Assessment for Learning (AfL): Implications for the Achievement of the Goals of Basic Education in Africa

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Abstract

Learning, an unobservable variable intervenes between what is learned and performance. We cannot experience learning but we can see its results through the performance that accrues from it. That is, performance operationalises learning, but it is not often valid at doing this. Performance sometimes underestimates or overestimates learning. Assessment whether for formative or summative purposes are all performance-driven, hence they are assessment of learning (AoL), and reflects the extrinsic component of learning. Assessment for learning (AfL), on the other hand, is the assessment of the process of learning itself, and takes into consideration the intrinsic aspects of learning. What are the factors that underlie learning, or drives performance, and the difficulties in the act of learning? The complex construct – learning – can be decomposed and learners' standing on each of the resulting components assessed. While assessment of learning guns at scores that accrues from learning, assessment for learning guns at how the processes that underlie that which lead to such scores can be improved. This paper tries to do this after differentiating among the several types of assessment. The implications of AfL for the achievement of the goals of basic education are presented and discussed and based on these recommendations are made on the application of AfL for the achievement of such goals.

Keywords: Assessment for learning; assessment of learning; continuous assessment; formative assessment; achievement of goals of basic education; Africa

INTRODUCTION

Learning is the most fundamental human growth and development activity as it brings about changes in behaviour desirable or undesirable. The output of formal learning is assessed through many

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ways in and out of the classrooms. Assessment of learning, which is the process of gathering information through a variety of methods, analyzing them and feeding the results back to the

learners, teachers, parents, and administrators for one type of decision making or the other, is carried out both at the process and output stages of the teaching-learning processes. At the process stage it is often called formative assessment, while at the output stage it is often called summative assessment. Both summative, and to some extent, formative assessment are assessments gear to document the amount of learning that has taken place, but assessment for learning is assessment to provoke, ensure and maximize learning. Summative assessment determines and provides information for decision making on the amount of learning that has taken place. Oftentimes the results **of** formative assessment are also used along with that of summative assessment for making terminal decision about the learners. Such decisions are never ever made about learning in which case it should take into consideration the condition under which learning takes place, or the factors which impede or enhance learning. Especially in a high stake setting, assessment whether formative or more so summative, is a great intimidator, anxiety provoking and creates an intimidating environment within which the testee readily becomes helpless and hence demotivated to learn.

The results from assessment are the most effective driver of behavioural changes in and outside the classroom. It can motivate or demotivate learning, or it can increase or decrease one's willingness to learn. Persistent poor performance, even during assessment for formative purposes or continuous assessment, often results in lack of confidence in or pessimistic feelings about learning. With such feelings, assessment, which should be a means of ensuring success at learning, brings about withdrawal or failure among learners. Many learners fail, not because they do not have what it takes to succeed, but because the right ingredients for learning are not made available to them. The art and the science of learning or learning techniques can be assessed and the results used to maximize learning.

While assessment of learning (AoL) documents the extrinsic product or amount of learning that has taken place, assessment for learning (AfL) is designed to assess the process of learning, what underlies or drives the act of learning and hence to provide feedback for improvement at learning. Our current assessment mode encourages a learner to ask: "how do I get a maximum score on this assignment?" while for assessment for learning mode the learner would rather ask "how do I improve my understanding or application of the course materials through this assignment?" Assessment for learning is concerned with building and strengthening the cognitive and affective fibres of learning. It is concerned with what makes a child "want to learn," or not "want to learn". It tries to identify such factors and to manipulate both individual and classroom psychological and physical environments to provoke and enhance learning.

Assessment, to maximize learning, must be designed to ensure learning and not necessarily to document amount of learning that has taken place. Many learners fail to succeed because they are judged by the results of an assessment designed to measure performance and not learning. Assessment of learning is not as important as assessment for learning because an assessment to document performance is not as important as assessment to ensure learning, that which sustains performance. Without effective assessment to ensure learning even those who

perform may be underperforming, they would have done better if they had their learning maximized through feedback from assessment for learning. The process of learning itself must be assessed, what motivates learning? Factors that bring about difficulties in the act of learning must be identified and assessed. The art and the science of learning or learning techniques have to be studied, the factors that underlie learning must be isolated, analysed and studied, and the results feedback into assessment of learning.

The Problem and Purpose of the Study

Assessment, if well practised in the classroom is the most powerful educational tool for promoting effective learning, yet the use of assessment to ensure learning is one of the weakest aspects of classroom practices (Assessment Reform Group [ARG], 2002), especially in Africa. The problem is that teachers rely only on quantifiable performance as an indicator of learning. Learning is too rich and complex a construct to be represented easily by a quantity or defined as a single quality. The simplistic definition of learning is readily translated into a simplistic treatment of learning as well as its assessment. Changes in cognitive behaviour, which is often ineffectively captured through assessment, represent the extrinsic aftermath of learning and does not define the intrinsic concept of learning. What is learning? To what extent are we correct to equate learning wholly to the result of performance? Just as not all teaching activities lead to learning and hence achievement by learners, not all learning activities lead to performance and not all performance is as a result of the related learning. Learning could be studied as a construct on its own right devoid of performance, and the result fed back to improve the learning process.

Learning is an unobservable variable that intervenes between what is to be learned and performance. We cannot experience learning but we can see its results through the performance that accrues from it. That a student has spent some time looking at a set of notes does not necessarily means that he/she is learning. With the current assessment of learning mode the only way he can be said to be learning is how many questions based on what he/she has been reading he/she can answer? It is operationalized by performance based on the belief that "he/she who learns performs and he/she does not performed has not learned." Consequently, even when significant learning might have occurred, the assessment may not have been designed to capture this kind of learning. Further, the feedback received through performance serves social and managerial purposes – teachers and students are held accountable by parents, administration and other stakeholders through what the grades reflect. The problem is further compounded by the fact that the amount of time spent on test preparation, marking and grading does not really give the teacher time to get to know about their students' learning. Why then do we dwell on performance as the sole indicator of learning? Much of what drive performance is the extrinsic aspect of learning and performance-related assessment does not account for the intrinsic aspect of learning.

The tendency is to be satisfied by using the assessment of performance to describe learning. But can one learn without performing? Can factors that influence learning be isolated

and studied without recourse to performance? Can performance take place without learning? Can learning be assessed on its own without recourse to performance by students? Can learning take place without teaching? Teaching, for example, can be extrinsically defined in terms of students' performance and it can also be defined in terms of how well a teacher performs given each of the intrinsic components of teaching. Just like teaching, can't learning be assessed in and of itself? For example, can't the extent to which assessment is designed to whet learners' desire or appetite to learn be assessed? A more comprehensive model for assessing the various dimensions of learning is needed, and for this we invoke Assessment for Learning (AfL).

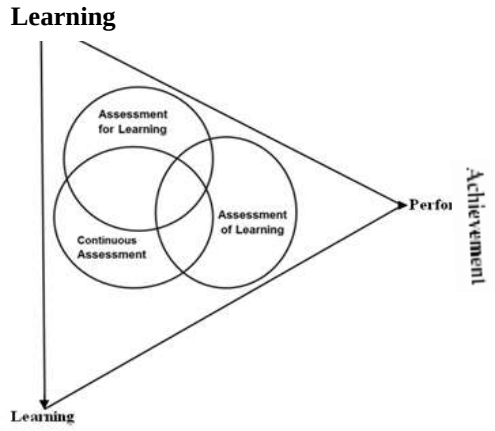
The purpose of this paper is to review and analyse various dimensions of and approaches to learning so as to come up with practical and intrinsic strategies of provoking learning by considering aspects other than performance. This paper will review approaches to learning as specified by Biggs (1987) and relate these to dimensions of learning (McREL, 1997; CCPS, 2006) otherwise referred to as aspects of significant learning (Fink 2003). Literature will be reviewed in the light of the dimensions that are considered critical to achieving AfL. Finally recommendations will be made on how to effectively use AfL in the classroom as a strategy to maximize learning. It is hoped that through this medium the awareness of African scholars to the need to use AfL to maximize learning will be raised.

The Concept of Assessment for Learning

Result from assessment is the most effective driver of behavioural changes or learning in and outside the classroom. It motivates or demotivates learning, or it can increase or reduce one's willingness to learn. Persistent poor performance, even during continuous assessment, often results in lack of confidence in or pessimistic feelings about learning and this readily results in learned helplessness. With such feelings, assessment, which should be a means of ensuring successful learning, brings about withdrawal or failure among learners. Many learners fail, not because they do not have what it takes to succeed, but because they have been denied the opportunity to learn through ineffective classroom assessment practices. Assessment for learning is that designed to ensure success at learning and thence as an extrinsic product, success at performance. Many learners fail to succeed because they were not motivated to learn, but may be to perform, assessment must be designed to motivate learning.

While continuous assessment shares a large amount of similarities with assessment for learning they are not the same thing. Continuous assessment operationalizes the concept of assessment for learning to a point but does not involve the conceptual or theoretical aspects of assessment for learning (see Figure 1) Assessment for learning is a research-provoking concept that sustains research through which means of improving leaning can be found. In other words, theories of learning have a big role to play in providing the foundation based on which speculations as to the improvement of learning could be made and followed through. Assessment of learning guns at scores while assessment for learning guns at how the process which underlies the production of such scores can be improved.

How can we improve such process in other to enhance achievement? Continuous assessment is more or less extrinsic in nature closely associated with performance while assessment for learning is more of intrinsic in nature closely associated with learning. Any type of assessment that 'forms' a learner for success and



l **Teaching** *ıgram depicting the relationship among 'continuous assessment,' 'assessment for learning,' and 'assessment of learning'*

Both summative, and to some extent, formative assessments are assessment gear to documenting the amount of learning that has taken place, but assessment for learning is assessment to provoke, ensure, and maximize learning. Assessment of learning is concerned with the outcome of learning, but assessment for learning is concerned with the intrinsic ingredient of learning. Summative assessment determines the amount of learning that has taken place and based on the result a terminal decision about the learner is taken. Hence it deals with the results of the product-stage of learning. Formative assessment, on the other hand, deals with results or products of learning at the process stage of learning by determining and analyzing the amount of learning that has taken place at that stage and feeding the results back into the teaching/learning process to enhance or improve these activities. Both are external to learning, or are extrinsic to the process of learning, assessment for learning is intrinsic to the learning process and its effect is enhancement of more learning, whetting appetite for more learning, even learning beyond that which summative and formative assessment are concerned with.

One of the goals of AfL is the whetting of students' appetite to learn by creating in the classroom and in the school a rich learning culture through skillful manipulation of both the physical and psychological environments involving both cognitive and affective variables in the classroom. Learning has both intrinsic and extrinsic aspects. While assessment of learning is concerned with the extrinsic aspects of learning, that is, assessing the outcome of learning, assessment for learning is a new move aimed at assessing the intrinsic aspects of learning in order to raise individual's learning level. Assessment for Learning (AfL) is the process of seeking and interpreting evidence for use by learners and their teachers to decide where learners are in their learning, where they need to go and how best to get there (ARG, 2002). AfL is distinctively different from AoL since AfL retrieves information from the learner in a comprehensive manner such that even aspects of the hidden curriculum such as motivation and attitude are assessed (ARG , 2002). As a means of enhancing learning, AoL is inferior to AfL

because whether it is for formative or summative assessment, AoL is performance-based as it is always involves performance and some form of terminal decision making. On the contrary, AfL is more centred on what can be done to enhance learning, and how non-performance components of can be assessed. Performance-driven assessment cannot provide valid materials with which effective job could be done on enhancing learning, "they are limited in scope, and lead to teaching for assessment not teaching for learning" (Birenbaum *et al.*, 2006, p. 12), and "do not allow learners to develop a clearer understanding of how they can improve in their learning" (p. 4). Assessment for learning is multidimensional in nature, a means of measuring the learner's progression and informing him/her about such progression and about areas for and ways of improvement. In other words, "a paradigm shift from assessment of learning towards assessment for learning is required" (Birenbaum *et al.*, 2006, p. 5).

According to McAlpine (n.d.), qualitative measures derived through AfL are aimed at informing us about aspects of learning that do not emerge from conventional test scores. Aspects such as the learning style employed by the learner, the learner's perception of the nature and importance of the task and the approach taken, or the strategy used to achieve learning are all determinants of whether a learner is intrinsically motivated to learn in depth. In this regard AfL is also different from formative assessment. Formative assessment '…takes on a narrow meaning as it refers to a system of frequent summative assessments administered at a regular interval to determine which students have not yet met set standards' (Stiggins & Chappuis, 2006). These authors opine that the assessment may be formative in helping teachers to identify the areas where more explanation or practice is needed. But for the learners, the marks and remarks on their work may tell them about their success or failure but not about how to make progress towards further learning. For AfL, assessment task:

> goes deeper than identifying incorrect answers and pointing these out to students. It should identify the nature of the concept or rule that the student is employing that governs his or her performance in some systematic way (in most cases, the student behavior is not random or careless, but driven by some underlying misconception or incomplete knowledge) (Glaser, 1981, p. 926).

The argument for AfL is that, just as we can assess aspects of teaching (such as teacher enthusiasm, questioning techniques, demonstration techniques, etc.) to improve teaching, we should be able to find ways of assessing 'aspects of learning' to enhance learning. Teachers should find ways through which they can enhance the learning of these intrinsic aspects as well as how to assess the quality of learning exhibited. AfL which takes into account the intrinsic aspects of learning involves students in every aspect of their learning to build their confidence and maximize their achievement (Stiggins & Chappuis, 2006). These authors further suggest that during instruction, national standards should be deconstructed into classroom level learning targets, these are then turned into dependably accurate classroom assessment, aspects of which are integrated it to daily classroom instruction. Through such clear methodology, everyone understands the definition of success from the onset and the students can watch themselves grow. This allows students to understand what success looks like, see where they are now, and learn

how to close the gap between the two. With such a clear vision, it is possible to have all students passing since according to Assessment Reform Group (2002), AfL:

1) Recognizes all educational achievement
2) Develops the capacity for self assessment
3) Helps learners know how to improve
4) Promotes understanding of goals and criteria
5) Fosters motivation
6) Is sensitive and constructive

Educational objectives should be made very clear to the learners in a language that is to their level, this is the first step in motivating the learners to learn as they are expressly aware of what will be expected of them. The learners need to be given proper guidance on how to achieve these goals; teachers should pinpoint learners' strengths and advise them on how to develop them. Since the learners are partners in the assessment process, they should be given a chance to assess each others work and to carry out self assessment. As noted by Klenowski (1996), student self-evaluation is a cognitive strategy which provides an avenue for the paradigmatic shift where '… students are more aware of their thinking and learning processes which encourages a deep, as opposed to a surface, approach to learning.' Teachers should be sensitive to learners' confidence, motivation and enthusiasm, comments given during the assessment should not demotivate the learner as his learning is hinged on his attitudes and perception towards the content material, the teacher, his peers and himself. If, as suggested by Fink (2003), achieving any one kind of learning simultaneously enhances the possibility of other kinds of learning being achieved, then AfL gives a chance to every learner to achieve their best and to have their efforts recognized.

Competencies in Assessment for Learning

Since AfL is based on intrinsic aspects of learning, it may not be as readily assessable as AoL. In listing five sound classroom assessment practices, Stiggins(2002) and Stiggins and Chappuis (2006) emphasised on teachers having deep knowledge of why we are assessing and hence what decisions are to be made, who will make the decisions, and what kind of information will be helpful. Teachers must have a good mastery of achievement targets that their students are to achieve. Such targets must be completely and clearly defined and must be mastered by the teacher for him/her to be able to communicate them clearly to the students and they should have a comprehensive plan scheduling when and how learning targets should be assessed. Another competence is the ability to translate targets into assessments that yield valid results. In other words, they should be assessment literate, having good and practical knowledge of testing procedures for valid results. Validity of tests and testing procedures should be increased (select proper assessment methods, high quality items and scoring guides, plan for careful sampling of achievement, and minimize distortion in results due to bias). The fourth competence is the ability to effectively communicate assessment results whether at the formative or summative levels. Feed results into effective communication systems that deliver information to users in a timely and understandable manner. Students should be

given descriptive feedback while there is still time to use it to improve and assessment results should be used 'to build students' confidence in themselves as learners'. The teacher should be able to adjust instruction based on the results of classroom assessment. Finally, but not the least, is the ability to teach learners relevant learning skills. Students should be taught skills that they need to have so as to be in control of their own ultimate academic success (goal setting and self-assessment, reflection, keeping track of and sharing their learning). The learners are inside the assessment process, watching themselves grow and feeling in control.

THEORETICAL FRAMEWORK

Approaches to learning

The Center for Development of Teaching and Learning [CDTL] (n.d.) explains the original conception of Biggs (1987) approaches to learning. This identifies three approaches to learning: (1) surface approach; (2) deep approach; and (3) achieving approach. According to Biggs, each of these approaches comprises two elements: motive (why a learner want to approach a task) and strategy (how learner approaches the task). In surface approach to learning, the motive is extrinsic as it is the task that is associated with either positive or negative consequences. The aim is to pass minimally; the learner simply reproduces information without any interconnections made. Deep approach is based on intrinsic motivation or curiosity. Learners have personal commitment to the tasks as they try to relate subject matter to personally meaningful contexts. Achieving approach is similar to surface approach as it focuses on the product, the general strategy is maximizing chances for higher grades, and the motive is borrowed from deep learning while the strategy is typically that of a surface learner. Therefore, according to Biggs (1987), any aspect of learning and any approach a learner takes are determined by motive and strategy.

Dimensions of learning

'Dimensions of learning' as defined by Mid-Continent Research for Education and Learning- [McREL] (1997) is a learning-centered framework for institutional planning that provides a framework for organizing, describing and developing research-based teaching strategies that engage students in types of thinking that lead to meaningful learning. Chesterfield County Public Schools (CCPS) (2006) contends that dimensions of learning as an instructional framework incorporates the best of research and theories of learning. The model is based on the premise that all successful learning is based upon five dimensions of thinking (McREL, 1997; CCPS, 2006).

The first dimension - attitudes towards, and perceptions about learning – involves creating and maintaining conducive classroom climate with feeling of being accepted by teachers and peers and a of comfort and order (physical comfort, clear rules and procedures, safety). Valued classroom task designed with clear directives to match learner's ability and interest. The second dimension - acquisition and integration of knowledge – involves two type of knowledge: declarative and procedural knowledge. The first case concerns the ability to construct, organize

and store meaning; while the second one concerns constructing models, shaping and internalizing what is constructed.

The next dimension is on the extension and refinement of knowledge. This involves questioning, comparing, classifying, inducing, deducing, analyzing errors, constructing support, abstracting and generating and analyzing perspectives. The fourth dimension involves meaningful use of knowledge in decision making, investigation, experimental inquiry, problem solving and intervention. The last of the dimensions is productive habits of the mind which involves critical thinking, creative thinking and self-regulation.

Fink (2003), on the other hand, put together a new taxonomy of learning that he called 'Taxonomy of Significant Learning'. In his view, this taxonomy should be seen as a successor of the well-known taxonomy of educational objectives formulated by Bloom and his associates in the 1950's. He expresses concern that individuals and organizations involved in education are expressing a need for valuing important kinds of learning that do not emerge easily from the Bloom taxonomy, for example learning how to learn, character, tolerance, etc. Fink identifies six categories of learning that should create important lasting change in a learner's life. A critical comparison of Finks Taxonomy of Significant Learning and the Dimensions of Learning model shows six levels of learning. These are: foundational knowledge which involves understanding and remembering information and ideas. Knowledge as used here by Fink refers to the learner's ability to understand and remember basic information and ideas that are necessary for other kinds of learning. This is reflected in McREL's Dimension 2, which calls for acquisition and storage of information. The next level is the application level; involving skills, thinking (critical, creative and practical), and managing projects. This occurs when learners try to engage in some new kind of action by putting together various skills learnt. This would be Dimension 4 in McREL's model where the learner has the ability to carry out experimental enquiry, applies problem solving techniques.

Integration involving connecting ideas, people and realms of life, students' are ability to see and understand the connections between different things giving them a new form of intellectual power; constitutes Fink's third level of learning. The learner meaningfully uses the knowledge acquired. According to the McREL model the learner questions, compares, analyzes and constructs support for what has been learnt. The next level involves the human dimension of learning. Learning about oneself and others. According to Fink, when students learn something important about themselves or others, it allows them to interact more effectively. What they learn or the way they learn may help them have a better self-image and a better understanding of others. This would fall under Classroom climate of Dimension 1 in the McREL model. The next level takes that a step further into caring. This is the developing new feelings, interests and values. Learning experiences change the degree to which students care about something. This may be reflected in the form of new feelings, interests and/ or values. This category of significant learning is comparable to McREL's classroom tasks in Dimension 1 that talks about value, ability and clarity. The last of the levels is that of learning how to learn. This involves becoming

a better student; inquiring about a subject and gaining the characterization of a self-directing learner.

Fink explains that this occurs when students learn something about the process of learning itself. They learn to engage in scientific enquiry and to become self-directing learners. This is comparable to the McREL model's Dimension 5 that looks at learning that leads to productive habits of the mind such as critical thinking, creative thinking and self-regulation. The learner should be able to evaluate his learning and steer himself in the right direction.

A critical look at the two models, Dimensions of Learning (McREL, 1997; CCPS, 2006) and the Taxonomy of Significant Learning (Fink, 2003), reveals that the categories of the two models are quite similar as they reflect the same aspects only in different words. The 5th category by Fink which he refers to as 'Caring' can be grouped together with 'Human dimension' so as to fit into Dimension 1 (attitudes and perceptions about learning).

Purposes of Dimensions of learning

It is important to bring to light these dimensions as they highlight some of the aspects of learning that are hardly ever assessed. Leaving these aspects out of assessment may be detrimental as they account for the intrinsic aspects of learning. According to McREL (1997):

- The model is a learning-centered framework for institutional planning that provides a framework for organizing, describing and developing research-based teaching strategies that engage students in types of thinking that lead to meaningful learning
- It offers a way of integrating major instructional models by showing how they are connected and where the overlaps occur. Fink (2003) explains that his model is not hierarchical but rather relational and interactive, each kind of learning is related to the other kinds of learning and that achieving any one kind of learning simultaneously enhances the possibility of the other kinds of learning being achieved.
- The model also provides a process for planning and delivering curriculum and instruction that integrates much of the research on effective teaching and learning (McREL, 1997).

Fink agrees with this opinion as he says that

> …the most significant learning experience is one in which students achieve all six kinds of learning. And that is possible - if teachers learn how to design their course properly with these goals in mind. That is the special capability of 'integrated course design' (Fink, 2003, p. 5).

In summary, five dimensions of learning (McREL, 1997; CCPS, 2006) have been identified as follows:

- Attitudes and perceptions about learning
- Acquisition and integration of knowledge
- Extension and refinement of knowledge
- Meaningful use of knowledge
- Productive habits of the mind

These dimensions and Bigss' (1987) 'approaches to learning' converge at the point that each of the five dimensions is heavily laden with two questions:

1. Why should I engage in the task? (i.e. motive)
2. How should I approach this task? (i.e. strategy)

According to Biggs (1987), strategy depends on motive. For this reason, if a student is to develop a good learning strategy, the motive for engaging him in a task must be to maximize his learning, not just to measure it.

Review of Literature on Dimensions and Approaches to Learning

Hua, Williams and Hoi (n.d.) carried out a study that aimed to identify 'at-risk' students (students who were at risk of failing before they even began learning) by analyzing their learning strategies. The researchers were concerned that the 'fear of failure' mentality of students at Ngee Anne Polytechnic did to some extent prompt students to adopt 'fear of failure' avoidance tactics which did not help as much in improving the quality of learning. Based on G.C.E 'O' Level math results, first year students were put into two groups of high ability, two groups of average ability and two of low ability. The learning approaches of these students were then identified using Bigg's Study Process Questionnaire (SPQ) as a diagnostic tool.

Students completed the SPQ model and received an immediate on-line report telling them about their study approach, the outcome of taking such an approach and strategies they could use for improvement. Low achievers and surface learners were then pointed out to tutors. Tutors were asked to counsel the 'at-risk' students and monitor their progress. At the end of the semester, students' overall performance was correlated with the SPQ data. The researchers also conducted focus group interviews with students.

Preliminary results showed that students who had been identified as low-achieving or surface learners by Bigg's SPQ model were observed to be weaker students in the math class. From the focused interview, students who had been identified as low-achieving or surface learners reported that they were either lacking interest in the course or did not like the teaching methods used. They also felt that the pace of the course was too fast. A correlation of students' final performance with their approach to learning as determined by Bigg's SPQ confirmed research findings that surface learners are likely to be academically weak. However the researchers were surprised to note that those who were classified as achieving by the SPQ model did not do well academically.

Tim (2002) undertook a survey on learning motives and strategies of students at the National University of Singapore. His study was provoked by the fact that survey results had shown that a large proportion of students in his module were using surface learning approaches and obtaining better grades than the deep learners. To address this issue, Tim sought to understand why students use a surface approach to learning. He found the following reasons:

(a) Modules encourage rote learning
(b) Structuring of subject matter does not take students prior knowledge into account
(c) Assessment tasks encourage and reward learners who take a surface approach
(d) Students do not see any intrinsic value in learning the subject

Armed with this information, Tim and his teaching team tried to make some significant change in the learners approach to learning. They explicitly brought out the structure of the subject and challenged students to make connections with what they already knew. As a first assessment, learners were asked to list their learning goals and standards. A conscious effort was made to match the level of subject matter delivery and the pace at which the module was presented to students' prior knowledge. The team encouraged learning by experience and active engagement through discussion and debate. Teaching was modified so that it could bring out the teachers' own enthusiasm and interest in the subject. They also redesigned assessment tasks in such a way that they rewarded deep learning and exploration. The teaching team was also explicitly encouraged and shown how to frequently give students qualitative feedback. Results from a survey later revealed that significantly higher proportions of students had used deep learning strategies and a significantly higher proportion of these students had attained better grades than those who adopted surface learning approaches.

Another study (Learning in Art and Design [LAD], (n.d.)) conducted to look into the quality of learning in art and design aimed at evaluating the impact of a self- and peer assessment programme on students' approaches to learning. The researcher wanted to know whether involving students in the assessment of their own work and that of others promotes a deep approach to learning. The researcher based his speculation on the improvement of learning on the fact that students structure their learning and study approaches to the kind of assessment they are given. A peer/ self assessment questionnaire was administered a few weeks after a self assessment process, 16 out of 20 students responded. The questionnaire sought to know if the students had understood the purpose of assessment, whether the process was clear and well defined, their experiences and how those experiences helped their learning.

The researcher found that although the assessment-groupings used were randomly selected, some students expressed concern about assessing their friends. The researchers contend that peer and self assessment exercises must be introduced at the beginning of the students' programme of study before the basis of friendship is established, otherwise friendship becomes a potential threat to objectivity. The researchers also found that unless students understand the difference between deep and surface learning, they also take a surface approach to self/peer assessment without them even realizing it. Self/peer evaluation doesn't help students with a surface approach. The researcher concludes that self/ peer assessment as constructed in this project does support a deep approach to learning for those who recognize what counts as a deep approach.

Similarly, Klenowski (1996) conducted a study to analyze the process of student self-evaluation and how this impacts on learning. The study focused on a suburban London Further Education college where lecturers were piloting an advanced science program; and on the Honk Kong Institute of Education, lecturers were implementing portfolio assessment to students. Multiple data sources were used: interviews, observation, records, documents and physical artifacts. Observations were made of student self-evaluative process in action, classroom teaching practice and formal presentations of portfolio work by students. The researchers found that student self-evaluation as fostered by portfolio assessment appeared to be a process of

supporting the achievement of student independence and responsibility for decision making. Self evaluation also led to increased student motivation, engagement in their learning, being critical and consequent improvement of quality of their work.

Summary of Literature Reviewed

Student learning strategies can be identified, and from these strategies teachers can pinpoint students who are at risk of failing the course even before learning begins. Following from such identification, students with poor approaches to learning can be counselled to improve their strategies; this greatly enhances students' final performance (Hua, Williams & Hoi, n.d.). Teachers inspire and motivate students' interest by making learning objectives explicit and by encouraging student participation in their own assessment. They modified teaching such that it brought out the teacher's enthusiasm and interest in the subjects, as a result significantly higher proportions of students who used deep learning strategies obtained better grades (Tim, 2002). Involving students in their own assessment leads to increased student motivation, increased participation in learning, and encourages critical thinking and deep learning (Klenowski, n.d.; Tim, 2002; Learning in Art and Design (LAD), n.d.). But introducing students to self and peer assessment should start early in the learning program before the basis of friendship among the learners is formed as these friendships may lead to bias thereby compromising objectivity (Klenowski, n.d.). Similarly, students with surface learning approaches exposed to self and peer evaluation tend to assess themselves and others poorly (LAD, n.d.) It is for this reason that the teachers first need to establish their learners' approaches before they engaged them in self and peer assessment. According to findings by LAD (n.d.), since students structure their learning approaches and study habits on the type of assessment they expect, teachers must prepare assessment tasks that inspire deep learning Thus empirical literature corroborates the competencies for AfL procedures as discussed in the theoretical framework.

Recommendations

Assessment for learning, if well practised is a reliable partner for the achievement of the goals of basic education in Africa, but as pointed out by Stiggins and Chappuis (2006) teachers do not have the skills to carry out AfL effectively; colleges fail to include AfL in their training programs. Since AfL provokes and maximizes learning, it is of utmost importance that the desire to assess for learning is invoked in the teacher. Teachers have to be trained to be literate in assessment for learning.

How can AfL be achieved in basic education?

Teachers should whet learners' appetite to learn by encouraging a culture of learning. This can be done though a skilful manipulation of physical and psychological learning environments by

1. Reducing the syllabus objectives into classroom level learning targets. These targets should be communicated explicitly to the learners. Learners should know where they are

in the learning process, where they need to go and how to get there. This can be practically done in the classroom by writing subtitles on the board such as:

(a) What do I know?
(b) What do I need to know?
(c) What am I learning today?
(d) How do I learn it?

The teacher can then outline prior knowledge, the day's topic and the learning activities of the day. In this way, the learner is given a chance to link prior knowledge with what is being taught. The teacher should master all objectives so that he can communicate them clearly to the learners.

2. Ensuring that the motivation of learners to learn is kept high. This can be done by teachers showing enthusiasm and interest in their own subjects so that students see the intrinsic value in the subject. Teachers' enthusiasm is easily reflected in the learners' attitude to the subject.
3. Pinpointing learners' strengths and weaknesses early in their learning programme so that they have time to improve before they are summatively assessed. The teacher should be able to analyze learners' perception of the nature and importance of the task at hand. Poor learning styles and approaches should be identified and corrected before the learner reinforces them into an unbreakable habit. Classroom level learning targets should be turned into dependable assessment tasks. They should reflect the classroom instruction given.
4. Teaching students the skills that they need to have so that they can be in control of their own success. Learned helplessness should not be allowed to crowd the learners' mind.
5. Making sure that assessment inspires deep learning as the learners structure their learning on the kind of assessment to be given. Learners need to have a deep knowledge of why they are being assessed (what is at stake) so that their motive for learning is to achieve deep learning through a deep approach to learning.
6. Since the learners are partners in assessment, they should be given a chance to evaluate themselves as well as their peers. In this way learners understand what success is from start, and they can watch themselves grow in their learning.
7. If learners are to be involved in self/peer assessment, this kind of assessment should be introduced early in the school programme so that the need for objectivity is ingrained in learners before the basis of friendship compromises their objectivity in assessing peers.
8. Students should only be involved in self/peer assessment if the teacher is convinced that the learners have achieved a deep learning approach, otherwise the self/peer assessment does not serve the purpose of provoking learning.
9. Teachers must be sensitive to comments given to learners during assessment so as not to demotivate the learner. Feedback should be communicated in a timely and easily understandable manner; the feedback should be as descriptive as possible so that it can be used to improve learning.

10. Teachers should form learning teams within their schools so that they can share experiences in preparing assessment materials. They should come up with assessment procedures that will be tailor-made to motivate students and provoke learning.

According to Stiggins (2002), in the United States, "few teachers are prepared to face the challenges of classroom assessment because they have not been given the opportunity to learn to do so" (p. 5). To the Government, The Assessment Reform Group (2002) suggests the following solutions to the problems of assessment:

1) Assessment for learning should be a central focus of government's programme of raising standards.
2) A range of examples should be published, showing how AfL can be integrated into classroom practice and into the planning of schemes of work, across ages and across subjects
3) Classroom assessment and their role in teaching and learning should be given greater prominence in initial teacher training and continuing professional development
4) Schools' endeavour to carry out AfL as a means of raising standards should be supported by government-led funding.
5) Great recognition should be given by school inspectors who should be supported with appropriate training in the area of AfL.

Educational researchers should not relent effort at studying and analysing learning as a construct, identifying its components and determining how to involve each of such components in the assessment to improve learning.

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