Mastery Learning Using Formative Evaluation

Dr. (Mrs.), Parveen Rani

Principal, Baba Kundan Rural College of Education Ludhiana

ABSTRACT *The ultimate objective of evaluation is to bring about qualitative improvement in education. It facilities learning and improves instruction. Therefore, evaluation should be construed as a powerful instrument for improving teaching-learning process. The present system of evaluation at school stage suffers from a number of imperfections. The first and foremost shortcoming of the evaluation system is that it focuses only on cognitive learning outcomes and completely ignores the non-cognitive aspects which are a vital component of human personality. The idea behind mastery learning is that children should not move on to another subject until they have mastered a current topic. In the present paper the author mainly focused on formative evaluation and stated that it is prerequisite for mastery learning. Formative evaluation has played a critical role in the apparent success of mastery learning. It helps in assessing both scholastic and co-scholastic domains of development which is not possible only with summative evaluation.*

INTRODUCTION

Evaluation plays an important role in the school education. It is an integral part of the instructional program and it proves information which serves as a basic for a variety of educational decisions. The main emphasis in educational evaluation, however, is on the pupil and his learning progress towards the realization of overall educational objectives.

Broadly, the evaluation of students can be categorized as external and internal. The external examination or eternal evaluation serves the purpose of providing information about students - information that may be used by teachers and others to find the suitability of students for a subsequent course of higher education or job in an establishment. The teachers, therefore, must emphasize upon the suitability of examination results in a more realistic manner.

Contrary to this, the teachers are tempted to distort teaching in order to obtain satisfying results in the examinations without caring whether students have gained knowledge or not. Experts do feel that in universities there is no system of education but system of examination. University examinations whether at the end of the year or at the end of the semester assesses the abilities to recall the facts, recall of principles, use of numerical data, construction of hypotheses, assessment of hypotheses, and design of experiments. However, they do not measure the students abilities to the use of single technique they have studied.

Some of the possible outcomes of learning should be knowledge, comprehension, application, analysis, synthesis, evaluation, drawing and sketching skills, ability to handle instruments, communication skills (skills in writing, talking), social skills (teamwork and leadership), personal qualities (regularity, hard work, inventiveness, originality, initiative), positive and scientific attitude, appreciation, constructivism and creativity. These qualities cannot be attained adequately by end examinations or external examinations. So there is a need for formative evaluation to be recommended as an ultimate source of continuous and comprehensive evaluation or overall teaching-learning effectiveness.

MASTERY LEARNING - THE CONCEPT

Mastery learning proposed that all children in an individu- alized manner can learn when provided with the appropriate learning conditions in the classroom. The idea behind mastery learning is that children should not move on to another subject until they have mastered a current topic.

Mastery learning is a learning concept first developed from the Mastery for Learning Model created by Benjamin Bloom, an American educational psychologist. An example of mastery learning is that a child in their early years of school will need to master the concept of writing their name or writing the alphabet by hand before moving on to writing sentences and paragraphs. This idea of mastery learning consists of topics that children will begin on the same level to master. The children who do not master will not move on the next part of the learning experience until they master the current concept. They often will be given extra help, more one-one-one time until they succeed.

In a mastery learning environment, the teacher directs a variety of group-based instructional techniques, with frequent and specific feedback by using diagnostic, formative tests, as well as regularly correcting mistakes students make along their learning path. Assessment in the mastery learning classroom is not used as a measure of accountability but rather as a source of evidence to guide future instruction. Remediation to the learning problems are provided simultaneously so as to ensure construction of sound knowledge pool that can be applied in daily life. A teacher sound knowledge pool that can be applied in daily life. A teacher using the mastery approach will use the evidence generated from his or her assessment to modify activities to best serve each student. Teachers evaluate students with criterion-referenced tests rather than norm-referenced tests. In this sense, students are not competing against each other, but rather competing against themselves in order to achieve a personal best.

FORMATIVE EVALUATION-THE CONCEPT

A formative evaluation (sometimes referred to as internal) is a method for judging the worth of a program while the program activities are forming (in progress). This part of the evaluation focuses on the process in its dynamic state.

It permits the curriculum designers, educators along with parents, learners and instructors to monitor how well the

instructional goals and objectives are being met. Its main purpose is to catch deficiencies so that the proper learning interventions can take place that allows the learners to master the required skills and knowledge within the stipulated time duration of the course.

Formative evaluation is used to monitor/supervise learning progress during instruction. Its purpose is to be provide continuous feedback to both student and teacher concerning learning successes and failures. Feedback to students provides reinforcement of successful learning and identifies the specific learning errors and misconceptions that need correction. Feedback to the teacher provides information for modifying instructional strategies, content and delivery mechanisms and for prescribing group and individual work.

Formative Evaluation-the prerequisite for mastery learning

Acceleration in the research and development sector of science, technology, management, education etc. today the needs and requirements of professionals are progressing fast with the development of every learned member into a perfectionist, resourceful and competent member in their respective fields. Reports of many committees had revealed that we lack in providing proper training to the trainees/learners. Students are relaying more on technological devices like calculator, computers etc. which are deteriorating their own creative potential day by day. Students are paying more attention to get grades and distinction by memorizing rather than understanding and reflecting the concepts. This is the main reason that we are unable to find resourceful and truly competent persons in every field.

It is stated in National Curriculum Framework for School Education (2000, p.96) that:

The present system of evaluation at school stage suffers from a number of imperfections. The first and foremost shortcoming of the evaluation system is that it focuses only on cognitive learning outcomes and completely ignores the non-cognitive aspects which are a vital component of human personality. Even in cognitive areas it lays too much emphasis on memorization and little on abilities and skills that require higher mental operations like problem-solving, creative thinking, summarizing, inferring, arguing etc.

Formative evaluation has played a critical role in the apparent success of mastery learning. It helps in assessing both scholastic (those aspects which are related to intellect or the brain, it includes assessment of learners in curricular subjects, assignments, project work, practical and oral work etc.) and co-scholastic (those aspects which are related to hand and heart, these includes psychomotor skills, physical development, life skills, attitudes, values, interests and participating in co-curricular activities) domains of development which is not possible only with summative evaluation. Formative evaluation is a process used by a teacher to continuously monitor student progress in a non-threatening and supportive environment. It is diagnostic and remedial measure and provides platform for active involvement of students in their own learning. It supplies effective feedback to students and teachers for remedial interventions resulting in enhanced learning and attainment of instructional objectives sequentially in a systematic manner.

With the feedback and corrective information gained from the formative evaluation, each student has a detailed prescription of what more needs to be done to master the concepts or skills from the unit. This "just-in time" correction prevents minor learning difficulties from accumulating and becoming major and differentiate their instruction in order to better meet students individual learning needs. As a result, many more students learn well, master the important learning goals in each unit and gain the necessary prerequisites for success in subsequent units (Guskey, 2005).

CONCLUSION

The ultimate objective of evaluation is to bring about qualitative improvement in education. The idea behind mastery learning is that children should not move on to another subject until they have mastered a current topic. Formative evaluation has played a critical role in the apparent success of mastery learning. It helps in assessing both scholastic and co-scholastic domains of development which is not possible only with summative evaluation.

REFERENCES

1. Block, James H. and Burns, Robert B. (n.d.) Student Evaluation: A Mastery Learning Perspective. In Lewy, Arieh and New, York: Gordon and Breach Science Publishers Ltd., pp. 57-72.
2. Guskey, Thomas R. (2005), Formative Classroom Assessment and Benjamin S. Bloom: Theory, Research, and Implications. Canada: American Educational Research Association. Retrieved from http://www.thelearningplace.ph/?p=600
3. Joyce, Bruce, Weil, Marsha, Calhoun, Emily (2009), Models of Teaching. New Delhi : PHI Learning Private Ltd., pp. 357-365
4. Linn, Robert L. (2000), Measurement and Assessment in Teaching, New Delhi; Pearson Education, Inc. p.57
5. National Curriculum Framework for School Education (2000), National Council of Educational Research and Training, p.96.
6. Rajput, Sarla (1998), Assessment of Affective Development- An Area for Teacher Preparation, Journal of Indian Education, Vol. 24, No. 3, pp. 13-24
7. Varughese, Ancey (1998), Mastery Learning - A Powerful Idea to Shape Educational Views and Practices. Journal of Indian Education, Vol. 24, No. 2, pp. 35-41.
8. http://www.cbse.nic.in/cce/CCE%20FLYER.pdf
9. http://en.wikipedia.org/wiki/Mastery_learning
10. http://www.educationbug.org/a/mastery-learning.html