dependent and the official Website of DepED Division of Bataan

INTERDISCIPLINARY APPROACHES TO INTEGRATING MATHEMATICS WITH OTHER SUBJECTS

by: Jonhry B. Esguerra Teacher I, Justice Emilio Angeles Gancayco Memorial High School

In recent years, there has been a growing trend towards integrating mathematics with other subjects in education. This pedagogical approach has gained substantial recognition among educators due to its numerous advantages in forging connections between mathematics and other academic disciplines. The incorporation of lesson integration in the classroom can be implemented through various means. It can be observed through engagement activities integrated within the lesson's proper phase. Given that we cater to 21st-century learners, they are better equipped to handle performance-based tasks. It is worth considering the implementation of performance tasks that encompass multiple subjects, as advocated by the Department of Education. By doing so, we can optimize each educational activity for the students, allowing them to develop a deeper appreciation for the material as it aligns with their individual abilities, interests, and preferences.

Additionally, linking math with other disciplines like science, technology, engineering, history, and the arts can give learners a more relevant and interesting learning experience. Students can gain a better comprehension of mathematical topics by emphasizing the applications of mathematics in everyday life. Students studying art can use math to create and analyze geometric shapes, while those studying physics can use mathematical concepts to explain motion and energy.

Thus, interdisciplinary approaches can help break down traditional subject barriers and promote a more holistic understanding of complex issues. For instance, integrating math with social studies can help students analyze statistics related to social



issues. Incorporating math into English language arts can help students analyze patterns and structures in literature.

One of the examples of an interdisciplinary approach to math education is projectbased learning. Students are assigned long-term projects that require them to use math in real-world contexts. For instance, students might use math to design a sustainable building or plan a budget for a community event. This approach can help students see the practical applications of math and develop critical thinking and problem-solving skills.

Despite the numerous advantages of interdisciplinary approaches, implementing them can also pose challenges. Teachers may require additional training and support to integrate math with other subjects, and finding sufficient time to cover all the necessary content can be challenging. Also, some students may struggle to connect math with other subjects or may have negative attitudes toward math that can hinder their engagement and motivation.

In summary, interdisciplinary approaches to integrating mathematics with other courses can assist students greatly. Students can gain a better knowledge of mathematical topics and see their practical implications in real-world circumstances by making math more entertaining and meaningful. To create a successful and encouraging learning environment, educators must be aware of the difficulties involved. Students can gain a more thorough understanding of math and its ties to other topics by using interdisciplinary teaching methods.

References:

Springer Nature. (2016). Interdisciplinary mathematics education https://library.oapen.org/bitstream/handle/20.500.12657/27783/1/1002222.pdf

