

Measuring Students' Learning through Formative Assessment Strategies in Classroom during Academic Sessions at University Level

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Abstract

Purpose of the study was to measuring students' learning through formative assessment strategies during academic sessions in classroom at university level. The study used a quantitative as well as qualitative research approach. The data was collected through a survey questionnaire administered to 300 students. The main findings are that universities are mainly using formative assessment during teaching and learning process. Results further indicate that formative assessment is the most significant factor that influences a learner's performance. The classroom assessment practices have a vital role on student's performance at university level. As today there is very high competition between students so teachers need to assess students in the class for their improved performance.

Keywords: Students' learning, Formative assessment, Academic session, University level

Introduction

Assessment is most important part of curriculum. It could be utilized at various stages including federal, institutional and in attainment of students on programmed level of courses. Let's say, when in school federal exams are directed in the Rwandan system of education, one could more accurately consider that assessment is conducted. Like when pupils of an institute gave exams at the end of semester they go through the process of assessment. However, in some other countries i.e United States of America instead of using the term assessment, they used the concept of evaluation (Rowntree, 1981) and also in system of Anglophone (Rwanamiza, 2004) utilized term evaluation not the assessment. In my thesis, this term assessment is described in very flexible and simple way. All of the in formations which we obtained through the students

during learning process described assessment and quality of learning. The operational meanings of the term assessment consist of both formative and of some summative aspects. Assessment could be carried out through teachers or students or even through combination of both. Harlen (2007) in article named 'Assessment of Learning' described the difference among term assessment and of evaluation as under:

'Assessment' can be described as procedure of collecting, inferring and then utilizing results in the direction of final conclusion about the success of students in field of education. Whereas other word 'evaluation' is specified for the procedure of utilizing these results relating to different schemes, various techniques, resources or other organization. (Harlen, 2007:11).

It is very difficult to describe the assessment in field of education at just a course level. About the achievement of students, there are different levels of judgment being used by the assessor. However, this different level of judgment does not match the level of the evaluation. However the present study is influenced by work of Harlen (2007) where described the basic constituents of assessment are evaluated in ways of the objectives of the assessment, applications of the assessment, various sorts of assessment work and finally how recording the final results of the assessment.

In procedure of training and of education the assessment of pupils plays very important part. It helps to clarify how much teaching methods are effective. It also compares the different learning methods with efficiency of students (Baines & Kennedy, 2010). Without assessment it is very difficult to evaluate the progress of the students. Here we will discuss the performance of the Teachers, different challenges, various opportunities and process of the evaluation. It is necessary for persons who designed curriculum and of teachers to behave like assessors before planning individual units. It helps teachers to check the efficiency of their different teaching methodology, and it also improves classroom education. Far improved learning results the evaluation system faces many obstacles that must be acknowledged and resolved. The evaluation of teachers, students, schools, boards, and of some social and moral issues are all possible barriers faced in evaluation framework (Faubert 2009). Each problem in the evaluation framework should be considered thoroughly. The process of assessment based on the educational career of the students. In education field, there are two types of evaluation systems exist named as internal and of external. Internal faculty of institutes involved in internal evaluation process while educational board members participate in external evaluation process (Blok, Slegers & Karsten, 2008). The evaluation helps in the transmission of different learning objectives.

Over the past two decades, technology-based evaluation of education has progressed. Previously computer technology was used for recording pupils test forms for purpose of evaluation. Modern systems hold up support a wide range of features and functions (Lorenz, Freddolino, Comas-Herrera, Knapp, & Damant, 2019). Self-management, software-controlled element demonstration, and of responses evaluation grounded on theoretical models, conclusion-assembly centered on rules and guidelines, preparation grounded on skillful knowledge, and straight ties among assessment and instructional adjustments are among these features. The application of electrical systems and software form to measure and assess the performance of learners is known as technology-based assessment.

It also assists in understanding the student skills. In institutes, the process of assessment must be identical and compact. Formative form and other summative, both types of evaluation systems are the basic two forms of assessment methods. Formative response is specified for pupils on a steady basis. Summative response is specified at last of course. Somewhere in system of evaluation, link between students, teachers, colleagues, families and communities is lost. Student's success is evaluated by teachers based on their assessments, examinations, tasks and projects. It has four main functions: grading student work, involving with students, encouraging students to concentrate and involving students in the course (Blok et al., 2008). It is organized to mark transitions and to concentrate students and teachers efforts. A student's ability to recognize the evaluation process and grading technique has yet to be established. In the appraisal scheme there is a insufficiency of accountability. Techniques for evaluating students in the classroom are uncommon. In the field of summative evaluation which is tightly regulated and has implications on tutee's evaluation assessment creativity is a delicate matter. Plagiarism and invigilation are matters that the authority is worried with. When various departments have different working processes and cultures scalability and transition issues arise.

Research objectives

Objective of the study were:

1. To analyze formative assessment strategies at university.
2. To understand how formative assessment affects students at university level.
3. To recommend appropriate strategies for authentic assessment.

Research Questions

Research questions of the study were:

1. What are the current formative assessment strategies at university level?
2. How formative assessment affects students at university level?
3. What are the appropriate strategies for authentic assessment?

Research Methodology

As the study was of descriptive nature; so, survey methodology was considered appropriate and used for its completion.

Population of this study is

- All the students of KFUEIT, R.Y.K
- All the teachers of KFUEIT, R.Y.K

Sample of the study is as follows

- Three hundred students from three departments of KFUEIT i.e. hundred students from each department.

The study is a quantitative in nature because the assessment practices at higher education level can be analyze better through the questionnaire than other research instruments. The population sample was free to give their idea about the already existing set up of assessment, issues, current practices and challenges faced. Therefore, questionnaires are designed for the teachers.

Data Analysis**Table 1: Part-1: Measuring Students' Learning through Formative Assessment in Classroom**

No	Statement	SDA	DA	A	SA
1	Teacher uses written tests to assess his students.	7	2.1	323	97.9
2	Teachers use short written quizzes to assess his student's knowledge and understanding.	86	26.1	244	73.9
3	Teachers use MCQs to diagnose gaps in his teaching.	84	25.4	246	74.5
4	Teacher uses the results from written test to aware his students of their next step in learning.	86	26.1	263	73.6
5	Teachers use open ended questions to diagnose knowledge and understanding.	86	26.1	244	73.9
6	Teacher structures his lessons so that learners can try a task, reflect and make improvement.	12	3.6	318	86.3
Average		60.17	18.23	273.00	80.02

Table 1 shows results regarding the statement that teacher uses written tests to assess his students". Based on the data 97.9% of students agreed and 2.1% disagreed with the statement. Teachers uses short written quizzes to assess his student's knowledge and understanding". Based on the data 73.9% of students agreed and 26.1% disagreed with the statement. Teachers uses MCQs to diagnose gaps in his teaching. Based on the data 74.5% of students agreed and 25.4% disagreed with the statement. Teacher uses the results from written test to aware his students of their next step in learning. Based on the data 73.6% of students agreed and 26.4% disagreed with the statement. Teachers uses open ended questions to diagnose knowledge and understanding". Based on the data exhibits that 75.6% of students agreed and 24.2% disagreed with the above-mentioned data. Teacher structures his lessons so that learners can try a task, reflect and make improvement. Based on the data 86.3% of students agreed and 3.6% disagreed with the statement.

Table 2: Part-2: Measuring Students' Learning through Formative Assessment in Classroom

No	Statement	SDA	DA	A	SA
7	Formative assessment motivates students to learn.	87	29.3	233	70.6
8	Formative assessment improves student's performance.	83	25.1	247	74.9
9	Formative assessment helps students to know their mistakes before it's too late.	62	18.8	267	80.9
10	Formative assessment is varied and it is colorful.	105	31.7	225	68.2

11	Formative assessment gives students enough time to think and learn.	15	4.5	315	95.5
12	Formative assessment makes students more responsible towards learning.	80	24.2	250	75.7
Average		72.00	22.27	256.17	77.63

Table 2 showed that formative assessment motivates students to learn”. Based on the data 70.6% of students agreed and 29.3% disagreed with the above-mentioned data. Formative assessment improves student’s performance”. Based on the data 74.9% of students agreed and 25.1% disagreed with the statement. Formative assessment helps students to know their mistakes before it’s too late”. Based on the data 80.9% of students agreed and 18.8% disagreed with the statement. Formative assessment is varied and it is colorful”. Based on the data exhibits that 68.2% of students agreed and 31.7% disagreed with the statement. Formative assessment gives students enough time to think and learn. Based on the data 95.5% of students agreed and 4.5% disagreed with the statement. Formative assessment makes students more responsible towards learning. Based on the data exhibits that 75.7% of students agreed and 24.2% disagreed with the statement.

Table 3: Part-3: Measuring Students’ Learning through Formative Assessment in Classroom

No	Statement	SDA	DA	A	SA
13	Formative assessment reduces student’s tension for final exam.	80	24.2	249	75.4
14	During the course teacher checks if students understood the material covered so far.	62	18.9	268	81.2
15	Teachers creates a situation in which student can make practical use of knowledge and skills which he gained.	103	31.2	227	68.8
16	Teacher encourages students to speak.	5	1.5	274	98.5
17	Teachers creates a situation in which student can make practical use of knowledge and skills which he gained.	85	25.7	245	74.2
18	Teacher’s courage’s to students to speak	80	24.3	250	75.7
Average		69.17	20.97	252.17	78.97

Table.3 shows that formative assessment reduces student’s tension for final exam. Based on the data 75.4% of students agreed and 24.2% disagreed with the statement. Teacher checks if students understood the material covered so far. Based on the data 81.2% of students agreed and 18.9% disagreed with the statement. Teachers creates a situation in which student can make practical use of knowledge and skills which he gained. Based on the data 68.8% of students agreed and 31.2% disagreed with the statement. Teacher courage’s to students to speak. Based on the data 98.5% of students agreed and 1.5% disagreed with the statement. Teachers give feedback about what is positive and correct about students speaking. Based on the data 74.2%

of students agreed and 25.7% disagreed with the statement. Teachers encourages to students to participate in classroom activities. Based on the data 75.7% of students agreed and 24.3% disagreed with the statement.

Findings

Following were the findings of study:

- It was found that teachers uses short written quizzes to assess his student's knowledge and understanding". Based on the data exhibits that 73.9% of students agreed and 26.1% disagreed with the above-mentioned data. The standard deviation of the data is 5888, Significance level is .183 and the mean score is 4.71 that show inclined towards the agreed response table.
- It was revealed that teachers uses MCQs to diagnose gaps in his teaching. Based on the data exhibits that 74.5% of students agreed and 25.4% disagreed with the above-mentioned data. The standard deviation of the data is 1.388, Significance level is .141 and the mean score is 3.81 that show inclined towards the agreed response.
- It was illustrated that teachers applies the results from written test to aware his students of their next step in learning". Based on the data exhibits that 73.6% of students agreed and 26.4% disagreed with the above-mentioned data. The standard deviation of the data is 1.573, Significance level is .001 and the mean score is 3.84 that show inclined towards the agreed response.
- It was affirmed that teachers adopts open ended questions to diagnose knowledge and understanding". Based on the data exhibits that 75.6% of students agreed and 24.2% disagreed with the above-mentioned data. The standard deviation of the data is 1.449, Significance level is .001 and the mean score is 3.87 that show inclined towards the agreed response.
- It was depicted that teacher makes structures his lessons so that learners can try a task, reflect and make improvement". Based on the data exhibits that 86.3% of students agreed and 3.6% disagreed with the above-mentioned data. The standard deviation of the data is .6872, Significance level is .102 and the mean score is 4.57 that show inclined towards the agreed response.
- It was showed that formative assessment motivates students to learn". Based on the data exhibits that 70.6% of students agreed and 29.3% disagreed with the above-mentioned data. The standard deviation of the data is 1565, Significance level is .108 and the mean score is 3.62 that show inclined towards the agreed response.
- It was declared that formative assessment improves student's performance. Based on the data exhibits that 74.9% of students agreed and 25.1% disagreed with the above-mentioned data. The standard deviation of the data is 1.595, Significance level is .791 and the mean score is 3.739 that show inclined towards the agreed response.
- It was explored that formative assessment helps students to know their mistakes before it's too late. Based on the data exhibits that 80.9% of students agreed and 18.8% disagreed with the above-mentioned data. The standard deviation of the data is 2.149, Significance level is .463 and the mean score is 4.18 that show inclined towards the agreed response.
- It was showed that formative assessment reduces student's tension for final exam. Based on the data exhibits that 75.4% of students agreed and 24.2% disagreed with the above-mentioned data. The standard deviation of the data is 1.358, Significance level is .275 and the mean score

is 3.88 that show inclined towards the agreed response.

- It was found that during the course teacher checks if students understood the material covered so far. Based on the data exhibits that 81.2% of students agreed and 18.9% disagreed with the above-mentioned data. The standard deviation of the data is 1.178, Significance level is .003 and the mean score is 4.12 that show inclined towards the agreed response.
- It was described that teachers create a situation in which student can make practical use of knowledge and skills which he gained. Based on the data exhibits that 68.8% of students agreed and 31.2% disagreed with the above-mentioned data. The standard deviation of the data is 1.424, Significance level is .011 and the mean score is 3.72 that show inclined towards the agreed response.
- It was found that teachers' encourage students to speak". Based on the data exhibits that 98.5% of students agreed and 1.5% disagreed with the above-mentioned data. The standard deviation of the data is 0.548, Significance level is .461 and the mean score is 4.63 that show inclined towards the agreed response.
- It was showed teachers encourage students to participate in classroom activities. Based on the data exhibits that 75.7% of students agreed and 24.3% disagreed with the above-mentioned data. The standard deviation of the data is 1.500, Significance level is .135 and the mean score is 3.88 that show inclined towards the agreed response.

Conclusions

Formative assessment is very important in the field of education as it diagnose the weak areas of teaching and learning and improves the learning, that is why formative assessment is also known as assessment for learning. It is used for structural evaluation (Harlen, 2007). Formative Assessment also known as informal Assessment is a diagnostic testing is a most common type of Assessment. Formative Assessment is mostly done by a teacher in classroom while teaching his lesson. It is informal in nature, means that it can be done at any time without prior notice it may be done during a lesson while a teacher is teaching a topic and he assess a student that how much he got the idea of topic by asking different questions or by asking a student to come on board and solve a question. This type of Assessment is very helpful to improve teaching and learning process (Blok et al., 2008). In this study accumulative mean scores of formative assessment is 4.01 which shows that most of the respondents are agreed that universities teachers are using formative assessment while teaching. And formative assessment is more significant that placement as its accumulative mean scores suggests.

Discussion

Most of the teachers elaborated that written test is an effective tool to assess the student's performance. More than half of the teachers confirmed that short written quizzes help to assess student's knowledge and understanding. Most of the teachers affirmed that MCQs is the best tool to assess the gaps in teaching .Majority of the teachers affirmed that written test result to enhance learning level of students. More than half of the teachers affirmed that open ended questions can be used to diagnosis the knowledge and understanding periodically. Majority of the teachers confirmed learners' efficiency of learners through individual tasks .most of the teachers elaborated that formative assessment play vital role for student motivation and

improve student performance .More than half of the teachers affirmed that formative assessment is a colorful and varied practice which improves student's individual mistakes and academic achievement .Majority of the teachers elaborated that formative assessment gives enough time to plan students' academic tasks .

Recommendations

On the basis of findings and conclusions following recommendations are made, which are presented by researcher to bring improvement, novelty, creativity and effectiveness in assessment mechanism at university level.

- Proper trainings should be given to the teachers for the proper use of assessment at university level.
- Proper awareness should be given to the students according to assessment, so that they can be motivated
- Self-assessment awareness must be provided to the students so that they can assess their abilities.
- Teachers must use formative assessment properly as literature suggest it is assessment for learning, formative assessment is use to enhance the learning of students, it is observed that students feel boring and they feed up by assessment, so institutes have to conduct seminars for the awareness of assessment outcomes so that students take interest in assessment activities.

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