PERFORMANCE BASED-TASK AND MATHEMATICAL REASONING: BRIDGE BETWEEN TEACHING AND LEARNING

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Mathematics is a subject that considered the mother of all learning in both Arts and Sciences. It is a tool for understanding structures, relationships and patterns to produce solution for complex real-life problems. It is a fact that despite its utility and importance, many students possess of negative perceptions on Mathematics as an academic discipline. Generation to generation, Mathematics is still constant. Different areas of Mathematics are developed by having formulas and proven mathematical statements. It became a tool to improve life especially for those professionals who give the primary needs of the people.

In mathematics, it is very important to provide performance based-task wherein students will learn more. Performance task is an assessment or learning activity where teachers asks students to perform or to demonstrate their understanding and proficiency on a specific topic. Moreover, performance tasks are routinely used in certain disciplines mostly in mathematics that yield a tangible product that serve as evidence of learning. In the K-12 educational system, performance-based task is the way of learning that is being encouraged and incorporated to the curriculum.” John Dewey (1938) proponent of one of the four pillars of education which is learning by doing where he believes that each child is dynamic, intrusive and exploratory. He added that effective performances came primarily through social interactions and socially engaging learning experiences.

In 21st century, having an improvement of standard education in the Philippines, Filipinos are adapting the K-12 educational system which is in a spiral setting of
curriculum. New types of tasks have been implemented in schools including the performance of the students inside the classroom. This kind of practice challenges the teachers to identify the level of learners’ mathematical reasoning. In addition, for the students to apply the knowledge they have gathered based on their performance in doing the given tasks. Through performance tasks that are meaningful and engaging to all types of learners, learning process will be more productive where it can provide quality education. This also enable the teacher to efficiently provide students with information on the strengths and weaknesses of their works.

Performance task have several characteristics: (1) Performance tasks demand for the application of understanding, knowledge and skills, not just reminiscence or recognition, (2) Performance tasks are flexible and naturally do not yield a single, correct answer, (3) Performance tasks create novel and reliable contexts, (4) Performance tasks offer indication of understanding via transmission, (5) Performance tasks are multi-faceted, (6) Performance tasks can integrate two or more subjects as well as 21st century skills and (7) Performances on open-ended tasks are assessed with conventional standards, principles and rubrics.

Indeed, performance based-task and mathematical reasoning is not only bridge between teaching and learning but also helping teachers collect evidence about students’ achievement in order to adjust instruction and to meet their learning needs which provide quality education and offer more learning experiences. Regarding other aspect, mathematical performance affects the Mathematical Reasoning of the learner especially inside the classroom or during the task period.

References:

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