

The Role of Assessment in the Teaching and Learning Process

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Abstract: The paper examines the effectiveness of the present assessment practice in higher educational institutes. This study was done using qualitative research methodology. Assessment plays an integral role in teaching and learning. For generations, summative assessment has dominated most classroom assessment work where the bulk of teacher time has been taken up with creating tests, marking and grading. The results of the survey indicate that there is a growing acceptance that Assessment for learning (formative) can enhance the teaching and learning process.

Keywords: Formative Assessment, Summative Assessment, Learning,

Introduction

The Sri Lankan Higher Educational Institutes have been successful in producing a population of literate individuals. However, the individuals who pass out do not possess the desired attributes. A greater percent of the total assessment mark is assigned to summative assessment during the course of study in higher educational Institutes. Both mid semester and final examination predominantly test knowledge. Summative assessment is termed as assessment of learning as it evaluates only the students' performance and does not facilitate to employ alternative methods to assess skills and abilities. Testing knowledge alone will no longer suffice in the outcome based education system. It will be increasingly important for Higher Educational Institutes to employ assessment strategies to guide students to apply their knowledge, skills, competencies while integrating concepts and thoughts to provide progress in real life situations. Thus the space for formative assessment, i.e. assessment for learning must be increased so that alternative

assessment methods can be employed to measure knowledge, skills, attitudes and beliefs.

The objective of this study is to examine the effectiveness of the present assessment practices based on the priority given to both summative and formative assessment at higher educational institutes and the growing need to move towards assessment for learning. The qualitative approach will give an in-depth understanding of the role of assessment in the present University System.

This paper is organized as follows. First, the erent types of assessment methods are discussed. The literature review of the previous research findings is discussed. Finally, the significance of Assessment for learning will be brought out to emphasise the effectiveness of this method over assessment of learning.

Literature Review

Good assessment improves students' learning and helps the development of lifelong learning skills. The way we assess learning has a great impact on the learning process. In a learner centred approach to teaching, assessment is considered an integral part of learning and teaching in keeping line with the constructive alignment theory by John Biggs. This is further supported by Huba & Freed (2000) who state "we not only monitor learning but we promote learning"

David Boud (1994) makes a critical comment "students can escape bad teaching; they can't avoid bad assessment." So assessment has a major influence on how the teaching is done how students learn and organise their studies and how individuals progress in

their future prospects. 'The term 'assessment' refers to all those activities undertaken by teachers, and students themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. Such assessment only becomes 'formative assessment' when the evidence is actually used to adapt the teaching work to meet the needs. (Black and William, 1998). As such assessment is the process of gathering and interpreting evidence to make judgements about student learning. It is the crucial link between learning outcomes, content, teaching and learning activities.

As cited by (ARG, 2002) in *Reflective teaching and learning*, edited by Dymoke and Harrison (2008) assessment for learning is defined as the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there. The purpose of assessment is to improve learning, inform teaching, help students achieve the highest standards they can and provide meaningful reports on students' achievement. However, the purpose of assessment of learning is summative as it is done at the end of a unit, course, semester or a year.

Assessment for learning is emerging as a more useful tool than assessment of learning. According to Earl (2003). "When they are doing assessment for learning, teachers collect a wide range of data so that they can modify the instructional media for their students. Assessment as learning gives more authority and responsibility of learning to students where their involvement in learning is higher than assessment for learning. The teachers' involvement in this scenario is less significant than assessment for learning. Students will be assessed by themselves in the learning process and they will be self directed and motivated towards their own goals.

According to Siobhan et al. (2005) "overtime, students move forward in their learning when they can use personal knowledge to construct meaning, have skills of self monitors to realize that they don't understand something, and have always the ability to decide what to do next". Formative assessment, like summative assessment, is about gathering information

relating to students' learning but it is the point at which this information is gathered that makes it different. Formative assessment focuses on how a young person is learning as they undertake the task. The teacher is then more able to tune into the learner's progress, picking up on emerging understandings and difficulties. Formative assessment provides teachers with information with which to modify or change the teaching and learning activities in which students are engaged.

The idea is further supported by other researchers as well who argue it to be a process which gives a feed back about students' learning and teachers which in turn can be used as a tool to evaluate student learning' (Browns & Pendlebury, 1992) . With the paradigm shift from teacher centred classrooms to learner centred classrooms, there is a fundamental change in the role and nature of assessments. As a result, the teachers who directed the learning process as transmitters of knowledge are now facilitators of learning with the active participation of students in the teaching and learning process. The basic idea is that learner-centered instruction requires the continuous collection of student feedback on what, and how well, they are learning. In addition, this feedback can be an indicator to the lecturer about the effectiveness of various teaching methods or technologies. As such, the feedback that is collected from assessment is mutually beneficial. Meaningful learning does not occur simply by receiving information from someone else but rather, it is what the learner does with that information that leads to learning. They use that information to build on existing knowledge to construct new knowledge for them. This suggests that we need a learner centred approach rather than a teacher centred approach where the students experience discovery learning from an autonomous viewpoint. Under teacher centred classrooms, teaching and assessment were two separate entities but now it is intertwined. In the developed countries, formative assessment has come to be very much concerned with the everyday ongoing process of teaching and learning. It enables teachers to gather information about their learner's learning and to use that information to improve the way they learn.

Assessment drives learning through motivation. The assessment informs the students about the real

goal or goals. Then they have a feeling to achieve this goal and likelihood of reaching them. Therefore, assessment forces the students for learning on motivation and achievements. Used with the skills, assessment can motivate the unmotivated, restore the desire to learn, and encourage students to keep learning. Assessment methods and requirements probably have greater influence on how and what students learn than any other single factor Boud, (1988)

All roundedness in knowledge, skill, attitude, attributes and professional competence are intended learning outcomes. However, converting an Intended Learning Outcome to a successful teaching and learning experience resulting in perfectly measurable set of such attributes of an undergraduate is not a straightforward activity.

So there is a need to design teaching learning activities and assessments to align with Intended Learning Outcome that needs a systematic approach from the core. Intended Learning Outcome must be planned at macro level to be converted to a set of achievable learning outcome. These programmes and specific outcomes are the guidelines of effective teaching and learning activities and of realistic and measurable assessment of the students' final achievements. (Biggs and Collis, 1982)

In selecting teaching/ learning Activities and assessments to align with Intended Learning Outcomes, there must be a systematic way of describing how a learner's performance grows in complexity when mastering many tasks, particularly, the set of tasks undertaken in their learning environment. A learner centred approach allows students to take more responsibility for their learning. This in turn has implications for the way in which we assess learning.

Assessments that emphasize memorization of information and the reliance on the conclusions of others do not encourage learners to think critically. Continuous feedback is an important factor in the promotion of learning through assessments."Improvement [in student learning] is

best fostered when assessment entails a linked series of activities undertaken overtime" (AAHE Assessments Forum, 1996). Continuous assessment also helps us understand the conditions under which students learn best and as such we can improve the learning experience to maximize learning. To improve learning, assessments should more than measure the outcomes of learning must be an evaluation of the process of learning and the students' experience along the way (AAHE Assessments Forum, 1996). As such, finding a balance between formative and summative assessment is essential. Making use of progressive weighting, whereby largely formative assessments contribute a percentage towards the final mark can help to mitigate these issues and can help your students appropriately focus their efforts throughout the module.

As stated in classroom Assessment techniques compiled by Danielle Mihram classroom assessment is formative in nature. Unlike final exams or major term papers, Classroom Assessment techniques (CAT) provide feedback on student learning while the teaching/learning relationship is well maintained, Its purpose is to improve the quality of student learning and not to provide evidence for evaluating or grading student. It also provides feedback about the effectiveness as teachers, This is supported by the article written by Black & William who argue "We start from the self-evident proposition that teaching and learning have to be interactive". In other words, frequent, prompt, performer friendly feedback coupled with an immediate opportunity to apply the feedback provides the best opportunity for learning. The first step is to consider the teaching goals for a particular section of the course material. Then, consider what the learning objectives are for each of the goals and plan assessment to gauge whether they have understood and acquired a particular skill.

2.1 The objectives of undergraduate assessment are:

- To check whether the required knowledge skills and attitudes is gathered by the student and determine the level of understanding.

- To ascertain whether the learning outcomes have been achieved to apply the Knowledge, skills and attitude to practical contexts.
- To improve and support the teaching and learning process using it as a feedback tool.
- To compare and rank the students based on the capacity tested that is uniform to all.
- To motivate students and focus their sense of achievement.

2.2 Different Typed of Assessments

All activities teachers use to help students learn and to monitor the student progress can be classified as follows depending on the criteria.

In the planning stage of assessment, it is important to know the purpose for which assessment is done and design them accordingly. Summative and formative assessment are used to achieve these objectives. However, they differ mainly in terms of their purpose, how the evidence gathered will be used and by whom.

Formative Assessment

This is generally carried out throughout a course or project. It is often done at the beginning or during a program, thus providing the opportunity for immediate evidence for students learning in a particular course. Classroom assessment is one of the most common formative assessment techniques. The purpose of this technique is to improve quality of student learning and should not be to evaluate or involve grading students. Boud,(1988). Classroom Assessment Techniques are formative evaluation methods that serve two purposes. They can help you to assess the degree to which your students understand the course content and they can provide you with information about the effectiveness of your teaching methods. Most are designed to be quick and easy to use and each classroom assessment technique provides different kinds of information. Formative evaluations provide information that can be used to improve course content, methods of teaching, and, ultimately, student learning. Formative evaluations are most

effective when they are done frequently and the information is used to effect immediate adjustments in the day-to-day operations of the course. Some faculty incorporate a Classroom Assessment Technique into every class session.

Summative Assessment

This is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. This is comprehensive in nature, provides accountability, and is used to check the level of learning at the end of the program. For example, after completion of program, students will have the knowledge to pass an accreditation test, which would be summative since it is based on the cumulative learning experience.

Conventional and Innovative assessments

Conventional and innovative assessments, both of them have the same objective although their methods of assessments as well as benefits and drawbacks are different.

Conventional Assessments can be either formative or summative. It is mostly exam oriented. It is generally paper assessments. Apart from these, it becomes a hectic task for teachers to make different types of questions. Maintaining a question bank is not an easy task as it takes place over a period of time. Exam papers use multiple choices, structured and essay type questions, or short answer tests. Students are tested individually. The test material is often isolated from real life situations.

Students achieve success with low level of cognition. It becomes a stress for students and some may suffer from depression. Correction of papers is also time consuming. Traditional closed examination is de-motivating for most students. They predominantly generate negative emotions. Traditional timed examination is likely to measure a great deal more than just the ability to acquire and utilize knowledge.

Innovative Assessment

Literally defined, innovative assessment could be any form of assessment which involves the application of a new technique or method. With the advancement of technology, both students and teachers prefer innovative assessment. However, administering it is not possible due to the limited resources available. Traditional assessment in the form of examination and coursework can be contrasted with innovative assessment such as computer assisted assessment, group assessment, self assessment, peer assessment, and portfolios.

Students often get more involved in innovative assessment and think innovative assessment are interesting and help them to learn. Mainly, it is a genuine attempt to improve the quality of learning in higher education. In addition, it aims to produce a more fertile and a rewarding learning experience for all teachers and students. In particular, the act of applying assessment criteria to their own work, and their peer's work can help students to achieve the associated learning outcomes. Novelty can cause anxiety, especially in the experimental stage. So students need to be given practice and a process of familiarization with any new method that is implemented.

Objective and Subjective Assessments

Both summative and formative Assessment is often categorized as either objective or subjective. Objective assessment is a form of questioning which may have more than one correct answer or more than one way of expressing the correct answer. There are various types of objective and subjective questions. Objective question type includes true/false answers, multiple-choice, multiple-response and matching questions. Subjective questions include extended-response questions and essays. Objective assessment is well suited to the increasingly popular computerized or online assessments format. Some have argued that the increasingly popular computerized or online assessment

Informal and formal Assessments

Assessment can be either formal or informal. Formal assessment usually implicates a written document, such as a test, quiz or paper A formal assessment is given a numerical score or grade based on student performance, whereas an informal assessment does not contribute to a students' final grade. An informal assessment usually occurs in a more casual manner and may include observation, inventories, checklists, rating scales, performance and portfolio assessments, participation, peer and self evaluation and discussion.

Internal and external Assessment

Internal assessment that is set and marked by the institute gives students the mark and feedback regarding the assessment where as external assessment is set by a governing body and marked by non biased personnel. With external assessment students get the mark or grading but they do not know how they actually performed.

Assessment for learning, assessment of learning and assessment as learning

Assessment for learning is diagnostic and formative for the purposes of greater learning achievement. It is used for ongoing planning and quality enhancement.

Assessment as learning is assessment as a process of developing and supporting students' active participation in their own learning. It is ongoing and it involves self and peer assessment which provides students the opportunity to use the feedback to improve self learning.

Assessment of learning is assessment for purposes of providing evidence of achievement for reporting. It occurs at the end of year or at key stages. It is summative and used for grading.

Methodology

The research is based on qualitative research approach using secondary data. Data was collected from observation of the researcher supported by past research articles, books and handbooks of state universities.

Findings

- Assessment of learning and teaching can be viewed as two complementary and overlapping activities that aim to benefit both the quality of student learning and the quality of teaching of the instructor. Assessing learning alone is not sufficient because the ultimate success of students is also dependent upon their motivation and commitment to learning. Similarly, assessing only teaching behaviours and course activities is not sufficient because qualities of the instructor may be appreciated by students but not optimally helpful to their learning and growth. As such, assessing teaching and learning can help instructors improve and refine their teaching practices and help improve students' learning and performance.
- If assessment is to be used in classrooms to help students learn, it must improve instruction rather than being used only to rank students or to certify the end products of learning. Over the past few years, feedback to learners had been in the form of marks or grades. These kinds of tests provide little direction or advice for improvement in teaching and learning strategies. Typically, they don't give much indication of mastery of a particular ideas or concepts because the test content is generally too limited to represent the broad range of skills and knowledge that have been covered. In the light of the evidence discussed by Gibbs (1989), "Assessments that only focus on the end product would be inadequate and there must be an appropriate balance between Summative and formative..
- The key problem associated with summative approaches is not having room or time for corrective measures. So formative assessments are advantageous over summative assessment in being able to improve instructional methods and provide feedback to the teaching learning process throughout the semester. Thus formative assessment can significantly enhance learning and attainment. The review of classroom assessment, by Black and Wiliam (1998) supports the view that formative assessment does improve learning.
- Continuous assessment that looks at student's overall capabilities should be used. This helps to constantly demonstrate the students' level of knowledge that an exam simply cannot accomplish.
- Classroom assessment techniques too need to be incorporated as it gives students opportunities to provide feedback about their learning to the teacher.
- As far as student learning is concerned, the contribution of assessment of learning towards achieving the desired learning outcome is very low when compared to assessment for learning, though it still dominates the other types in higher educational institutes. However, we cannot ignore assessment of learning because it is the final measurement of students' learning; further results of assessment of learning can be used for restructuring of teaching and learning process of the next batch of students. It is still a problem to think how far the results can be adapted as the results of summative approaches are broader and do not describe a specific area in teaching and learning
- Assessment as learning is very critical in learning as there is student involvement in deeper contexts. In this scenario, peer and self assessment are very appropriate when used as assessment as learning. This approach encourages reflection of students' work and self criticism. The important aspect is that these involve the students in trying to apply the assessment criteria for themselves and make judgments on their own work. Group presentations, poster displays, group project process, reports, portfolios are some areas in which peer and self assessment can be conducted. Thus assessment as learning can be identified as a very open approach for students to

think, learn, assess and realize themselves in the learning. It can be seen that it will not only limit the learning to existing knowledge but also enhance searching of new knowledge.

- The ways we assess our students can really make a difference to how students learn. Assessment is a fundamental driver of what and how students learn. Moreover it is vital to make a bridge between the present system of assessment and what is yet to be improved. As assessment is an integral part of learning, assessment tasks should be embedded in the teaching and learning framework. Hence, there is a greater chance that students will achieve the learning outcomes and be enriched by the experience.

Conclusion

In the present system of assessment, both summative and formative practices are used. However, formative assessments that are practiced do not meet the purpose it is intended as it is done with a focus on mid semester and end semester Examination. This continuum of examinations becomes de-motivating for students as they expect a variety in the process of assessment. The study also indicates that formative assessment assesses not only knowledge (Cognitive) but also attitude (Affective) and skills (psychomotor).

In considering the experience and observation of the researcher, assessment for learning (formative) is relatively lower than that of assessment of learning (summative) and assessment as learning is less used due to the difficulty in administering and lack of experience of both instructors and students.

The study reveals that the ideal way would be in the order: assessment as learning > assessment for learning > assessment of learning.

As there is more emphasis on assessment of learning in the present context, steps should be taken to give more priority to assessment for learning as there is a shift of emphasis to Assessment for learning. In order to keep abreast to the latest developments, it is vital to keep a better balance between summative and formative assessment.

Limitations and Directions for the Future Research

This paper is limited to secondary data at a broader perspective. It can be suggested to use empirical studies to identify the problems and find solutions to the existing system of assessment.

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