ALTERNATIVE ASSESSMENT: ROLE OF ICT

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**Abstract**

If education system sets its target for students to be able to think critically, solve problems individually and collectively, be creative, instructional and assessment processes must undergo a paradigm shift as suggested in National Curriculum Framework 2005. Critics of current assessment practices argue that the goal should be to have students who can create, reflect, solve problems, collect and use information, and formulate interesting and worthwhile questions. Thus, it is argued, our assessments - whether they are developed by teachers, writers of textbooks, or large corporations - must measure the extent to which students have mastered these types of knowledge and skills. Most of the criticism has been directed at the widespread use of achievement tests in our educational institutions. Many of our assessment practices place too much emphasis on assessing content and give too little attention to the skills and applications. Critiques point that such evaluation fails to assess learner's level of meta-cognition, creativity and other higher order skills which are mostly the prerequisite of real life situations, work employment, personal and professional growth. It is argued that we must no longer treat assessment as fundamentally separate from instruction. If curriculum, instruction, and assessment are integrated, the assessment itself becomes a valuable learning experience. Learning and evaluation activities are blended into a holistic act/task, which demands learners not to select but design and create the task. In this changing scenario, alternative technology mediated procedures such as e-portfolio and rubrics are the need of hour.

In view of this, here an attempt has been made to provide an alternative paradigm of assessment from constructivist perspective. It first highlights the criticisms of prevailing achievement tests and presents some ideas of preparing portfolio and performance task from constructivist perspectives and assessing the performance by creating rubrics.

**CONCEPTUAL FRAMEWORK**

Instructional processes provide the sufficient condition for quality education. Our instructional processes and practices are characterized largely by lectures where students are passive listeners. Such instructional processes contribute at best to lower order cognition, memorization and fragile learning; together, they make a grand nexus for large-scale failing in examination. Students lack problem-solving ability, higher order thinking and cognition, and creativity. If the education system sets its target for students to be able to think critically, solve problems individually and collectively, be creative, instructional processes must undergo a paradigm shift. Instructional processes must bring students at the centre of stage where they primarily learn to learn through peer interaction, problem-solving, experiential learning, etc. In this new instructional scenario, teachers will be facilitators of learning. Research as a tool for learning is quite common all over the world; introduced even at the pre-primary stage. Indeed, by the time students are in the 9th and 10th standards they should become researchers to be able to crack problems, contemplate solutions, explore and experiments alternative and creative ways of problem-solving instructional processes must be constructivist in its approach. Through constructivism, students will learn to construct their learning according to their own worldview that unfolds over the years of schooling. It is this learning to construct learning that will hold them into the adult life at work and later.

Conventionally, education system, particularly school education is guided and controlled by concern for results in examination irrespective of the quality of learning --whether fragile or sustainable. The competition, though artificial, for securing percentage of marks in the final examination creates unusual stress in the students leading often to mental break down and suicides. This must change. Change in the mechanics of examination will be too simplistic a solution, amounting to treating the symptoms, not the disease itself. Examination-stress is directly related to facing the challenge of examination with 'fragile' learning due to memorizing huge stock of information. In order to manage the stress factor in examination it will be necessary to ensure sustainable learning.

Yet, it will be necessary to reconstruct and redesign examination system with attributes like flexibility where a student can achieve mastery learning in a flexible time frame and accumulate credits; eliminating power tests (fixed duration), adopt continuous and comprehensive evaluation. The practice of mark sheets indicating marks in certain subjects must be replaced by a portfolio that would accommodate a student's performance in a variety of domains like life skills, academic/nonacademic and vocational subjects, personal qualities, etc. The portfolio should be comprehensive, revealing of the total being of the student.

Standardized or teacher made achievement tests take relatively little time to administer and are inexpensive. In addition, the results are simple to report and understand. Often a single score, such as a percentile rank, standard score, or grade equivalent is reported for each student, and aggregate scores are reported for a classroom, school, or school district.

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Finally, and very significantly, standardized achievement tests are promoted as objective measures of achievement, meaning that the results are not affected by the personal values or biases of the person who scores the test.

Standardized achievement tests are promoted as scientifically-developed instruments which are valid and reliable measures of what a student knows and is able to do. They originated at a time when it seemed both necessary and logical to teach students a given body of subject matter content. Furthermore, many learning theorists believed that teaching and learning were most effective when concepts and ideas were broken into smaller and smaller components. Standardized achievement tests reflected these assumptions and practices, for they were specific to each discipline and typically used a set of multiple choice items to sample the scope of a particular discipline. Advocates of standardized testing assumed that a student who had a command of the pieces (e.g., specific knowledge and facts) also would have a good understanding of the larger content domain.

As our focus has been shifted from behaviourist to constructivist approach and our National Curriculum Framework, 2005 has put paramount importance to this new paradigm of assessment from constructivist perspectives, there is an urgent need of bringing about a change in the system of assessment system.

**CURRENT PRACTICES OF EVALUATION**

Our current practice of evaluation of pupil's learning outcomes both in school and in higher education usually employ teacher made, standardized and performance tests. Number of issues relating to the irrelevance of such tests, malpractices and psychosocial hazards have raised questions on the validity of such assessment procedures. The common charges labeled against such evaluation approaches are:

- **Lipman (1)** and many others maintain that standardized achievement tests using a multiple choice format are not effective in measuring complex problem solving skills, divergent thinking, and collaborative efforts among students. They also are ineffective in measuring communication skills. In a similar manner, Resnick and Resnick (2) maintain that standardized tests continue to feature short, choppy, superficial reading; searching for information in bits; passively recognizing errors (rather than producing corrections); and filling in preselected responses to other pupil's questions. The responses must be fast and non-reflective. Judgment, interpretation, and thoughtful inference are all outside test boundaries.

- **Archbald and Newmann (3)** challenge the assumption that a student who performs well on a standardized achievement test knows more than his or her peers, has higher order thinking skills, or is more disciplined. They point out that although performance on standardized achievement tests correlates moderately with high school grade point averages (approximately .5), scores on standardized achievement tests do not correlate well with first year college performance or performance of tasks that require disciplined inquiry, integration of knowledge, or the ability to deal with new and unusual problems.

- **Barth and Mitchell (4)** maintain that multiple-choice, norm-referenced testing "...corrupts teaching because it is essentially passive, students select, they do not construct, an answer" (p. 14). Further, they charge that norm-referenced, standardized achievement tests give the impression that answers are always right or wrong. Finally, they assert that the use of norm-referenced, standardized achievement tests encourages memorization, rather than understanding, and ultimately "... trivializes schooling, all the effort for a few bubbles on a scantron sheet..." (p. 15).

- The National Commission on Testing and Public Policy (5) notes, "Current testing, predominantly multiple choice in format, is over-relied upon, lacks adequate public accountability, sometimes leads to unfairness in the allocation of opportunities, and too often undermines vital social policies" (p. ix).

- Mislevy (6) makes the following observation: Educational measurement faces a crisis today that would appear to threaten its very foundations. The essential problem is that the view of human abilities implicit in standard test theory... is incompatible with the view rapidly emerging from cognitive and educational psychology. Learners increase their competency not by simply accumulating new facts and skills, but by reconfiguring their knowledge structures, by automating procedures and chunking information to reduce memory loads, and by developing strategies and models that tell them when and how facts and skills are relevant. (p. 1).

- Wiggins (7) argues that the standardized achievement test is "disrespectful because mass testing as we know it treats students as objects - as if their education and thought processes were similar and if the reasons for their answers were irrelevant... To gauge understanding, we must explore a student's answers; there must be some possibility of dialogue between the assessor and the assessed to insure that the student is fully examined... Consider too, that the bell-shaped curve is the intended result in designing a means of scoring a test, not some coincidental statistical result of a mass testing. Norm-referenced tests, be they locally or nationally normed, operate under the assumption that teachers have no effect - or only a random effect - on students (p. 708).

- The American Association of School Administrators in 1989 (8) expressed serious reservations about the heavy reliance on standardized achievement tests as the single or most important measure of how well we are doing in education. They argue, for example, that most standardized achievement tests measure traditional basic
skills and are not particularly effective in measuring the higher order thinking skills which are crucial in the present century.

Though this current practice of evaluation was challenged almost two decades ago, we still continue to follow the same practice of evaluation in our educational institutions. It is high time to think of introducing alternative assessment in our educational institutions.

ALTERNATIVE ASSESSMENT

Alternative assessment procedures are based upon constructivist principle of knowledge construction. Fundamental focus of such procedures lies on learner's ability for creative expression and proficiency in real life task and activities. Learners have to carry out task which are collaboratively decided by learners, instructors and the institution; and total artifacts of pupil's performance are subjectively assessed by learners, peers and instructors. The task and performance are show cased for every learners and the team which act as motivators to learn to excellence. Here the task, the criteria, performance condition and the indicators are collaboratively defined and designed. This makes the learners understand from the beginning what they are expected of in a definite context of learning. The following alternative assessment procedures are discussed below.

PORTFOLIO ASSESSMENT

Invariably, proponents of performance assessment also advocate the use of student portfolios. In doing so, they also remind us that a portfolio is more than a folder stuffed with student papers, video tapes, progress reports, or related materials. It must be a purposeful collection of student work that tells the story of a student's efforts, progress, or achievement in a given area over a period of time. If it is to be useful, specific design criteria also must be used to create and maintain a portfolio system.

Typically, proponents of portfolios suggest two reasons for their use. The first reason reflects dissatisfaction with the kind of information typically provided to students, parents, teachers, and members of the community about what students have learned or are able to do. As examples, we are reminded that traditional grading systems ("A's", "B's", etc.) or test scores (percentile scores or percent correct) tell us almost nothing about what a student has learned or is able to do.

Second, it is argued that a well-designed portfolio system, which requires students to participate in the selection process and to think about their work, can accomplish several important purposes: it can motivate students; it can provide explicit examples to parents, teachers, and others of what students know and are able to do; it allows students to chart their growth over time and to self-assess their progress; and, it encourages students to engage in self-reflection.

Frazier and Paulson (9) argue that the primary worth of portfolios is that they allow students the opportunity to evaluate their work. Further, "...portfolio assessment offers students a way to take charge of their learning; it also encourages ownership, pride, and high self-esteem" (p. 64). Vavrus (10) notes that several decisions must be addressed prior to establishing a portfolio system. The decisions, with some of her recommendations, follow.

1. What will it look like? There must be a physical and a conceptual structure. "The physical structure refers to the actual arrangement of documents used to demonstrate student progress. The conceptual structure refers to your underlying goals for student learning" (p. 50).

2. What goes in? In order to make this decision, numerous other questions need to be addressed: Who is the intended audience for the portfolios? Parents? Administrators? Other teachers? What will this audience want to know about student learning? Will the selected documents show aspects of student growth that test scores don't capture? ... What kinds of evidence will best show student progress toward your identified learning goals? Will the portfolio contain best work only, a progressive record of student growth, or both? Will the portfolio include more than finished pieces: for example, ideas, sketches, and revisions? (p. 50).

3. How and when to select? Decisions need to be made as to when documents go in and come out during the school year. It is recommended that specific times during the year be identified for selecting student work. In addition, student participation in the selection process is critical, for this allows students to reflect on their work and monitor their progress. It also is suggested that materials which are included be dated and include an explanation for their inclusion.

4. Evaluating Portfolios. If portfolios are to be evaluated, the evaluation standards should be established before the portfolio system is established. As for the evaluation itself, "... portfolios can be evaluated in terms of standards of excellence or on growth demonstrated within an individual portfolio, rather than on comparisons made among different students' work" (p. 53).

5. Passing Portfolios on. The final decision item has to do with what is done with portfolios at the end of a semester or school year. They could, of course, be turned over to students. However, there are advantages to keeping portfolios over a long period of time and sharing them with other teachers. "Portfolios give you opportunities to promote continuity in your students' educations and to collaborate with other teachers and your students in the process. By passing a portfolio on, you can share important information with the student's next teacher" (p. 53). Wolf Dennie Palmer (11) also feels that portfolios should be kept for long periods of time (several years), and that they should act as a type of "passport" as a student moves from one level of instruction to another.
Although students are encouraged to be creative and unique, the portfolio has several basic requirements regarding its form and content. For example, it must be well written, with a title page, table of contents, and specific headings. Students also are encouraged to include photographs, charts, drawings, and appendices along with samples of their work.

The portfolio is a collection rather than a single piece of work. Beyond this an educational portfolio can take many forms, have various purposes and, for this last reason, contain many different types of material. Despite the title of this piece and much literature on the subject which focused on the use of the educational portfolio for authentic assessment purposes. Certain portfolios, for instance, may contain a mixture of authentic and relatively conventional assessment materials.

Portfolios have been unquestioningly used for formative and summative assessment purposes within certain courses of study, such as, writing, art, design and multimedia as well as being used for formative purposes in a range of subject areas from primary through to higher education. Portfolios are currently receiving the most attention in the context of constructivist learning. This encourages the accreditation of informal and non-formal learning, the promotion of lifelong learning and the integration of all the channels of education.

**BENEFITS OF PORTFOLIOS**

Portfolios can feature multiple examples of work. Be it a student, a faculty or a institutional portfolio,

- Portfolios can be context rich. The portfolio can provide the kind of thick description that helps user understand an outcome and the reasons for the outcome.
- Portfolios can offer opportunities for selection and self-assessment. The process of completing a portfolio necessarily involves its creator in making self-reflective choices with reference to quality criteria.
- Portfolios can offer a look at development over time. Because portfolios can be compiled over time they can reflect learning achieved over a period of time, rather than as a once-off product, as tends to be the case with summative assessment.

Although the above points apply equally to conventional paper-based portfolios, technology can provide a more effective, economical, transparent, user-friendly and a better way of achieving these potential benefits.

**e-PORTFOLIO**

Electronic portfolios are gaining recognition as a valuable tool for learners, instructors, and academic organizations. E-portfolios can best be viewed as a reactionary response to fundamental shifts in learning, teaching, technology, and learner needs in a climate where learning is no longer perceived as confined to formal education.

**Definition**

E-portfolios and webfolios are digital enactments of portfolios. Some authors have drawn distinctions between terms, defining e-portfolios as information that resides on a CD ROM or other physical media, and webfolios as web-based portfolio. This paper treats e-portfolios as an umbrella concept that includes webfolios.

Definitions of e-portfolios vary, but generally include digital resource of personal artifacts, instructor comments, demonstrating growth, allowing for flexible expression (i.e. customized folders and site areas to meet the skill requirements of a particular job), and permitting access to varied interested parties (parents, potential employers, fellow learners, and instructors). “Portfolios are collections of work designed for a specific objective—that is, to provide a record of accomplishments” (National Learning Infrastructure Initiative (12). “An e-portfolio is a web-based information management system that uses electronic media and services. The learner builds and maintains a digital repository of artifacts, which they can use to demonstrate competence and reflect on their learning.”(13)

Portfolio implementations can best be viewed as a continuum. Portfolios are driven by the intended task: assessment, professional/personal development, learning portfolio, or group portfolio. The expressions of learning in an e-portfolio can range from simple blogs to enterprise-level implementations. The intended task of the portfolio is the ultimate determinant of value. For certain courses or programs, a blog may be all that is required. Regardless of the format selected, each e-portfolio effort should encourage learners to develop the skills to continue building their own personal portfolio as a life-long learning tool.

**Influencing Factors**

The growth of e-portfolios is fuelled by three broad factors: the dynamics of functioning in a knowledge economy, the changing nature of learning, and the changing needs of the learner.

In a knowledge economy, the most valuable resource is obviously knowledge. A person's ability to express his/her knowledge effectively (through artifacts, examples of work, progression of growth, and instructor comments) improves opportunities for employment and access to education. A portfolio permits the learner to display competence, outside of a static transcript. The richness of an individual's learning can be portrayed through multiple media. For example, using an actual website to communicate web development skills is far more effective than simply listing a certificate on a resume.

Learning is also changing. The traditional lecture model is giving way to alternative approaches like Problem Based Learning, Competency Based Learning and Assessment. In some instances, even the very model of “a course” is experiencing pressure as organizations recognize the significance of learning that happens in communities, on the job, and from personal knowledge networks. Learning is now a process of living. Formal education is only a stage of learning. Learning continues in virtually all aspects of life.
Schools assign grades to demonstrate competency. Learning through life experiences creates artifacts instead. The ability to include these is an important motivation for e-portfolio development.

The needs of learners are being recognized, especially in light of the social impact of technology. Many learners entering higher education are technically proficient. They are used to the online domain. Brown (2002) describes young learners as multi-processors who think in hyperlinked fashion (not linear), and are comfortable with various media. E-portfolios may be as familiar to many of today's learners as writing pads were to previous generations.

**Benefits and Uses**

The main participants of the e-portfolio development process are: learners, instructors, and institutions. The end-users of e-portfolios are: prospective employers, instructors (for assessment), parents, and award granting agencies.

E-portfolios offer many benefits for **learners** as they seek to create and reflect on life experiences.

- Personal knowledge management
- History of development and growth
- Planning/goal setting tool
- Assist learners in making connections between learning experiences (this may include formal and informal learning).
- Provide the meta-cognitive elements needed to assist learners in planning future learning needs based on previous successes and failures.
- Personal control of learning history (as compared to organizations controlling learner history).

**Faculty** members also benefit from the use of e-portfolios:

- Means to share content with others faculty
- Move to more authentic assessment (as opposed to testing)
- Preparing learners for life-long learning
- Create an assessment-trail that is centralized and under learner control

**Institutions** also experience direct value in initiating e-portfolio use in learning:

- Providing value for learners by allowing personal control
- Contribute to the development of a more permanent role in the lives of learners (i.e. education is not viewed as a 2-4 year relationship, but rather a life-long relationship)

**Components**

E-portfolios can include a wide range of information:

- Personal information
- Education history
- Recognition – awards and certificates
- Reflective comments
- Coursework – assignment, projects
- Instructor comments
- Previous employer comments
- Goals, plans
- Personal values and interests
- Presentations, papers
- Personal activities – volunteer work, professional development

All of the artifacts included should have a purpose – they should demonstrate a skill, an attribute, and learning acquired from experience.

**Process of e-portfolio Creation**

Varying processes exist to detail the portfolio creation process. One of the simpler models is based on four broad activities:

1. Collecting items for the portfolio
2. Selecting items best able to demonstrate competence
3. Reflecting on the items selecting in order to demonstrate learning derived from experiences
4. Connecting various aspects of life – personal, learning, work, and community

**Tools**

The infancy of the e-portfolio field is most evident in the limited toolset available for their creation. On a basic level, any tool that allows an individual to design and publish digital content could be used for e-portfolios. This need is currently being met through a variety of tools. Some examples:

- HTML editors – Dreamweaver, FrontPage
- Web Design tools – Flash, Authorware
- Blogs, wikis

**e-portfolio software:**

Mahara (http://mahara.org) is an open source e-portfolio system with a flexible display framework. Mahara is user centred environment that enables different views of an e-portfolio to be easily managed. Mahara also features a weblog, resume builder and social networking system, connecting users and creating online learner communities. Mahara includes a file repository which allows users to create folder and sub folders structures, upload multiple files quickly and efficiently, give each file a name and description, manage their file allocation quota.

A comprehensive blogging tool is provided in Mahara, where blogs and blog postings are considered Artifacts and may be added to a View. The blogging tool allows users to create blog posts using any editor, attach files to posts, embed images into postings, configure whether or not Comments may be received on their blog, and create draft postings for later publishing. Mahara provides a social networking facility.
where users can create and maintain a list of Friends within
the system. ePortfolio owners choose whether other users can
add them to their Friends list automatically or by request and
approval. An ePortfolio owner's friend's lists show those
Views to which they have been assigned access. Mahara
includes a resumé builder which allows users to create digital
CV's by entering information into a variety of optional fields
including: contact and personal information, employment and
education history, certifications, accreditations and awards,
books and publications, professional memberships, personal,
academic and work skills and personal, academic and career
goals

eElgg (http://elgg.net) is a fully featured electronic portfolio,
weblog and social networking system, connecting learners
and creating communities of learning”. Simple tools are
important in order to accelerate eportfolio adoption. Many of
the potential developers of eportfolios are not be technically
skilled. Eventually, the tools will need to become extremely
simple to use (templated in nature) –essentially “push-
button” simplicity. Tools like Elgg are examples of the simple
technology that is required to increase adoption of portfolios

The Open Source Portfolio Initiative (OSPI)
(http://www.theospi.org) is a community of individuals and
organizations collaborating on the development of the leading
non-proprietary, open source electronic portfolio software
available.”

Implementation

Implementing an institutional approach for eportfolios can be
difficult task. To be effective, the concept needs to be
embedded into the process of instruction and assessment. In
an ideal implementation (for an educational institution)
portfolios would possess the following characteristics:

- The portfolio needs to be viewed as a personal, learner-in-
  control tool. It is treated as central to the learning and
  assessment process.
- Learners need to be introduced to the concept, and
  instructed on how to use the system (both from a technical
  and from a usefulness perspective)
- Learners need to use the portfolio in completing their
  course work and assignments
- The portfolio needs to be used for assessment of learning
  objectives. Instructor feedback can be integrated back into
  the portfolio and treated as an artifact.
- Learners need to be encouraged to include personal life
  experiences, awards, non-academic activities, and other
  character/ learning revealing artifacts in their portfolio.
- Learners need to be involved in dialogue, debate,
  discussion on use of eportfolio.
- Faculty need to understand and promote the value of
  eportfolios
- Technical details need to be well managed, resulting in a
  simple, positive end user experience

PERFORMANCE TASK

The role of assessment in teaching happens to be a hot issue in
education today. This has led to an increasing interest in
“Performance-based education.” Performance-based
education poses a challenge for teachers to design instruction
that is task oriented. The trend is based on the premise that
learning needs to be connected to the lives of the students
through relevant tasks that focus on students' ability to use
their knowledge and skills in meaningful ways. In this case,
performance-based tasks require performance-based
assessments in which the actual student performance is
assessed through a product, such as a completed project or
work that demonstrates levels of task achievement. At times,
performance-based assessment has been used interchangeably with "authentic assessment" and "alternative
assessment." In all cases, performance-based assessment has
led to the use of a variety of alternative ways of evaluating
student progress ( journals, checklists, portfolios, projects,
rubrics, etc.) as compared to more traditional methods of
measurement (paper and pencil testing). The use of rubrics
will be explored as a viable means of evaluating students' performances.

STUDENT PERFORMANCE AND ASSESSMENT

Student performances can be defined as targeted tasks that
lead to a product or overall learning outcome. Products can
include a wide range of student works that target specific
skills. Some examples include communication skills such as
demonstrated in reading, writing, speaking, and listening, or
psychomotor skills requiring physical abilities to perform a
given task. Target tasks can also include behavior
expectations targeting complex tasks that students are
expected to achieve. Using rubrics is one way that teachers
can evaluate or assess student performance or proficiency in
any given task as it relates to a final product or learning
outcome. Thus, rubrics can provide valuable information
about the degree to which a student has achieved a defined
learning outcome based on specific criteria that defined the
framework for evaluation.

In its simplest terms, a performance assessment is one which
requires students to demonstrate that they have mastered
specific skills and competencies by performing or producing
something. Advocates of performance assessment call for
assessments of the following kind:

- Designing and carrying out experiments;
- Writing essays which require students to rethink, to
  integrate, or to apply information; working with other
  students to accomplish tasks;
- Demonstrating proficiency in using a piece of equipment or
  a technique;
- Building models;
- Developing, interpreting, and using maps;
- Making collections;
• Writing term papers, critiques, poems, or short stories; giving speeches; desi
• Playing musical instruments;
• Participating in oral examinations;
• Developing portfolios; and
developing athletic skills or routines, etc. In short, as the term is used in the literature, an authentic performance assessment requires students to demonstrate skills and competencies which realistically represent those needed for success in the daily lives of adults. Authentic tasks are worth repeating and practicing. They require students to apply what they know, not merely to recall or recognize information. Finally, authentic tasks are those which are judged by criteria or standards similar to those used to evaluate the efforts of adults.

Performance Criteria

Advocates of performance assessments maintain that every task must have performance criteria for at least two reasons: (1) the criteria define for students and others the type of behavior or attributes of a product which are expected, and (2) a well-defined scoring system allows the teacher, the students, and others to evaluate a performance or product as objectively as possible. If performance criteria are well defined, another person acting independently will award a student essentially the same score. Furthermore, well-written performance criteria will allow the teacher to be consistent in scoring over time.

Stiggins (13) notes that if a teacher fails to have a clear sense of the full dimensions of performance, ranging from poor or unacceptable to exemplary, he or she will not be able to teach students to perform at the highest levels or help students to evaluate their own performance.

In developing performance criteria one must both define the attribute(s) being evaluated and also develop a performance continuum. For example, one attribute in the evaluation of writing might be writing mechanics, defined as the extent to which the student correctly uses proper grammar, punctuation, and spelling. As for the performance dimension, it can range from high quality (well-organized, good transitions with few errors) to low quality (so many errors that the paper is difficult to read and understand).

The key to developing performance criteria is to place oneself in the hypothetical situation of having to give feedback to a student who has performed poorly on a task. Stiggins (13) suggests that a teacher should be able to tell the student exactly what must be done to receive a higher score.

DEVELOPING PERFORMANCE TASKS

Developing performance tasks or performance assessments seems reasonably straightforward, for the process consists of only three steps. The three steps, with a brief discussion of each, follow.

Step 1. List the skills and knowledge the students are expected to learn as a result of completing a task.

As tasks are designed, one should begin by identifying the types of knowledge and skills students are expected to learn and practice. These should be of high value, worth teaching to, and worth learning. In order to be authentic, they should be similar to those which are faced by adults in their daily lives and work.

Herman, Aschbacher, and Winters pp. 25-26 (14), suggest that educators need to ask themselves five questions as they identify what is to be learned or practiced by completing a performance task. Their questions, with examples, follow:

1. What important cognitive skills or attributes do I want my students to develop? (e.g., to communicate effectively in writing; to analyze issues using primary source and reference materials; to use algebra to solve everyday problems).

2. What social and affective skills or attributes do I want my students to develop? (e.g., to work independently, to work cooperatively with others, to have confidence in their abilities, to be conscientious).

3. What metacognitive skills do I want my students to develop? (e.g., to reflect on the writing process they use; to evaluate the effectiveness of their research strategies, to review their progress over time).

4. What types of problems do I want them to be able to solve? (to undertake research, to understand the types of practical problems that geometry will help them solve, to solve problems which have no single, correct answer)

What concepts and principles do I want my students to be able to apply? (e.g., to understand cause-and-effect relationships, to apply principles of ecology and conservation in everyday lives).

Step 2. Design a performance task which requires the students to demonstrate these skills and knowledge.

The performance tasks should motivate students. They also should be challenging, yet achievable. That is, they must be designed so that students are able to complete them successfully. In addition, one should seek to design tasks with sufficient depth and breadth so that valid generalizations about overall student competence can be made.

Herman, Aschbacher, and Winters p. 31 (14) have a list of questions which are helpful in guiding the process of developing performance tasks. Those questions, with their recommendations, follow:

1. How much time will it take students to develop or acquire the skill or accomplishment? The authors recommend that assessment tasks should take at least one week for students to complete. Others recommend that worthwhile tasks require far more time.
2. There are no rules regarding the appropriate length or complexity of a task; however, there are problems associated with developing overly complex and creative performance tasks (15). To begin with, relatively modest performance tasks are easier to develop. Furthermore, if they are well crafted and reasonably short (a few days rather than a few weeks), they are more likely to hold the interest of students. Finally, if a task fails to accomplish its purposes, it is best if the task is limited in duration.

3. How does the desired skill or accomplishment relate to other complex cognitive, social, and affective skills? Priority should be given to those which apply to a variety of situations.

4. How does the desired skill or accomplishment relate to long-term school and curricular goals? Skills or accomplishments which are integral to long-range goals should receive the most attention.

5. How does the desired skill relate to the school improvement plan? Priority should be given to those which are valued in the plan.

6. What is the intrinsic importance of the desired skills or accomplishment? Emphasis should be given to those which are important, while others should be eliminated.

7. Are the desired skills and accomplishments teachable and attainable for your students? Priority should be given to tasks which represent realistic goals for teaching and learning.

Step 3. Develop explicit performance criteria which measure the extent to which students have mastered the skills and knowledge.

It is recommended that there be a scoring system for each performance task. The performance criteria consist of a set of score points which define in explicit terms the range of student performance. Well-defined performance criteria will indicate to students what sorts of processes and products are required to show mastery and also will provide the teacher with an "objective" scoring guide for evaluating student work. The performance criteria should be based on those attributes of a product or performance which are most critical to attaining mastery. It also is recommended that students be provided with examples of high quality work, so they can see what is expected of them.

Performance assessments are not new. Teachers always have assigned tasks which require their students to perform or develop products. If possible, groups of educators should work together to design performance tasks. Tasks are more likely to be interdisciplinary. In addition, this process allows for discussion and exchange of ideas. Tasks may be fair and free of bias. Tasks should not give particular advantage to certain students. Tasks should be interesting, challenging, and achievable. This means that the tasks should be neither too complex and demanding, nor too simple or routine.

HOW TO CONDUCT PERFORMANCE TASK

Students are asked to study the scenario of technical education in India

1. As a group, members of the class must develop a common set of procedures, interview questions, and a questionnaire. This questionnaire will be used by each student for the purpose of interview.

2. Each student should identify and interviews at least five people. During the interview process, the student should take careful notes. (Note: students may wish to tape record or video tape their interview). After the interview is completed, the student should summarize the process and responses in written form.

3. After all interviews are completed, students are divided into small groups (of perhaps four or five persons) and asked to discuss (compare and contrast) their experiences and to reach some conclusions about what they learned.

4. Each student must consult the written documents. Similarities and differences should be identified and explained.

5. Each student must use internet to get additional information about the problem.

6. Each group is required to develop an oral presentation (about 30 minutes in length) in which each student has a role in the presentation. The rough draft should be presented before the class. In this report to the class, students should be encouraged to use video and/or audio materials, overhead transparencies, multi-media etc. Time for questions should be allowed.

7. Each student is required to write a brief report in which the student summarizes the entire experience.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4=Excellent</th>
<th>3=Very Good</th>
<th>2=Satisfactory</th>
<th>1=Needs Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Information is properly organized with well-constructed paragraphs and subheadings</td>
<td>Information is organized with well-constructed paragraphs</td>
<td>Information is organized, but paragraphs are not well-constructed</td>
<td>The information appears to be disorganized.</td>
</tr>
<tr>
<td>Amount of Information</td>
<td>All topics are addressed and all questions answered with at least 2 sentences about each</td>
<td>All topics are addressed and most questions answered with at least 2 sentences about each</td>
<td>All topics are addressed, and most questions answered with 1 sentence about each</td>
<td>One or more topics were not addressed.</td>
</tr>
<tr>
<td>Quality of Information</td>
<td>Information clearly relates to the main topic. It includes several supporting details and/or examples.</td>
<td>Information clearly relates to the main topic. It provides 1-2 supporting details and/or examples.</td>
<td>Information clearly relates to the main topic. No details and/or examples are given.</td>
<td>Information has little or nothing to do with the main topic.</td>
</tr>
<tr>
<td>Sources</td>
<td>All sources (information and graphics) are accurately documented in the desired format.</td>
<td>All sources (information and graphics) are accurately documented, but a few are not in the desired format.</td>
<td>All sources (information and graphics) are accurately documented, but many are not in the desired format.</td>
<td>Some sources are not accurately documented.</td>
</tr>
<tr>
<td>Mechanics</td>
<td>No grammatical, spelling or punctuation errors.</td>
<td>Almost no grammatical, spelling or punctuation errors.</td>
<td>A few grammatical, spelling or punctuation errors.</td>
<td>Many grammatical, spelling, or punctuation errors.</td>
</tr>
</tbody>
</table>
PERFORMANCE CRITERIA

The criteria are presented below.

RUBRICS FOR PERFORMANCE BASED EVALUATION

The above assessment tool is an example of rubric. A rubric is a scoring tool for subjective assessments. It is a set of criteria and standards linked to learning objectives that is used to assess a student's performance on papers, projects, essays, and other assignments. Rubrics allow for standardized evaluation according to specified criteria, making grading simpler and more transparent.

The rubric is an attempt to delineate consistent assessment criteria. It allows teachers and students alike to assess criteria which are complex and subjective and also provide ground for self-evaluation, reflection and peer review. It aims at accurate and fair assessment, fostering understanding and indicating the way to proceed with subsequent learning/teaching. This integration of performance and feedback is called "ongoing assessment."

A rubric is an authentic assessment tool used to measure students' work. It is a scoring guide that seeks to evaluate a student's performance based on the sum of a full range of criteria rather than a single numerical score. A rubric is a working guide for students and teachers, usually handed out before the assignment begins in order to get students to think about the criteria on which their work will be judged. Rubrics can be analytic or holistic, and they can be created for any content area including math, science, history, writing, foreign languages, drama, art, music, etc...

The rubric is one authentic assessment tool which is designed to simulate real life activity where students are engaged in solving real-life problems. It is a formative type of assessment because it becomes an ongoing part of the whole teaching and learning process. Students themselves are involved in the assessment process through both peer and self-assessment. As students become familiar with rubrics, they can assist in the rubric design process. This involvement empowers the students and as a result, their learning becomes more focused and self-directed. Authentic assessment, therefore, blurs the lines between teaching, learning, and assessment (16).

Three Common Features

Rubrics can be created in a variety of forms and levels of complexity, however, they all contain three common features which:

- focus on measuring a stated objective (performance, behavior, or quality).
- use a range to rate performance.
- contain specific performance characteristics arranged in levels indicating the degree to which a standard has been met.

Advantages of Rubrics

Many experts believe that rubrics improve students' end products and therefore increase learning. When teachers evaluate papers or projects, they know implicitly what makes a good final product and why. When students receive rubrics beforehand, they understand how they will be evaluated and can prepare accordingly. Developing a grid and making it available as a tool for students' use will provide the scaffolding necessary to improve the quality of their work and increase their knowledge.

Rubrics offer several advantages.

- Rubrics improve student performance by clearly showing the student how their work will be evaluated and what is expected.
- Rubrics help students become better judges of the quality of their own work.
- Rubrics allow assessment to be more objective and consistent.
- Rubrics force the teacher to clarify his/her criteria in specific terms.
- Rubrics reduce the amount of time teachers spend evaluating student work.
- Rubrics promote student awareness about the criteria to use in assessing peer performance.
- Rubrics provide useful feedback to the teacher regarding the effectiveness of the instruction.
- Rubrics provide students with more informative feedback about their strengths and areas in need of...
improvement.

- Rubrics accommodate heterogeneous classes by offering a range of quality levels.
- Rubrics are easy to use and easy to explain.

**Components of a rubric**

Scoring rubrics include one or more dimensions on which performance is rated, definitions and examples that illustrate the attribute(s) being measured and a rating scale for each dimension. Dimensions are generally referred to as criteria, the rating scale as levels, and definitions as descriptors.

**Types of rubrics**

Rubrics are generally categorized as generic or task-specific.

**Generic rubrics** can be applied to a number of different tasks. It is certainly most efficient to design or identify rubrics that can be used for multiple purposes, but when weighing the use of generic versus task-based rubrics, efficiency is not the only important criterion. Some rubrics are created in such a way as to be generic in scope for use with any number of writing or speaking tasks, it is best to consider the task first and make sure that the rubric represents a good fit with the task and instructional objectives. For learners who are new to performance assessment and evaluation, may be introduced with the process by first using generic rubrics and gradually introducing task-specific rubrics.

**Task-specific rubrics** are used with particular tasks, and their criteria and descriptors reflect specific features of the elicited performance. Rubrics that combine features of generic and task-specific rubrics are very useful in classroom assessment because they provide feedback to learners on broad dimensions of language production along with their performance on the particular competencies and knowledge targeted by course content and aligned assessments. When adapting the rubrics for other tasks, teachers may keep the generic language production elements as they are and change one or two categories to focus on task expectations.

**STEPS FOR CREATING A RUBRIC**

Rubrics help students become thoughtful evaluators of their own and others' work and reduce the amount of time teachers spend evaluating student work. Here is an eight-step method for creating and using a rubric for writing assignments.

1. The first step is to have students look at models of good versus “not-so-good” work. A teacher could provide sample assignments of variable quality for students to review.

2. The second step is to list the criteria to be used in the rubric and allow for discussion of what counts as quality work. Asking for student feedback during the creation of the list also allows the teacher to globally assess the students' writing experiences. For example, to assess oral presentation we may choose dimensions, such as, voice projection, body language, grammar and pronunciation, and organization. Similarly, for written products we may consider grammar and spelling, organization and formatting.

3. The third step is to determine dimensions. Dimensions depend on the purpose of measurement. If it's diagnostic and formative, we should have more dimensions rather than fewer. If we want a summative evaluation of our students' performance for a particular lesson, fewer dimensions are OK. Dimensions are to be ranked from most important to least important.

4. The fourth step in creating a rubric is to articulate gradations of quality. They can be based on the discussion of the good versus not-so-good work samples.

5. The fifth step in creating a rubric is to practice on models. Students can test the rubrics on sample assignments provided by the instructor. This practice can build a student's confidence by teaching them how the instructor would use the rubric on their papers. It can also facilitate student/teacher agreement on the reliability of the rubric.

6. The sixth step is to ask for self and peer-assessment.

7. The seventh step is to revise the work based on that feedback. As students are working on their assignment, they can be stopped occasionally to do a self-assessment and then give and receive evaluations from their peers. Revisions should be based on the feedback they receive.

8. The eighth and final step is to use teacher assessment, which means using the same rubric the students used to assess their work.

**Usage**

Rubrics are often used in alternative assessments in education but have gained ground as a way of establishing written guidelines or standards of assessments for formal, professionally-administered essay tests like certain teacher assessment exams. In alternative assessment, rubrics are designed to reflect the processes and outputs of "real-life" problem solving. It is usually in the form of a matrix with a mutually agreed upon negotiated contract or criteria for success. The rubric focuses on stated objectives, which should be tied to the educational standards as established by the community, and should use a range or scale to rate the performance.

The key advantage for classroom teachers is that rubrics force clarification of success in the classroom, establishing clear benchmarks for achievement. By sharing scoring rubrics with students, they become aware of the expected standards and thus know what counts as quality work. With rubrics, grading becomes more objective, consistent, and defensible. Additionally, rubrics make grading more efficient. Time spent developing a grading rubric will be made up for in ease and speed of actual grading.

During the **pre-assessment phase**, rubrics are used to clarify
Creating Rubrics in Rubistar

- Register as a New User: Click on the register link on the opening page. Fill out the new user form. You will need to enter your personal information, as shown. Click the register button when you have finished.
- Click create new rubric. You will be taken to a page with over 60 ready-made and customizable rubrics in 10 topic areas.
- Note that you can also search for rubrics created by other teachers in thousands of topic areas. Go to FIND RUBRIC at the top of the page. Just type in a keyword.
- 6 Traits rubric template. Every field can be edited. If you don't like the ratings text in the title boxes, you can rename them.
- Not only can you customize the ratings columns, you can also change the name of the category without losing the descriptions in each box.
- Add four or five categories to be assessed. Edit the category as needed. Edit the language in the description, if you want. Leave unused categories blank.
- You will be given another opportunity to modify this rubric. But you can also scroll down to the bottom of the page and choose to print or save.
- If you choose make available online, you will need to create an account or log in to an existing one.
- Click on “Save Rubric Online and log into your account or create one, as necessary.
- You will be assigned a rubric ID.
- Choose Edit Rubric at the top of the page for edit purpose.
- Now you can add a column to your rubric. Call it Total Points. Click on Edit Row Names to continue.
- You will then be given a chance to move rows up and down. You could also rename category rows here.
- You can print your rubric to distribute to students.
- You can also download/export the rubric by clicking on SAVE RUBRIC.

Analyzing a Rubrics in rubistar

- Go to your teacher home. Click on your rubric. Then click on Analyze Rubric.
- Enter Student Results. Click update result for each new student. Hit submit when finished.
- Percentages are automatically calculated in the next screen.
- Sometimes, student results are shown in red. Highlighting means that this was a skill many members of your class found difficult. You may want to provide more practice, more examples, or more support in this area for this class and/or for similar projects.

CONCLUSION

Our education system is guided and controlled by concern for results in examination irrespective of the quality of learning -- whether fragile or sustainable. The competition for securing percentage of marks in the final examination creates unusual stress in the students leading often to mental break down and suicides. This must change. In order to manage the stress factor in examination it is necessary to ensure sustainable learning. To ensure sustainable learning we have to use alternative assessment in our educational institutions. We must no longer treat assessment as fundamentally separate from instruction. Curriculum, instruction, and assessment are to be integrated; the assessment itself should be a valuable learning experience. Learning and evaluation activities are to be blended into a holistic act/task, which demands learners not to select but design and create the task. In this changing scenario, alternative technology mediated procedures such as e-portfolio and rubrics are the need of hour. In view of this it is high time to reconstruct and redesign our examination system. The practice of mark sheets indicating marks in certain subjects must be replaced by a portfolio that would accommodate a student's performance in a variety of domains like life skills, academic/ nonacademic and vocational subjects, personal qualities, etc. The portfolio should be comprehensive, revealing of the total being of the student.
Rubric should be used to assess the performance task.

REFERENCES

Web links
32. www.rubrics4teachers.com