LOOPHOLES IN MATHEMATICS ACHIEVEMENT IN PISA AMONG FILIPINO LEARNERS

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The Programme for International Student Assessment (PISA) results reveal significant challenges in the mathematics performance of Filipino students, highlighting critical gaps within the education system. An analysis of the 2018 PISA results indicated that Filipino students ranked second to last among 79 participating countries, achieving an average Mathematics score of 353 points—well below the OECD average of 489 points. This performance level is below Level 1 proficiency (Dooma et al., 2024; Acido & Caballes, 2024). These findings raise important concerns regarding the educational landscape in the Philippines and the systemic issues contributing to these outcomes.

One significant issue in the Philippines is the disparity in educational quality between public and private schools. Research shows that students in private institutions consistently outperform their public-school peers, highlighting the inequities embedded in the educational system (Chavez, 2024; Bernardo et al., 2022). This gap indicates that the public school system may lack resources, qualified teachers, and the innovative teaching methods that private schools utilize, which limit students' ability to achieve satisfactory Mathematical literacy (Dooma et al., 2024; Dicdiquin et al., 2023). Moreover, inequalities in resource availability greatly impact the effectiveness of Mathematics instruction and students' ability to tackle complex mathematical concepts (Dicdiquin et al., 2023; Acido & Caballes, 2024).

The teaching methods commonly used in Filipino classrooms also play a crucial role in insufficient performance. Traditional approaches, which often rely on rote memorization and provide limited focus on problem-solving skills, hinder students'

ability to apply mathematical concepts in real-life situations (Chavez, 2024; Machromah et al., 2020). Programs that promote critical thinking, numeracy skills, and practical applications of Mathematics are not adequately incorporated into the curricula (Machromah et al., 2020). Additionally, the findings suggest a lack of a comprehensive approach that aligns teaching methods with international assessment standards like PISA, resulting in fragmented educational experiences for students (Acido & Caballes, 2024; Kusmaryono & Kusumaningsih, 2023).

Further, social and economic factors affect students' performance, such as school climate and students' socio-emotional support systems, which have significantly influenced mathematics achievement in the Philippines (Bernardo et al., 2023). Economic disparities affect students' educational experiences and perceptions of mathematical abilities, contributing to a cycle of low achievement that is challenging to overcome (Bernardo, 2020). Additionally, students' socio-economic backgrounds can influence the relationship between their attitudes and performance, highlighting the need for policies that address these socio-emotional factors in conjunction with academic content (Bernardo, 2020). Similarly, students' self-efficacy in Mathematics, which is shaped by their growth mindset and educational beliefs, varies greatly based on socio-economic conditions (Bernardo, 2020).

As initiatives to improve education, such as curriculum reviews and teacher training programs, are proposed, the inherent challenges within the Filipino educational system must be carefully considered. Current strategies should go beyond surface-level interventions and adopt multifaceted approaches that address structural inequalities and pedagogical deficiencies (Bernardo et al., 2022; Acido & Caballes, 2024). Comprehensive educational reforms should incorporate modern teaching strategies, equitable resource distribution, and community engagement to create an environment conducive to mathematical literacy—all vital for supporting the development of Filipino learners in mathematics and meeting international standards.

Filipino learners face challenges in mathematics achievement as assessed by PISA, highlighting a convergence of inequalities in resource allocation, teaching methods, and socio-economic factors. Addressing these issues requires systemic reforms focusing on educational policies at the surface level and engaging with the deeper socio-economic roots affecting student performance. It is essential to acknowledge and address the interplay among these factors to ensure that future educational assessments accurately reflect the capabilities of Filipino learners.

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