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Performance Based Assessments: Theory and Practice

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SYNOPSIS

INTRODUCTION

In conjunction with the current educational reform movements, there has been an interest in assessing higher-order thinking, reasoning, problem solving, and conceptual understanding of scientific knowledge. Consequently, implementation of performance based assessments that require thinking skills and are consistent with cognitive theories of learning has emerged as a need (Maeroff, 1991).

THE PURPOSE OF THE STUDY

The purpose of this study was to expose the rationale behind performance based assessments. In addition, by giving some examples for performance based assessment methods, it was aimed that this study would be a guide for teachers who want to integrate these methods into their teaching.

METHODOLOGY

A documentary survey research method was utilized for the study (Karasar, 2003). The following categories were determined at end of the documentary reviewing: assessment as a concept, recent trends in assessment and evaluation, assessment and constructivist epistemology, performance based assessments, and performance based assessment methods. Different patterns in each category composed sub-categories. For example, three sub-categories were emerged under the category of assessment and constructivist epistemology. These sub-categories were teaching and assessment, feedback, and self evaluation and peer evaluation.

Assessment is the process of systematically collecting, interpreting and using information to improve student learning and satisfaction (Gainen & Locatelli, 1995). Due to the fact that traditional assessments are often removed from real purposes, test esoteric skills in isolation, and ignore the prior knowledge and thinking strategies (Zollman &

Jones, 1994), some recent trends have emerged in classroom assessment. More established traditions of focusing assessment on objective testing at the end of instruction are being supplemented with, or in some cases replaced by, assessments during instruction to help teachers make moment by moment decisions and with what are called performance based assessments (McMillan, 1997). Authentic assessment, performance assessments, and portfolios are some examples for performance based assessments (Smith, 2003). These forms of assessment involve the active construction of meaning rather than the passive regurgitation of isolated facts. If learning is thought of as a process of constant development enhanced by structured, purposeful, and educational experiences, then assessment is more likely to be seen as providing documentation and feedback (Delandshere & Jones, 1999). Effective assessment approaches based on constructivist views promote integration of assessment and teaching (Wilson, 1994; Pilcher, 2001; Sluijsmans, Brand-Gruwel, van Merrienbore & Bastiaens, 2003). In order to produce the most valid inferences about what a student knows or understands; the teacher must necessarily gather evidence from multiple sources (Wilson, 1994). In constructivist framework, valid assessment must be useful to teachers and students. This usefulness depends on how teachers apply varying assessment strategies to their students by considering individual student strengths and weaknesses (Graue, 1994). A student's performance throughout the process of a performance task and/or the product s/he develop at the end of the task can be assessed in a most valid and fair way by using a rubric. Assessments in which students carry out an activity or procedure a product in order to demonstrate their knowledge and skills are called performance assessments. A portfolio, on the other hand, can be defined as a purposeful, systematic process of collecting and evaluating student products to document progress toward the attainment of learning targets (Century, 2002). Portfolios can provide an effective means for helping students become more self-reflective and involved in their own learning (Zollman & Jones, 1994).

CONCLUSIONS

In parallel with the changes in learning theories, it has been expected that students not only apply knowledge but also use higher order thinking skills, make analysis and synthesis, evaluate knowledge, and solve daily life problems. Performance based assessments together with traditional assessments are needed in order to determine where students are in the process of constructing knowledge. Constructivist epistemology emphasizes that teaching and assessment are two processes that feed each other. Consequently, assessment methods which can assess students and provide feedback during teaching are necessary. Furthermore, assessment affects student learning. Teachers should gather different information in different forms at different times to make their decisions about students' learning. These necessities mentioned above highlight the importance of performance based assessments that enable students to perform in accordance with their capacity and to develop their metacognitive skills

SUGGESTIONS

Teachers have an important role in implementation of reform recommendations (Dori & Herscovitz, 2005). Therefore, they should have qualifications in application of performance based assessment methods and in recording students' improvement. The content of pre-service and in-service teacher education programs should be organized in a way that science teachers gain such qualifications. Moreover, tests administered at national level act as barriers to reforms (Tamir, 2003). Hence, construct and content of the national tests, such as university entrance examination, should be revised.

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