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Using Assessment for Effective Learning

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Abstract

Improving the quality of elementary education was one of the thrust areas under SSA Phase II. Assessment that supports student learning will do a lot of good in achieving the goal of enhanced learning achievement by children in elementary schools. In the context of student learning, assessment is considered as the process of collecting and recording information to reflect how well a student is learning. There have been several efforts in this direction. The major ones at the national level are the development of the Continuous and Comprehensive Evaluation (CCE) package at the Primary and Upper Primary Levels, the formulation of learning outcomes for every class, and the development of CCE Guidelines up to the Elementary Level. In an educational context, we talk of three types of assessment — assessment for learning (formative assessment), assessment of learning (summative assessment), and assessment as learning (self-assessment). When the purpose of assessment is primarily to improve learning by children, and teachers adjust their teaching-learning styles and pedagogy, it is generally understood as 'formative assessment' or 'assessment for learning'. When the work of the children is evaluated to declare what they learned in a specific period, the activity is described as 'a summative assessment or 'assessment of learning'. However, when children are motivated and they are involved in assessing their learning as well as learning by their peers, this kind of assessment is called 'self-assessment' or 'assessment as learning'. This article discusses how to use technology to make these assessments useful, effective, and relevant.

Introduction

In this era of technology it is important to use the benefits of technology, for assessing children and providing appropriate feedback to different stakeholders as per their needs and

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areas of action. If we look at the system of education, we find that schools are at the grass roots level which are supported and monitored by cluster and block level officers. Since improving learning is a constant effort it is always helpful to track the achievement of children to see the effect of interventions and efforts, whether these are teacher-mediated or otherwise, to improve a child's learning.

Information and Communication Technology (ICT) can be of great use in the documentation of student learning as well as the recording of classroom teaching-learning strategies of teachers. Such practices can always be shared to improve the quality of classroom processes and constructive use of documentation done for student learning. Peer assessment and self assessment by students can also be promoted in interesting ways using appropriate technology. The technology can also help customise the presentation of assessment information according to the needs of different users including children, parents, teachers, school leaders, and policy administrators.

The Learning Triangle

Teaching, learning and assessment are the vertices of the learning triangle which signifies that these are parts of the whole and are strongly connected. Assessment should be such that it can serve as a meaningful tool influencing the quality of classroom processes and outcomes. Making assessment integral to classroom processes is a much-needed strategy to achieve better outcomes of learning. Learner-centred teaching should also use assessment as a part of the learning process.

Assessment refers to collecting information on the progress of students' learning using a variety of procedures. The process and purpose of assessment should not be limited to assigning grades or giving away marks, rather the focus should be to include constructive feedback for learners' improvement.

The National Curriculum Framework (NCF) 2005 suggested a major shift in the approach towards teaching and learning. It suggested a learner-centred approach and that the process of assessment should aim at identifying and nurturing the learning capabilities of the learner. Such a shift in approach requires a major change in assessment tools and techniques. In an active and participatory classroom, students should be encouraged to become active and autonomous learners. The teacher should carefully facilitate and provide appropriate scaffolding to all the students as per their needs and potentials as far as possible. Such a warm environment in the classroom can help them develop critical thinking and problem solving attitudes. Group work and peer work are often assigned as a strategy to develop habits of sharing of ideas. The discussion in the group helps in conceptual clarity and wholesome learning.

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Information and Communication Technology (ICT) for Education

The use of ICT in schools provides an opportunity for teachers to reform their practices and offer students improved educational content and more effective teaching and learning methods. There is no point of difference among practitioners and academics that integration of ICT in pedagogy and assessment has a positive impact on the classroom learning environment. It can provide students and teachers with new tools to improve and enhance the quality of teaching and learning. In many cases, tools of ICT are largely used to increase access to different learning resources to provide choices to the learners for using these according to their interests and needs. In our country various ICT tools have been employed over sometime to improve the quality as well as management of primary and elementary education. These include radio, satellite-based interactive meetings, audio and video conferencing and the internet. No doubt there are variations in their use by different states and other users across the country. It is also important to note that the use of ICT in education can also cause damage, if not used wisely and carefully. It is useful for extending the spread of education to difficult areas and reaching out to children in difficult circumstances and empowering teachers. Some advantages of ICT for primary classes can be seen in following forms:

- Images in the form of diagrams, and flow charts, can be used for concept building of students.
- The use of videos brings live experiences to the classroom.
- Teaching-learning through activities and the use of ICT can make learning joyful, which can have a positive impact on student attendance and participation.

Repetition and reinforcement of concepts also become easy on the part of the teacher with the help of ICT.

The commonly cited limitations of integrating ICT in teaching-learning are that setting up the devices is too expensive, sometimes teachers show resistance and feel hesitant in using technology and there is a lack of mentorship and hand-holding for developing confidence in teachers towards the use of technology.

Purpose of Assessment and Use of Assessment Results

All types of assessments are designed to serve some purpose, whether to diagnose learning difficulties, to assess

the regular progress of children toward achieving learning outcomes (LOs) or to determine whether a school in a district has met its targets or not. One type of assessment cannot serve all of the purposes adequately. The major types of assessment that are used in the classroom include formative assessment, self-assessment, and summative assessment. Formative assessment involves the teacher providing constructive feedback to students to promote their learning. Self-assessment involves students in monitoring their progress toward the learning outcomes as well as determining what efforts are needed on their part to achieve the targets or the learning outcomes. Summative assessment reveals a student's performance at the end of a certain period or class and it is usually indicated in the form of grades or marks. However, to make summative assessment truly valuable, formative assessment and self-assessment must be integrated into the classroom processes. All these types of assessments provide the opportunity for enhancing the quality of learning experiences for every learner in the classroom.

Standardised assessments such as achievement surveys are designed to provide information on the average performance of children in districts and schools. However, for classroom teachers, that information is incomplete and inadequate. She cannot make her classroom plans based on these results. To get the right kind of information, she would need the results, at regular intervals, obtained through the consistent use of classroom-based assessments.

Assessment information can be used in multiple ways. It can facilitate judgements on the quality of most elements of our education system. Earlier test and examination results were predominantly meant to serve as an indicator of what and how well a student knew and understood a subject. But now assessment data is used in multiple ways. In such cases, both teachers and students must be aware of the why assessment is taking place. In the same way it is also important that teachers discuss the assessment results and their implications with the students and make future classroom plans.

The Case for ICT Based Assessment

In this era of technology it is almost impossible to imagine the future learning environments that are not supported, in one way or the other, by Information and Communication Technologies (ICT). The current generation is often seen as a digitally oriented generation and as such ICT has a lot of potential to affect the teaching-learning process today and in the future. The technology has a lot of potential in changing and modernising the education systems and ways of learning and assessment. We notice different types of ICT usage in our environment such as computer assisted learning,

web-learning, computer-classes, online training, distance education, e-learning, virtual learning, digital training, etc.

Sindhu, S in the review titled 'ICT Based Assessment in Schools: Teachers' Attitude' took a broad view on ICT and learning. Consequently, its impact on the learning process was considered not only in the form of traditional learning outcomes but also in the use of ICT by teachers, and the organisational use of ICT by education and training institutions. Thus the impact of ICT on learning can be read in different ways. There were two objectives of the review, viz., to study the attitude of teachers towards ICT based assessment in schools and to study whether there exists a significant difference in the attitude of teachers towards ICT based assessment in schools, based on gender. The review was conducted by adopting a normative survey method for the study and the sample comprised 50 high school teachers from the Kottayam district. The tools used were a personal data sheet and a scale of attitude towards ICT based assessment in schools. The findings were that 64 per cent of the teachers showed a favourable attitude towards ICT based assessment in schools while 24 per cent of the teachers remained undecided and 12 per cent of the teachers showed an unfavourable attitude. Another revelation was that male teachers showed a more favourable attitude towards ICT based assessment in schools.

What Assessment Approaches are Found in the Classroom?

ICT supported techniques to make pedagogy and assessment effective

Formative assessment techniques are used to monitor student learning during the teaching-learning process. The results obtained are used to identify areas where students are struggling so that teachers can adjust their teaching and students can adjust their learning. Also it can suggest to teachers if interventions are immediately needed for some students. These are the frequent assessments that happen often in the classroom. Techniques that are used for formative assessment are formal as well as informal. The informal techniques may be written reflections, quizzes and surveys, checks for understanding. Generally at the end of a class or after completing an out-of-class activity, the teacher may ask some basic questions such as 'What was the most important thing you learned today?', 'Did you encounter any confusing topics today?', 'What did you find difficult in today's discussions?', etc. The students may speak or write on a piece of paper or make small presentations using technology. Such methods can provide important feedback to teachers. The teacher may also record the discussion in audio or some small video recording may also be done to help the teacher recall these discussions later on while planning further lesson plans.

The formal techniques for formative assessment could be in-class activities, quizzes, online assignments, etc. In a classroom, students work in pairs or small groups to solve problems. Such opportunities create space for powerful peer-to-peer learning and rich class discussions. Quizzes help teachers to know about students' prior knowledge, assess progress midway through a unit, create friendly in-class competition and review learning before the test. Students also learn a lot through quiz activities. Using a quiz to begin the lesson is also a fun way to assess what students already know, clear up misconceptions, and assess how much they would learn. The teacher can take the help of students to record the points of different teams or students and a data base can be created which may be discussed with the students to encourage them better in the future. Teachers should also try to organise some 'wrapping-up' activities, in the form of reflective questions which may help students develop skills to monitor their learning. These are some examples of formative assessment.

Summative assessment techniques evaluate student learning. These are the assessments that occur at the end of an instructional unit or course and are expected to measure the extent to which students have achieved the desired learning outcomes. We generally use written exam inations, projects, portfolios, presentations, etc. The tests should include several types of questions – short answer, multiple-choice, etc to allow students to fully demonstrate what they know. The use of ICT can be of great help here as teachers may create a question bank with a variety of questions from different units. They can optimally use such a question bank for testing students during or at the end of the academic session. The performance of students and their record can be managed effectively using ICT supported means and methods. Such data will not only help the teacher but also other stakeholders.

Data on student opinions, attitudes, behaviours or confidence in understanding can be gathered either during class or outside of class using Google Forms. The data analysis can be done instantly and teachers can show the immediate results to students. Such efforts can make students more active and participative in the classroom and at the same time teacher can also make changes in the future course of action, if it is felt after analysis. Audio-visual mediums can be used to understand and illustrate student engagement with the material as well as their prior knowledge, misconceptions, and comprehension.

Papers, projects, and presentations give students a chance to go deeper with the material to put the knowledge they have acquired to use or create something new from it. The use of ICT can be significant and handy here. Creating a portfolio at the end of a course can be a powerful way for

students to see the progress they have made. Instead of keeping students' work in the form of papers, portfolios can also include reflections on their learning in the form of diagrams or other visual ways which help to quickly decide on about the assessment. The students must be involved while deciding what should be kept in their portfolio. Photographs of children while they are engaged in activities can sometimes make them motivated learners. The beauty of ICT is that it helps children to see themselves and their performance. This can have a good impact on students' habit formation and personality development.

Over some time several Learning Management Systems have been innovated, which allow students to solve problems or answer questions along the way. This can provide useful information on student responses and class performance which can be utilised by the teacher to modify her instruction and for other purposes according to the particular learning needs.

Conclusion

The usages of ICT and its impact on educational performance may be influenced by a several factors such as attitude and exposure of students and teachers to ICT, curriculum and teaching practices, infrastructure and school environment, etc., To make assessment useful and worthwhile for the learners, they need to be empowered through training and mentoring in the usage of ICT for assessment. They should be given periodic training in the form of seminars, workshops, etc. It is high time to realise that the ICT must be harnessed to make classrooms more interactive, and attractive. Teachers should also be empowered in the use of technology through hands on experience in Continuous Professional Development (CPD) Programmes. The advantages and disadvantages of ICT must be seen in perspective and carefully balanced in the best interest of children.

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