THE USE OF DIFFERENTIATED MATHEMATICS INSTRUCTION

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Mathematics is a globally recognized vital discipline that must be supplemented in school to give students the abilities they need to pursue higher education, job goals, and personal fulfillment. All technologies in the world are built on the foundation of mathematics. Mathematics is used in various professions, including medical, engineering, natural, social, physical, and business and commerce. Because of its importance, children are under more pressure to achieve mathematics than any other subject (Fraser & Gilan, 2012). Some of the key aims of mathematics education in Kenya, according to Eshiwani (2013), include the development of thinking capacity and logical cognition. Mathematics aims to develop numerate and intelligent people who will benefit the household, society, and country. Mathematics is required for all students in Kenya because of its relevance and utility in acquiring other courses and its application in business and real-life circumstances. As a result, education stakeholders are concerned about children's arithmetic proficiency. Educators have offered various strategies for teaching mathematics and understanding these methods might aid in developing a more effective teaching plan. A teacher should avoid committing to a single teaching approach. A teacher's teaching strategy should be based on the nature of the learners, their level of interest and maturity, and the resources available. Not all of the ways may be equally appropriate and suitable for all levels of mathematics instruction. After the instructor has learned about all the ways and their benefits and drawbacks, he or she should create his or her method by combining the best aspects of all of them. The teacher's method must promote maximum student participation, progress from tangible to abstraction, and deliver knowledge at the comprehension level (Merchant, 2010).

Differentiated instruction is a way of teaching that assumes every classroom has a range of learners and that all of them can be addressed by using a variety of approaches and activities. Differentiated instruction identifies individual students' needs and makes adjustments in the classroom to satisfy those needs. Pupils learn differently and at varying rates; therefore, no two students are alike. Based on this understanding, varied instruction is a method of teaching and learning that provides students with various ways to absorb information and make sense of concepts. Differentiated instruction is a teaching strategy based on the idea that educational methods should change and adapt according to the needs of individual and different students in the classroom. Rather than expecting students to adapt themselves to the curriculum, differentiated instruction demands teachers to be flexible in their approach to teaching and vary the curriculum and presentation of material to learners (Tomlinson, 2013).

Providing successful differentiated training entails several tasks. Teachers must communicate and discuss differentiated teaching ideas to be more effective at giving differentiated education. They can express their perspectives on differentiated teaching and plan to utilize it in the classroom to broaden their understanding of instructional changes (Gettinger & Stoiber, 2012). According to Chamberlin and Powers (2010) teachers must recognize that differentiated instruction is not a formula. It is theoretically directed and can be put into practice in various ways. Differentiation procedures are neither easy nor straightforward. Teachers must start small. As a result, it's not a good idea for teachers to start using differentiated instruction in all of their classes right away . Instead, teachers can go to other disciplines after providing excellent differentiated instruction in one subject.

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