Implementing Elementary Mathematics Successfully

Mathematics may be a complicated subject for most elementary school children. The concepts, definitions, and processes may be of some trouble for most and complicated to understand. The importance for an educator to provide the best source of education in mathematics is for they themselves to be knowledgeable on the subject and be equipped with the best resources and tools to teach their students. This paper addresses the overall environment a classroom should have to provide a productive learning experience and an overall foundation teachers need to know in order to teach mathematics successfully to their students.

In order for students to understand math, their educators must be provided with one as well. The way an adolescent is educated on math in elementary school determines whether the adolescent ends up liking or disliking the field of study. A student who comprehends and successfully grasps the fundamental concepts of mathematics in elementary school will discover it less complicated to learn complex methods and concepts in higher class levels (Bruner 1960). It is essential that a teacher who instructs math to students in elementary school be persistent and patient in helping the child overcome and learn basic math skills. The first thing an elementary teacher can do is make the classroom comfortable and less of a distraction. To help children focus on concepts it is important that the atmosphere be suitable and helpful to learning. The main aspects to be aware of are seating organization and the motivation and concentration ability of each
child. A teacher must explain in detail each new concept that he or she presents to the class. Linking each concept to real life situations will also help in the students understanding of the material (Duffy & Jonassen 1992). Relating concepts to real life scenarios generates a sense of familiarity within students. It helps them grasp concepts faster and they tend remember the concepts after instruction. Real life application is one of the most useful ways to help students realize the importance of math in their every day lives (Duffy & Jonassen 1992). Yet, each student tends to differ in her or his learning practices and capabilities. Certain students are inclined to learn faster than others. Some comprehend better with hands on experiences, where visual and audio aids can assist others. A teacher must conclude how each student will learn to their best capability. The educator can make his or her students work out and solve math problems on the board or he/she can have group conversations about concepts (Zachery, e al 2007). It is the teacher’s responsibility to take students who are having a difficult time understanding aside to further evaluate their learning needs.

Practice is fundamental when learning math. Both slow learners and fast learners must practice the concepts they learn in the classroom through homework, tests and reviews, and class assignments. When teaching elementary children about math concepts, it is often necessary to use manipulatives because they provide students’ with pieces and parts to move around while they learn (Ball 1990). A teacher must also teach her or his students to check their work after solving a problem. Self-checking is an important part of the learning process for it helps them revisit their previous work and make certain they have completed the problems to their best ability (Ball 1990). Finally, it is important to
continually review the concepts learnt, particularly prior to continuing to the next concept because reviewing reinforces learning.

Elementary school mathematics teaching starts with the teacher’s comprehension and knowledge of the mathematical subject matter to be taught. The teacher knows how to process and perform math and is comfortable teaching mathematics in the school classroom (Draper 2002). He or she then chooses how to portray the math to his or her students. Based on the students’ prior experiences in the subject, the teacher chooses the explanations and instructional tactics that will help the students develop their current background and encourage a thorough understanding (Bracey 2000). After selecting the strategies, the teacher designs and implements a sequence of activities directed at facilitating all students’ learning of the subject. These activities may include direct instruction, group work, guided discovery, or any other of the many pedagogical instruments available. The professor may then gauge the pupils’ level of understanding, diagnosing areas of misunderstanding, and designs additional activities to lessen those misunderstandings (Leko & Brownell 2009). Based on this portrayal, elementary school mathematics teaching, an elementary school teacher undoubtedly needs a sound conceptual awareness of the math subject and a likewise complete understanding of academic skills and exercises that will academically develop and stimulate students.

In the United States, many states have content specialty exams that forthcoming teachers must pass previous to obtaining a full-time teaching standing. These exams expose future educators about mathematical materials they are expected to teach within the classroom (Harris & Sass 2007). These materials are essential for teachers to master. An example of this exam is the four-hour Massachusetts test that entails “number sense and
operations; pattern relations, and algebra; geometry and measurement; data analysis, statistics, and probability; trigonometry, calculus, and discrete mathematics; and integration of knowledge and understanding” (Harris & Sass 2007). Approximately 23% of the test, for elementary math teachers, focuses on “patterns, relations, and algebra, and there are 100 multiple-choice items and two constructed-response items” (Harris & Sass 2007). Another fundamental component to ensure a teacher is productively instructing his or her students is mentioned by Liping Ma [7] in her book, Knowing and Teaching Elementary Mathematics. Ma’s book compares Chinese and American elementary math teachers and concludes that within the United States, it is highly recognized “that elementary mathematics is 'basic,' superficial, and commonly understood. Elementary mathematics is not superficial at all, and anyone who teaches it has to study it hard in order to understand it in a comprehensive way” (Ma 1999). In a helpful manner, Liping recommends that elementary teachers research and study teaching materials thoroughly. Also, she insists teachers take advantage with working amongst other educators and learn from them, to learn from their students when they ask questions, and try to solve problems and equations many different ways (Ma 1999). Students must be given ample opportunities to work together, talk about possible solutions, and think about theories. They ought to be encouraged to look at many potential ways to explain a problem, not just discover one "correct" way.

In conclusion, elementary mathematics is of vital concern when instructing to students. It is very so rare that all students will comprehend and master a complete understanding on the subject simultaneously. With this fact, it is of the responsibility of teachers to extensively research and study the subject matter to the best of their abilities in
order to successfully teach his or her students. By fundamentally and systematically providing an academic stimulating classroom environment will help ensure students feel comfortable and at ease when learning new concepts and methods. Also, by preparing for a state’s content specialty test teachers’ are undoubtedly aware of the materials their potential students must learn and know by the end of their grade level that will propel them in their future mathematical education careers. Finally, by achieving helpful manners that will encourage students to implement and learn math in a comprehensive way.
Bibliography


