TURNING THE TABLES: REVOLUTIONIZING MATHEMATICS EDUCATION THROUGH FLIPPED CLASSROOM

by:
Shirley E. Napana

"Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". This is one of the United Nations Sustainable Development Goals (SDG). Inclusivity is parallel to DepEd's "No Child Left Behind" Policy which aims to bring every single learner to school. On the other hand, equitability can be seen as giving equal opportunity for students to quality education. Different methods and approaches to teaching were applied as to make this vision a reality.

But even with advances in science and technology, we are still powerless against natural disasters, which have a significant impact on both the educational system and our everyday lives. Typhoons and monsoons forced us to cancel classes, the pandemic affected us greatly for nearly two years, and high heat indexes forced us to use alternate delivery methods in order to avoid the unbearably hot weather that was detrimental to learning. The backlogs and lack of mastery of specific competencies meant for the particular school year were caused by all of these. And so forth, creating a cascading effect on issues from the lowest to the highest educational tier. Since quantity should never be underestimated, making the most of learning time must also be taken into account. How is it possible to accomplish this? Although there isn't a "one-size-fits-all" approach, teachers can employ strategies like the flipped classroom.

The flipped classroom strategy is an innovative teaching approach that has gained significant traction in recent years, particularly in the field of mathematics education. This pedagogical model inverts traditional teaching methods by delivering instructional

content, often online, outside of the classroom, while engaging in interactive problem-solving and application activities in class.

Bishop and Verleger (2013), as mentioned by Napana (2019), described the flipped classroom as a new instructional techniques that engages "asynchronous video lectures and practice problems as homework, and active, group-based problem solving activities in the classroom". In this method, video recordings of the lessons were sent to the students, in which they will watch on their convenient time prior to the meeting or discussion. With this, students may have prior knowledge about the lesson, and their questions or clarifications will be the ones to be attended to by the teacher. The flipped classroom strategy also significantly improves students' understanding and retention of mathematical concepts. Traditional lectures often present information at a pace that may be too fast for some students and too slow for others, leading to a lack of comprehension. In contrast, the flipped model allows students to review instructional content at their own pace, pausing and replaying parts of the material as needed. This self-paced learning helps ensure that students fully grasp the content before moving on. Halili, Razak, and Zainuddin (2014) mentioned that with the use of flipped classroom the teacher will be able save the time in delivering the lessons. In line with this, required competencies in the specific level may be reached thus ensuring quantity and quality of lessons.

As educators continue to seek effective ways to improve mathematics education, the flipped classroom model presents a promising solution that can help students achieve their full potential and prepare them for future success in an increasingly complex and dynamic world. Although the term "flipped classroom" may be unfamiliar to some, this technique has been used by teachers even prior to the pandemic. As a proof, this was considered as one of the best practices of one of the Senior High School Teachers of Bataan in teaching Mathematics as mentioned by Napana (2019). Further studies may be conducted as to prove its effectivity in learning.

References:

Halili, S. H., Abdul Razak, R., & Zainuddin, Z. (2014). Enhancing collaborative learning in flipped classroom. ePrints UM. Retrieved from http://eprints.um.edu.my

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. 120th ASEE Annual Conference and Exposition. Retrieved from https://www.googlescholar.com

Napana S.E. (2019). Exploring Best Practices of Senior High School Teachers of Bataan on ICT integration in Teaching Mathematics (Unpublished master's thesis). Bataan Peninsula State University.