

# EMBEDDING TECHNOLOGY IN ASSESSMENT

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Over the years education sector has seen the changes in education delivery from classrooms with blackboard and chalk to 'Smart Class rooms' with LCD's and computers. Since education delivery has embedded the technology, it calls for the same in assessment also.

The term assessment is generally used to refer to' all activities teachers use to help students learn and to gauge student progress. It is integral part of learning. It is used as a tool to measure the learning in a stipulated time period.

Assessment of learners is not a new concept in modern education system rather it was prevalent at all phases of human development. Different methods were adopted by the teachers to appraise the learners. In olden days students used to spend a part of their life with their mentors (gurus). In this scenario the mentors knew each and every aspect of the student's personality and disciples were constantly under the guidance of mentors and were given feedback regularly to evolve and grow. This kind of education sharpened the multifaceted personality of the disciples. With the passage of time and formalization of education sector, the focus is till the same - to develop the overall personality of the learner. Assessments being the yard stick to measure learner's performance. Before we look into how technology assists in assessment, let us see the various types of assessments in the schools these days:

- ❑ Summative and Formative:
- ❑ Objective and Subjective
- ❑ Formal and Informal
- ❑ Internal and External

Generally it is assumed that the use of technology in assessment is restricted to taking online examination or generating grades on the marks scored and printing the report cards. But technology can play more intense role in the whole process of education.

Following are the ways in which computer software can be used to assist assessment:

Computer aided assessment

It is a term that covers all forms of assessment, whether Summative (Le. tests that will contribute to formal qualifications) or Formative (Le. tests that promote learning but are not part of a course's marking delivered with the help of computers.

## Question Paper Generator

Process of Summative assessment starts with designing of the question paper. A right blend of all types of questions is required to make a good question paper which should have the questions of all difficulty levels.

Computer aided assessment can aid Summative assessment with the help of question paper generators. These are special kind of software which has the capability of storing the questions on the basis of following, topic wise:

- ☐ Level of difficulty
- ☐ Marks allocated
- ☐ Nature of question - analytical, logical, understanding

As part of regular practice, evaluators or teachers can enter the questions through out the year on the topics taught along with the details like marks, level of difficulty, nature of question in the software. This software will act like a question bank to generate randomly selected questions based on the specifications given by the evaluators.

Teachers will have to enter the following details and paper can be generated automatically:

- ☐ Topics to be included
- ☐ Marks and type of questions from each topic

Advantages:

- ☐ Time saved in designing question paper.
- ☐ Contains questions according to the design specified.
- ☐ Secrecy regarding question paper can be maintained till examination is conducted.

## Computer based Examination

One of the most common forms of computer aided assessment is online quizzes or exams. The exams with multiple choices are more suitable for this kind of assessment. This can be conducted online or on Local Area Network.

Computer based examinations are used in two situations:

Practice: This type of test is initiated by the student to check the understanding of a particular topic. Generally all e learning software have this feature to review the topic.

E-Learning software integrates lessons as well as assessments on the various topics. Students are given their logins to access the software. As and when student logs in and starts learning process by learning or reading the lesson; the details are recorded in the system. This keep tracks of the details when student has logged in and how much time student has spent on a particular topic.

Similarly there are assessments after every topic. As part of the learning process students are supposed to take assessments also. Software keep tracks of the level of understanding of the students according to answers given by the students.

Some of the features which e-Learning software demonstrates are:

- ☒ Detailed reports are generated after each assessment.
- ☒ Comparative reports from last assessments can be generated
- ☒ Progress of the students can be emailed to parents.

Formal examination: Online examination can be the part of formal examination also. In addition to generating question paper according to new Computer Based Examination software can directly store the marks scored in these tests in the students database.

After the exam, the detailed report can be printed stating the statistics of the examination like average score, weakness in a particular section or in particular type of questions. Formal online exam in actions can be the eco friendly way of conducting the formal examinations. As the process of examination student / class can book a slot for examination. As assesses logs in by specifying details like login id and the name of exam to be given, test generator automatically generates the exam according to specifications given by the evaluators (refer question paper generator). Students are required to key in the answers and just after the exam score sheet stating the score and analysis can be printed.. Advantages:

- ☒ Reduces use of paper and stationary
- ☒ Reduces stress for students as flexibility of conducting the exam at any time
- ☒ Results will be declared on the spot and will be computer generated so no biasness.

### Portfolio Management

One form of authentic assessment being widely adapted in schools today is portfolio assessment. It can be defined as "a container that holds evidence of an individual's skills, ideas, interests, and accomplishments./l Long-term portfolios provide a more accurate picture of

students' specific achievements and progress and the areas of needed attention. Portfolios of students can be maintained with the help of computers also.

An electronic portfolio, also known as an portfolio or digital portfolio, is a collection of electronic evidence assembled and managed usually on the Web or on Local area network. An e-portfolio can be seen as a type of learning record that provides actual evidence of achievement. It can be seen as reflection of students owns continuous personal development rather than just a store of data.

Such portfolios can be maintained for the students for their entire schooling years. Same portfolio can be forwarded to next class teachers for the further maintenance.

Such facility will allow students to enter their accomplishments in terms of pictures and observations in the software stored on web or Local Network. In addition, software also allows teachers to give their feedback on the student's accomplishments. This process can be the part of informal or formative assessment of the students.

Results of a comparative research between paper based portfolios and electronic portfolios in the same setting suggests, use of an electronic portfolio leads to better learning outcomes.

Advantages:

- ☒ Students can reflect on their own their personal developments
- ☒ A structured assessment system for specific systems
- ☒ Art work of students can be shared with outside world.

Report Cards

The end of assessment cycle usually ends with making of report cards. Use of technology can be seen in this phase of assessment as:

Making of report card:

The evaluators will enter the marks scored by the students in each subject in the software and automatically all the calculations like percentages and grades will be calculated by the software. The software has the option to print the report cards also. These type of software reduces time taken by the evaluators to make the report cards and also reduces the chance or errors.

Publishing the results

After making the result same can be posted on web. The same can be seen by the parents or students after being authenticated by the server. With the integration of mobile computing with the web technologies the result of examination can be send as SMS to the parents.

## Integration with Continuous and comprehensive Evaluation

With the release of new guidelines of CBSE regarding class IX and X examinations, role of ICT has grown manifold. Besides the assessment of academic subjects there are many other aspects of child's personality which needs to be assessed upon. As suggested by the board that the evaluation cannot be done by the class teacher or subject teacher alone. All the evaluators have to agree on the common grade for the student. This is the phase where ICT can be of great help. All the evaluators have to mark the students on each descriptive indicator on the scale of 1–5. The same can be recorded in the software. (Reason for the rating can be logged in Logbook or Student's Port folio). After the entries from all the evaluators, the software can calculate the grade on the basis of entries made by the evaluators.

### Advantages

- ☐ Teachers can concentrate on child's traits.
- ☐ No section of biasness in the whole process

To implement ICT based techniques in assessment procedures of our school, software used can be purchased from authorized company or can be developed by in house software development team. Whatever be the choice, following points can be considered before making a choice of software:

- ☐ Software should be flexible to adapt to the changes in assessment policy of school.
- ☐ Operations should be user friendly and easy to use.
- ☐ Various reporting tools should be available to generate reports required by different people in the organization.
- ☐ Flexibility of creating new tailor made reports should be available.
- ☐ Response time to changes required in software should be less.

### Bibliography:

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- ☐ [www.testnation.net](http://www.testnation.net)
- ☐ [www.eportfolio.org](http://www.eportfolio.org)

🔗 [Dr. Helen Barnett's blog on e portfolios](#)

🔗 [Teachers Manual on Continuous and Comprehensive Assessment](#)