

Report on Group Discussion: Ethnomathematics
Date of Discussion: 15th March, 2024

Ethnomathematics aimed to explore how cultural practices, traditions, and knowledge systems from various ethnic groups shape mathematical ideas and applications. The discussion was designed to foster a deeper understanding of how mathematics is embedded in the daily lives and practices of different communities around the world. The session began with a collective definition of ethnomathematics. Participants agreed that ethnomathematics refers to the study of mathematical practices in various cultural contexts. It recognizes that different communities develop their own mathematical systems based on their specific needs, environments, and cultural practices. This field challenges the dominant narrative of mathematics as a purely Western invention, instead emphasizing the diverse origins of mathematical thought across civilizations, such as the Mayans, Egyptians, and indigenous communities. Historical contributions of various cultures participants reflected on examples of ethnomathematics from ancient cultures, such as the geometry of the ancient Egyptians, the Mayan number system, and the Inca's use of quipu for record-keeping. Discussion emphasized how these systems, though different from the modern mathematical methods, demonstrate advanced understanding and problem-solving skills, showing that mathematical reasoning is universal, though expressed differently across cultures. Practical applications in daily life ethnomathematical practices were also discussed in terms of their relevance to everyday activities such as farming, architecture, navigation, and trade. One participant highlighted the example of indigenous navigation techniques in the Pacific Islands, where sailors use environmental cues and mental calculations to navigate the seas—an impressive display of spatial reasoning and geometric knowledge. A key point of discussion was how ethnomathematics could be integrated into contemporary education to make mathematics more inclusive and engaging. Some participants suggested that incorporating cultural examples of mathematics into curricula could help demystify the subject for students, especially those from marginalized communities. This would show them that their own cultural backgrounds have valuable contributions to mathematics. Participants also discussed the potential for ethnomathematics to foster critical thinking by encouraging students to question and explore the cultural assumptions behind conventional mathematical practices. Challenges in recognition and implementation the group acknowledged that ethnomathematics faces challenges in gaining wider recognition.



