

In ranking method, behaviours are rated from highest behaviour performance to lowest occurrence or verse versa. It is a method used for rating individuals on the same set of traits.

Example of a ranking scale:

Rank your most favourite subject. Enter 1 through 5 to rank these features

Mathematics	<input type="text"/>
English	<input type="text"/>
Christian Religious Studies	<input type="text"/>
Economics	<input type="text"/>
Civic Education	<input type="text"/>

Technology

The use of technology in collecting facts is easier and more effective for busy teachers. For instance, photographs, video, and audio recordings are more realistic in gathering students' learning skills. With this type of observation technique, teachers can replay key moments in a child's day to look for specific interactions, play patterns, developmental milestones, struggles and accomplishments. With this technique, teachers can record interactive sessions with the learners and even interactions that students are having with their peers. Teachers can also record how learners carry out classroom tasks (Peterson & Elam, 2022).

Observation is an important technique for assessment. It gives teachers the understanding of the methods that learners use when they get involved in learning experiences. There is the need to use any technique available, including observation, so as to enhance learning when it matters most (White, 2016). Observational technique even with its limitations is ideal for assessing students' behaviour, learning experiences, learning outcomes within and outside the classroom especially in this post COVID-19 era. Test, such as achievement, ability and aptitude tests help teachers in assessing the cognitive domain, observational techniques are appropriate in assessing the affective and psychomotor domains of educational level.

Innovation in the use of Observational Techniques in the Formative Assessment of Students

Using observational method of assessment during learning may not be viable since it is a period of 45 or 50mins. The teacher may not be able to record immediately what was directly observed. In the era of hybrid mode of learning, there is need to seek for other ways of observing students' behaviour and learning. Can formative assessment of students using observational techniques be done online?

The teacher can create an online platform for study groups. Then the students can be divided into sizable subsets, and then create an online platform for each of these groups. It is important that the teacher chooses a learning platform that is cheaper and easily accessible within the students' context, example, WhatsApp, Telegram, Easy Class, etc. With these, the teacher can assess the students, then during physical class, rating becomes viable. Formative assessment is an on-going process, hence, it is not restricted to teaching/learning in the classroom.

The teacher can also use Entry & Exit Slip. This method is easy and practical. Entry & Exit Slip is in form of index cards that can be prepared by the teacher either with pieces of paper or the use of technology (its two-sided; one side is written entry and the other side is exit). The Entry Slip is used for recall of knowledge at the beginning of lesson while the other side, the Exit Slip is used for feedback. It is given to the students at the beginning of the lesson and it is collected at the end

of the lesson. With this tool, the teacher can get the understanding of the students on a given topic and use it to assess their learning abilities.

Conclusion

Formative assessment is vital in education. Teacher uses formative assessment to monitor students' progress. By so doing, it also provides ongoing feedback and allow the teacher to improve and adjust teaching methods and for students to improve their learning. Hence, with formative assessment both teacher and student have room for improvement. The teacher can use observation (direct observation) to assess the students' learning experiences and learning outcomes, and to observe their behaviours. The teacher does these by using observational techniques or tools, such as checklist, anecdotal records, rating scales, and technology.

Recommendations

1. Educators/teachers and school administrators should adopt observation techniques (checklist, anecdotal records, rating scales, and technology) in assessing the students' learning experiences and learning outcome. Most often only tests are used to measure students' mental abilities and educational achievement (cognitive), neglecting the affective and psychomotor domains.
2. The combination of test instruments (e.g. achievement test, intelligent test, aptitude test) and non-test instruments (e.g. observational techniques) when used gives a holistic formative assessment.

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