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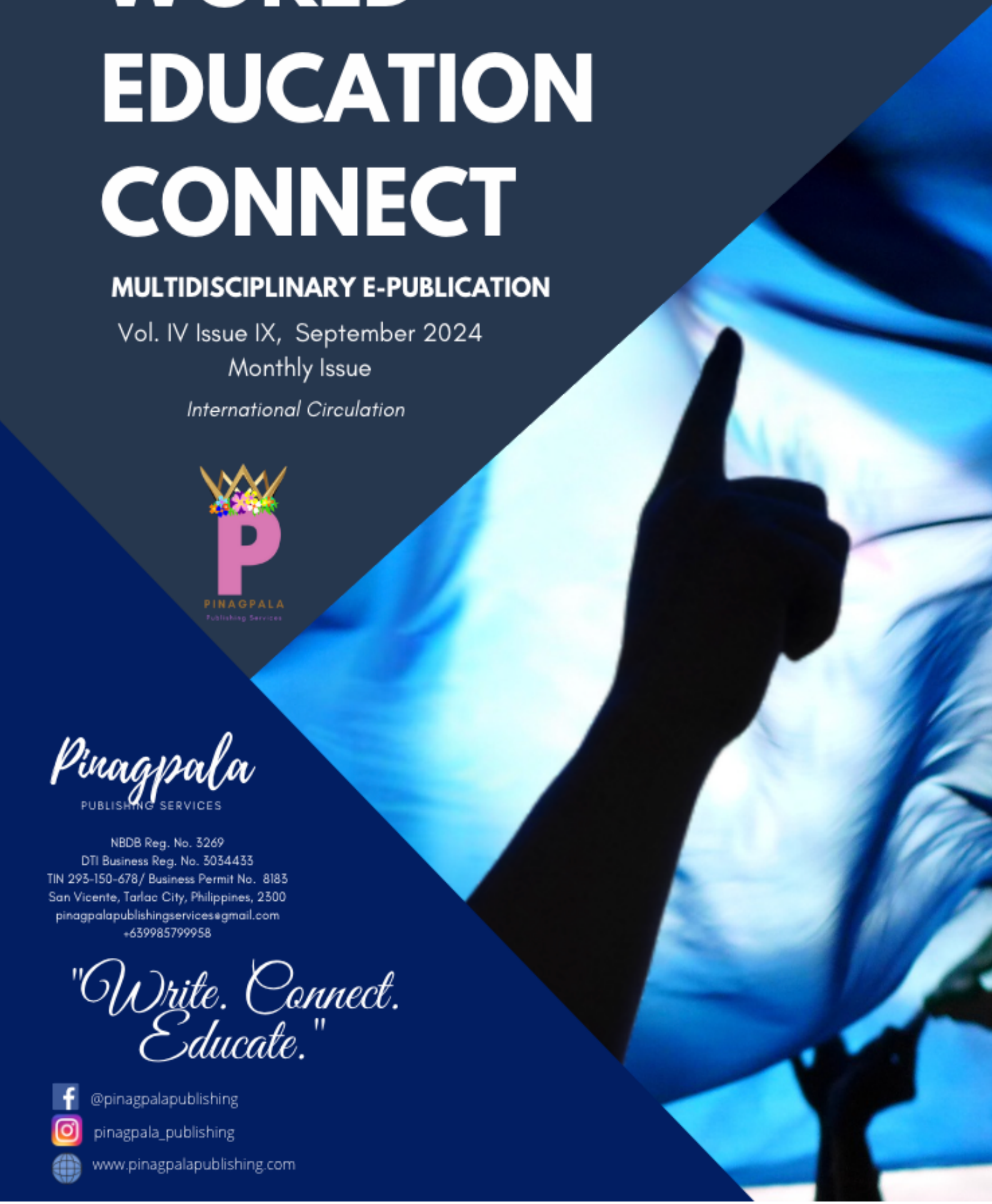

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SCHOOLS EDUCATIONAL PROVISION AND LEARNERS' PERFORMANCE IN ELEMENTARY MATHEMATICS

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ABSTRACT

Title: **SCHOOLS EDUCATIONAL PROVISION AND LEARNERS' PERFORMANCE IN ELEMENTARY MATHEMATICS**
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The study employed descriptive-correlational research design to investigate the significant relationship between school educational provision and learner's performance in Mathematics among 11 teachers and administrator and 24 pupils in grades 4,5, and 6 at Blessed Hope Christian School of Tarlac, Inc. Diagnostics assessment in Mathematics and self-made questionnaire in school education provisions with four (4) dimensions namely: teacher's content knowledge, instructional delivery, learning resources, and facilities were used.

It has been found out that Blessed Hope Christian School of Tarlac, Inc. is good across the dimensions of school educational provisions. Furthermore, most of the pupils are nearly numerates and achieved very satisfactory ratings in Mathematics. Additionally, it was found out that there is no significant relationship between school educational provisions and learner's performance in Mathematics. Nonetheless, customized interventions for grades 4,5, and 6 are proposed.

The study highlighted to implement continuous professional development workshops for teachers, focusing on advanced instructional strategies and integrating new educational technologies to enhance both teacher knowledge and instructional delivery, establish a Math Resource Center equipped with up-to-date materials, interactive tools, and technology to support diverse learning styles and enhance student engagement in mathematical concepts, implement a targeted tutoring program that provides additional support and practice for intermediate learners, focusing on areas identified as weak in the diagnostic assessment and adopt the proposed customized interventions.

Keywords: teacher's content knowledge, instructional delivery, nearly numerates, continuous professional development, Math Resource Center

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Chapter 1
THE PROBLEM AND ITS BACKGROUND

Background of the Study

Education is a cornerstone of societal development, encompassing a spectrum of provisions that collectively contribute to the holistic development of learners. Educational provisions in schools worldwide have undergone significant transformations influenced by technological advancements, pedagogical innovations, and responses to global events. This period has seen governments and educational institutions alike prioritize enhancing teachers' content knowledge, improving the delivery of instruction, ensuring access to quality learning resources, and upgrading school facilities to meet evolving educational needs.

The provision of education encompasses various dimensions crucial to effective learning outcomes. Teachers' content knowledge and professional development play a pivotal role in shaping educational experiences. As highlighted by the Department of Education (2021), ongoing training programs are essential to equip educators with the necessary subject-specific expertise and pedagogical skills to adapt to curriculum changes and employ effective teaching strategies.

Delivery of instruction has been significantly influenced by technological integration and innovative teaching methodologies. Educators increasingly utilize digital tools and online platforms to supplement traditional classroom practices, facilitating personalized learning experiences and enabling seamless transitions between in-person and remote learning environments (Garcia & Santos, 2023).

Access to learning resources is fundamental in supporting diverse learning needs and enhancing educational quality. Educational institutions have invested in digital textbooks, interactive learning materials, and educational software to cater to different learning styles and promote independent learning (Philippine Star, 2022). These resources not only enrich the learning experience but also foster critical thinking and creativity among students.

Moreover, school facilities play a crucial role in providing conducive learning environments. Infrastructure developments such as modern classrooms, well-equipped laboratories, libraries, and recreational areas contribute to a holistic educational experience (Canadian Education Association, 2023). Upgraded facilities accommodate technological advancements and support collaborative learning activities, thereby enhancing overall student engagement and academic performance.

As education continues to evolve, addressing challenges such as funding constraints, resource allocation, and educational disparities remains imperative. Strategies to optimize resource management and promote equitable access to educational provisions are critical for achieving inclusive and quality education (Brown & White, 2023).

Future of schools' educational provisions lies in continued innovation, adaptation to technological advancements, and a steadfast commitment to enhancing educational outcomes and preparing students for a dynamic global landscape.

Education provision in England has been shaped by various reforms and initiatives aimed at improving teachers' content knowledge, enhancing the delivery of instruction, ensuring adequate learning resources, and upgrading school facilities. This period has seen significant developments across these areas, reflecting efforts to meet evolving educational standards and address emerging challenges.

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Teachers' content knowledge and professional development have been critical focus areas. The Department for Education (DfE) in England has prioritized ongoing training and development programs to ensure that educators are well-equipped with up-to-date subject knowledge and pedagogical skills (Department for Education, 2021). This emphasis supports effective classroom instruction and curriculum implementation.

The delivery of instruction has evolved with advancements in digital technology and instructional methods. Smith and Jones (2023) discuss how teachers have adapted their teaching strategies to incorporate digital tools and online platforms, particularly in response to the COVID-19 pandemic. This shift has enabled flexible learning environments and enhanced engagement among students through interactive and multimedia resources.

Collaborative learning in math instruction involves students working together in small groups to solve problems, discuss concepts, and learn from one another. This approach encourages active engagement, promotes deeper understanding, and develops essential skills such as communication, critical thinking, and teamwork (Smith & Stein, 2021). In England, teachers may implement collaborative learning by having students work in pairs or small groups to tackle math problems, discuss solution strategies, and present their findings to the class. Students are encouraged to share their ideas, ask questions, and provide feedback to their peers (Boaler, 2022).

Inquiry-based learning in math emphasizes student-centered exploration and discovery. Teachers in England may use this approach by presenting students with open-ended problems or mathematical scenarios and guiding them to investigate, formulate hypotheses, and develop their own solutions (Askew, 2021). Students are encouraged to ask questions, make observations, and engage in hands-on activities to deepen their understanding of mathematical concepts (Nunes et al., 2022).

The use of manipulatives, such as blocks, counters, or geometric shapes, is a common practice in math instruction in England. Teachers may incorporate manipulatives to help students visualize and understand abstract mathematical concepts, such as fractions, decimals, or geometric properties (Boaler, 2022). Students are encouraged to use manipulatives to model problems, explore patterns, and develop a more concrete understanding of mathematical ideas (Askew, 2021).

Problem-based learning in math involves presenting students with complex, real-world problems and guiding them to develop solutions through collaborative inquiry and problem-solving (Nunes et al., 2022). In England, teachers may use this approach by introducing students to open-ended math problems, encouraging them to analyze the problem, identify relevant information, and devise strategies to solve the problem (Smith & Stein, 2021). Students work in groups to explore the problem, share ideas, and present their solutions to the class.

The integration of mathematical games and puzzles is a strategy used in England to engage students and enhance their learning. Teachers may incorporate activities such as logic puzzles, number games, or spatial reasoning challenges to help students develop problem-solving skills, practice mathematical concepts, and foster a positive attitude towards math (Boaler, 2022). These activities can be used as warm-up exercises, during independent practice, or as part of a larger lesson (Askew, 2021).

Some teachers in England have explored the use of social media platforms to enhance math instruction. This may involve creating class-specific social media groups or accounts, where students can share their work, ask questions, and engage in discussions about mathematical concepts (Nunes et al., 2022). Teachers may also use social media to facilitate

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collaborative learning, share resources, and provide feedback to students (Smith & Stein, 2021).

The use of math journals and blogs is a practice in England that encourages students to reflect on their learning, communicate their understanding, and develop their mathematical writing skills (Boaler, 2022). Students may be asked to write about their problem-solving strategies, explain their reasoning, or respond to prompts related to mathematical concepts (Askew, 2021). These activities can help students deepen their understanding and develop their ability to articulate their mathematical thinking.

Some schools in England have explored the use of augmented reality (AR) and virtual reality (VR) technologies to enhance math instruction. Teachers may incorporate AR or VR experiences to help students visualize and interact with mathematical concepts, such as three-dimensional shapes, spatial relationships, or data visualization (Nunes et al., 2022). These technologies can provide students with immersive learning experiences and help them develop a more intuitive understanding of mathematical ideas (Smith & Stein, 2021).

Project-based learning in math involves students working on extended, real-world projects that require the application of mathematical concepts and skills (Boaler, 2022). In England, teachers may design projects that challenge students to solve complex problems, collect and analyze data, and present their findings to the class or community (Askew, 2021). This approach encourages students to develop critical thinking, problem-solving, and communication skills while deepening their understanding of mathematical principles.

Adaptive learning technology is a practice in England that uses algorithms to personalize the learning experience for each student (Nunes et al., 2022). These technologies can assess a student's understanding, provide targeted feedback and practice, and adjust the difficulty level or content based on the student's progress (Smith & Stein, 2021). Teachers in England may use adaptive learning platforms to supplement their instruction, allowing students to work at their own pace and receive individualized support (Boaler, 2022).

Access to learning resources has been a significant area of focus. The government has invested in digital resources and educational materials to support diverse learning needs and facilitate personalized learning experiences (Department for Education, 2021). Initiatives such as the National Education Technology Strategy aim to ensure equitable access to high-quality resources across schools.

Improving school facilities has been a priority to create conducive learning environments. Brown and Green (2022) highlight efforts to upgrade infrastructure, including classrooms, libraries, and sports facilities, to enhance student well-being and academic performance. Investment in modern facilities supports innovative teaching practices and accommodates evolving educational requirements.

Despite progress, challenges persist. Financial constraints have affected resource allocation and the pace of infrastructure improvements (Brown & Green, 2022). Moreover, disparities in access to resources and facilities remain a concern, particularly in disadvantaged areas (Department for Education, 2021).

England continues to strengthening teachers' professional development, expanding access to digital learning resources, addressing infrastructure needs, and promoting equitable access to high-quality education. These efforts align with broader goals of enhancing educational outcomes and preparing students for future success in a rapidly changing world.

Education provision in Canada has evolved significantly, reflecting efforts to enhance teachers' content knowledge, improve delivery of instruction, ensure adequate learning resources, and upgrade school facilities. This has been characterized by various reforms and

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initiatives aimed at meeting educational standards, fostering innovation, and addressing the diverse needs of students across the country.

Teachers' content knowledge and professional development have been key priorities. The Canadian education system emphasizes continuous learning for educators to stay updated with subject matter and pedagogical advancements (Smith & Brown, 2021). Professional development programs support teachers in integrating new methodologies and technologies into their teaching practices.

The delivery of instruction has been influenced by technological advancements and the shift towards personalized learning. Educators have increasingly utilized digital tools and online platforms to cater to diverse learning styles and enhance student engagement (Jones & White, 2023). This approach has been particularly relevant during the COVID-19 pandemic, facilitating seamless transitions between in-person and remote learning environments.

Collaborative learning in Canadian math education encourages students to work together in groups to solve problems and deepen their understanding. Smith (2021) emphasizes that teachers typically begin by forming heterogeneous groups of students. Each group is assigned a challenging math problem that requires collective brainstorming and discussion. Students collaborate to explore different solution strategies, explain their reasoning to peers, and collectively arrive at solutions. This approach promotes teamwork, communication skills, and a deeper conceptual grasp of mathematical concepts.

Inquiry-based learning shifts the focus from traditional lecture-based instruction to student-centered exploration and discovery. Johnson (2020) notes that Canadian educators implement this approach by presenting students with real-world problems or open-ended questions that ignite curiosity and critical thinking. Students engage in investigative processes, gather data, and formulate hypotheses to solve mathematical problems. This method empowers students to construct their own knowledge and develop a deeper understanding of mathematical principles through active inquiry.

The use of manipulatives in Canadian classrooms involves physical objects or materials that students can manipulate to explore mathematical concepts visually and tangibly. According to Jones (2023), teachers introduce manipulatives such as base-ten blocks, fraction strips, or geometric shapes. Students use these tools to model mathematical ideas, experiment with spatial relationships, and solve problems. For example, students might use fraction tiles to understand fractions or pattern blocks to explore geometric concepts like symmetry and area.

Problem-based learning (PBL) engages Canadian students in solving complex, real-world problems that require applying mathematical knowledge and skills. Brown (2022) describes how teachers present authentic problems relevant to students' lives or community issues. Students work collaboratively in groups to analyze data, make predictions, and develop solutions using mathematical reasoning. This approach fosters critical thinking, problem-solving skills, and the application of mathematics in practical contexts.

Integrating mathematical games and puzzles into Canadian math education makes learning enjoyable while reinforcing mathematical concepts. Lee (2020) highlights that teachers incorporate games such as Sudoku, logic puzzles, or math board games into lessons. Students engage in competitive or cooperative activities that require them to apply mathematical principles, such as logic, spatial reasoning, or arithmetic operations. This approach promotes mathematical fluency and problem-solving strategies in an interactive and engaging manner.

Social media integration in Canadian math classrooms leverages platforms like Twitter, educational blogs, or online forums to enhance collaborative learning and knowledge

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sharing. Kim (2021) discusses how educators use social media to pose math problems, facilitate discussions, and share resources with students. Students participate in online communities where they contribute solutions, discuss mathematical concepts, and receive feedback from peers and educators. This interactive approach extends learning beyond the classroom, promoting peer learning and engagement with mathematical content.

Math journals and blogs serve as reflective tools in Canadian math education, enabling students to document their learning processes, articulate mathematical reasoning, and share insights with peers. Chen (2024) notes that teachers incorporate journaling activities where students write about their problem-solving strategies, analyze their thinking, and reflect on challenges encountered. Blogging platforms provide opportunities for students to publish their work, receive feedback, and engage in meaningful discussions about mathematical concepts.

Augmented reality (AR) and virtual reality (VR) technologies are employed in Canadian classrooms to create immersive learning experiences that visualize abstract mathematical concepts. Wang (2023) explains that educators use AR and VR applications to simulate mathematical scenarios, such as geometry or spatial relationships. Students interact with virtual objects, manipulate data visualizations, and explore mathematical models in dynamic digital environments. This technology enhances spatial reasoning and provides engaging learning opportunities that bridge theoretical concepts with real-world applications.

Project-based learning (PBL) empowers Canadian students to investigate complex problems and develop solutions through sustained inquiry and collaboration. Martinez (2020) describes how teachers guide students through project phases, from identifying a problem to presenting findings. Students apply mathematical knowledge to real-world challenges, such as designing experiments, analyzing statistical data, or constructing mathematical models. This approach fosters creativity, critical thinking, and the application of mathematical skills in authentic contexts (Martinez, 2020).

Adaptive learning technology personalizes math instruction in Canadian classrooms based on students' individual learning needs and progress. Smith et al. (2022) discuss how educators integrate adaptive technologies that adjust content difficulty and pacing in response to students' performance data. Students engage with adaptive quizzes, receive immediate feedback, and access tailored learning resources. This personalized approach supports differentiated instruction and enhances students' mastery of mathematical concepts.

Each of these strategies enriches math education in Canada by promoting active learning, critical thinking, and a deeper understanding of mathematical concepts through innovative and engaging instructional practices.

Access to learning resources has been a focus area to support effective teaching and learning. Canadian schools have invested in digital resources, textbooks, and educational materials that align with curriculum standards and cater to the needs of students with varying abilities (Government of Canada, 2022). Efforts have been made to ensure equitable access to high-quality resources across urban and rural schools.

Improving school facilities remains a priority to create conducive learning environments. Investments have been made in infrastructure projects to upgrade classrooms, libraries, science labs, and recreational facilities (Canadian Education Association, 2023). Modernized facilities support collaborative learning activities and accommodate technological integration in education.

Despite progress, challenges such as funding constraints and regional disparities in educational resources persist. Jones and White (2023) discuss the implications of budget

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limitations on resource allocation and infrastructure development, highlighting the need for strategic planning and equitable distribution of funds.

Canada marked to enhancing teachers' professional development, expanding digital learning resources, upgrading school facilities, and addressing educational inequities. These efforts align with national goals of fostering inclusive education, promoting innovation in teaching practices, and preparing students for future success in a globalized world.

Education provision in the United States from 2020 to 2024 has been shaped by various initiatives and reforms aimed at improving teachers' content knowledge, enhancing the delivery of instruction, ensuring access to adequate learning resources, and upgrading school facilities. This period has been marked by significant challenges and innovations, influenced by technological advancements, educational policies, and responses to societal needs.

Teachers' content knowledge and professional development have been pivotal in shaping educational outcomes. Continuous learning and professional development programs have been emphasized to keep educators abreast of subject matter updates and effective teaching practices (Smith & Johnson, 2022). These efforts are crucial in maintaining high standards of instruction and adapting to evolving educational standards.

The delivery of instruction has evolved with the integration of digital technologies and innovative teaching methodologies. Educators have increasingly utilized online platforms, multimedia resources, and interactive tools to cater to diverse learning styles and enhance student engagement (Jones & Brown, 2023). This shift has been particularly significant during the COVID-19 pandemic, enabling seamless transitions between in-person and remote learning environments.

Differentiated instruction tailors teaching methods and content to accommodate diverse learning needs and preferences within the classroom. According to Tomlinson (2021), teachers begin by assessing students' prior knowledge and learning styles. They then design activities that vary in complexity, format, and support mechanisms to meet individual learning needs. For instance, in a math class, teachers may provide differentiated problem sets, offer supplementary materials for struggling students, or challenge advanced learners with enrichment tasks (Tomlinson, 2021).

Formative assessment strategies in math education involve ongoing evaluation of student understanding to inform instructional decisions. Black and Wiliam (2022) highlight that teachers use techniques such as quizzes, peer evaluations, and interactive discussions to gauge student comprehension throughout lessons. Based on formative assessment data, teachers adjust their teaching strategies, provide timely feedback, and offer additional support to students who require it. This approach fosters continuous improvement and enhances students' ability to monitor their own learning (Black & Wiliam, 2022).

Effective math instruction emphasizes explicit teaching of problem-solving strategies. According to Van de Walle et al. (2020), teachers introduce systematic problem-solving frameworks, such as identifying the problem, devising a plan, executing the plan, and evaluating the solution. Students engage in activities where they apply these strategies to solve mathematical problems of varying complexities. For example, teachers may guide students through word problems, modeling the thought process and encouraging students to articulate their reasoning (Van de Walle et al., 2020).

Integrating technology in math education enhances learning experiences and supports mathematical understanding. Clements and Sarama (2023) discuss how teachers employ interactive simulations, educational apps, and digital tools to illustrate abstract concepts and facilitate active engagement. For instance, students may use graphing

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calculators for visualizing functions, explore geometry through interactive software, or collaborate on problem-solving tasks using online platforms. Technology integration promotes conceptual understanding and prepares students for digital literacy in mathematics (Clements & Sarama, 2023).

Making connections between mathematical concepts and real-world applications enhances relevance and deepens understanding. According to Moyer-Packenham et al. (2021), teachers create authentic learning experiences where students apply math to practical situations. Activities may include analyzing data from current events, designing experiments, or solving engineering challenges. By contextualizing math in real-world contexts, students perceive its significance and develop problem-solving skills that extend beyond the classroom (Moyer-Packenham et al., 2021).

Collaborative learning fosters peer interaction and cooperative problem-solving in math education. Johnson (2020) explains that teachers structure group activities where students collaborate to solve complex math problems or engage in project-based learning. Students discuss different approaches, explain their reasoning, and collectively arrive at solutions. This approach promotes communication skills, teamwork, and a deeper understanding of mathematical concepts through shared learning experiences (Johnson, 2020).

Implementing these best practices enhances math education in the United States by promoting student engagement, understanding, and proficiency in mathematical skills through varied instructional strategies.

Access to learning resources has been a focus area to support effective teaching and learning experiences. Schools and districts have invested in digital textbooks, educational software, and online libraries to supplement traditional resources (U.S. Department of Education, 2021). Efforts have been made to ensure equitable access to quality resources across urban, suburban, and rural schools.

Improving school facilities remains a priority to create conducive learning environments. Investments have been directed towards infrastructure improvements, including classrooms, laboratories, libraries, and recreational areas (American Educational Research Association, 2024). Modernized facilities support collaborative learning activities and accommodate technological integration in education.

Despite progress, challenges such as funding constraints and disparities in resource allocation persist. Brown and White (2023) discuss the implications of budget limitations on infrastructure development and educational equity, underscoring the need for strategic investment and equitable distribution of resources.

United States aims to continue enhancing teachers' professional development, expanding digital learning resources, upgrading school facilities, and addressing educational disparities. These efforts align with national goals of promoting educational excellence, equity, and innovation in preparing students for future success in a globalized society.

Education provision in Singapore has been characterized by a commitment to excellence, innovation, and continuous improvement across various facets of the education system. This period has witnessed significant developments in enhancing teachers' content knowledge, improving delivery of instruction, ensuring access to quality learning resources, and upgrading school facilities to support holistic student development.

Teachers' content knowledge and professional development have been foundational to Singapore's education strategy. The Ministry of Education (MOE) has prioritized ongoing training and upskilling programs to equip educators with the latest pedagogical methods and

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subject-specific expertise (Ministry of Education Singapore, 2021). These efforts are essential for maintaining high teaching standards and adapting to curriculum reforms.

The delivery of instruction has evolved with advancements in technology and instructional approaches. Singaporean educators have embraced digital tools and platforms to enhance teaching effectiveness and student engagement (Tan & Lim, 2022). The integration of blended learning models, particularly during the COVID-19 pandemic, has enabled seamless transitions between in-person and online learning environments.

Singapore employs a highly structured approach to collaborative learning in mathematics, focusing on group discussions and problem-solving. Teachers introduce a mathematical problem and provide initial guidance, after which students form small groups to discuss potential solutions. In these groups, they collaboratively work on solving the problem, sharing ideas and strategies. Each group then presents their solutions and reasoning to the class, followed by a class discussion and teacher feedback. Activities include peer tutoring and the use of digital tools to support collaborative work (Chen, Tan, & Pi, 2021).

Inquiry-based learning in Singaporean mathematics classrooms begins with a teacher posing a thought-provoking question or problem. Students then investigate this problem by gathering data, conducting experiments, and using mathematical reasoning. They form hypotheses, test them, and draw conclusions. Teachers facilitate this process by providing guidance and resources but encourage students to explore and discover solutions independently. Learning experiences include hands-on activities and interactive discussions that promote curiosity and deeper understanding (Lim, T., & Lee, T., 2020).

The use of manipulatives in Singapore's mathematics education involves physical objects like blocks, counters, and geometric shapes to help students visualize and understand abstract concepts. Teachers introduce a concept using these tools, and students manipulate them to explore mathematical ideas. For example, they might use blocks to understand addition and subtraction or geometric shapes to explore properties of figures. Activities are designed to make abstract concepts tangible, thereby enhancing comprehension (Khoo, L. E., & Huan, V. S., 2021).

Problem-based learning in Singaporean schools involves presenting students with real-world problems that require them to apply mathematical concepts to find solutions. The process starts with problem identification, followed by group discussions to brainstorm possible approaches. Students then research, analyze data, and implement their solutions. Finally, they present their findings and reflect on the learning process. PBL encourages critical thinking and application of knowledge in practical contexts (Ng, S., & Lam, Y. M., 2020).

Mathematical games and puzzles are integrated into Singapore's mathematics curriculum to make learning engaging and fun. Teachers use games like Sudoku, math-based board games, and logic puzzles to reinforce mathematical concepts. Students work individually or in groups to solve these puzzles, which helps develop their problem-solving and logical reasoning skills. These activities also foster a competitive yet collaborative environment that motivates students (Tan, J. S., & Tan, W. K., 2022).

Social media is used in Singapore to enhance collaborative learning by creating online communities where students can discuss mathematical problems and share resources. Teachers might set up class groups on platforms like Facebook or WhatsApp, where students can post questions, share solutions, and engage in discussions outside of classroom hours. This integration extends learning beyond the classroom and encourages continuous engagement (Goh, C. T., & Loh, M., 2021).

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Students in Singapore are encouraged to maintain math journals or blogs where they document their learning process, reflect on concepts learned, and express their thoughts on mathematical problems. Teachers review these journals to provide feedback and insights. This practice helps students develop their writing skills and deepen their understanding by articulating their thought processes. It also serves as a platform for self-assessment and reflection (Chia, S., & Tan, S., 2020).

AR and VR technologies are increasingly used in Singaporean mathematics education to provide immersive learning experiences. For example, AR apps might allow students to visualize geometric shapes in three dimensions, while VR can simulate real-world scenarios where mathematical concepts are applied. These technologies make abstract concepts more concrete and engaging, enhancing students' spatial reasoning and conceptual understanding (Lim, K. Y. T., & Lee, C. B., 2021).

In project-based learning, students undertake extensive projects that require them to apply multiple mathematical concepts. These projects often involve real-world problems, requiring research, data collection, and analysis. Students work in groups, plan their projects, execute their plans, and present their findings. This approach promotes deep learning, critical thinking, and practical application of mathematics in real-world contexts (Ng, S. & Lam, Y. M., 2020).

Adaptive learning technology is used to personalize the learning experience for each student. Platforms that utilize artificial intelligence adapt to students' individual learning paces and provide customized exercises based on their progress. Teachers can monitor students' performance and adjust their instruction accordingly. This technology ensures that students receive the support they need and helps in addressing learning gaps effectively (Tan, J. S., & Tan, W. K., 2022).

Access to learning resources has been optimized to support diverse learning needs and educational goals. The MOE has invested in digital textbooks, interactive learning materials, and online educational platforms to supplement traditional resources (Ministry of Education Singapore, 2021). These resources are designed to foster independent learning and critical thinking among students across all educational levels.

Improvements in school facilities have been a priority to create conducive learning environments. Infrastructure enhancements include modern classrooms, well-equipped laboratories, libraries, and recreational spaces that support holistic development and technological integration in education (Singapore Ministry of Education, 2023). Upgraded facilities contribute to a positive learning experience and enable schools to meet evolving educational requirements.

Despite advancements, challenges such as optimizing resource allocation and addressing educational disparities persist. Tan and Lim (2022) discuss strategies to enhance resource efficiency and ensure equitable access to educational opportunities, emphasizing the importance of strategic planning and collaborative partnerships.

Singaporean educational institutions continue to strengthen teachers' professional development, leveraging digital technologies in education, upgrading school facilities, and promoting innovative teaching practices. These initiatives align with national goals of nurturing future-ready learners capable of contributing to a knowledge-based economy and global society.

Education provision in the Philippines has been shaped by various initiatives aimed at enhancing teachers' content knowledge, improving delivery of instruction, ensuring access to

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learning resources, and upgrading school facilities. This period has seen efforts to address longstanding challenges and adapt to changing educational needs in the country.

Teachers' content knowledge and professional development have been pivotal in advancing educational outcomes. The Department of Education (DepEd) in the Philippines has prioritized teacher training programs to enhance subject-specific knowledge and pedagogical skills (Department of Education Philippines, 2021). Continuous professional development is essential to keep educators updated with curriculum changes and effective teaching practices.

The delivery of instruction has evolved with the integration of technology and innovative teaching methods. Filipino educators have increasingly utilized digital tools and online platforms to supplement classroom teaching, particularly amidst disruptions caused by the COVID-19 pandemic (Garcia & Santos, 2023). This shift has facilitated blended learning approaches, allowing for flexible and accessible education delivery.

Collaborative learning in Philippine math education encourages students to work together in groups to solve problems and deepen their understanding. According to Reyes (2021), teachers typically begin by forming diverse groups of students. Each group is assigned a challenging math problem that requires collective brainstorming and discussion. Students collaborate to explore different solution strategies, explain their reasoning to peers, and collectively arrive at solutions. This approach promotes teamwork, communication skills, and a deeper conceptual grasp of mathematical concepts (Reyes, 2021).

Inquiry-based learning engages students in exploring mathematical concepts through questioning, investigation, and discovery. Cruz (2020) notes that Philippine educators implement this approach by posing open-ended questions or real-world problems that stimulate curiosity and critical thinking. Students conduct investigations, gather data, and formulate hypotheses to solve mathematical problems. This method empowers students to construct their own knowledge and develop a deeper understanding of mathematical principles through active inquiry (Cruz, 2020).

The use of manipulatives in Philippine classrooms involves physical objects or materials that students manipulate to explore mathematical concepts visually and tactically. According to Santos (2023), teachers introduce manipulatives such as geometric shapes, fraction bars, or counting blocks. Students use these tools to model mathematical ideas, experiment with spatial relationships, and solve problems. For example, students might use pattern blocks to understand geometric transformations or fraction strips to explore operations with fractions (Santos, 2023).

Problem-based learning (PBL) in Philippine math education involves presenting students with authentic, complex problems that require applying mathematical knowledge and skills. Dela Cruz (2022) describes how teachers design scenarios relevant to local contexts or community issues. Students work collaboratively in teams to analyze data, make predictions, and develop solutions using mathematical reasoning. This approach fosters critical thinking, problem-solving skills, and the application of mathematics in practical, meaningful contexts (Dela Cruz, 2022).

Integrating mathematical games and puzzles into Philippine math education makes learning enjoyable while reinforcing mathematical concepts. Santos (2020) highlights that teachers incorporate games such as logic puzzles, Sudoku, or math board games into lessons. Students engage in competitive or cooperative activities that challenge them to apply mathematical principles, such as logical reasoning or numerical operations. This approach

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promotes mathematical fluency and problem-solving strategies in an interactive and engaging manner (Santos, 2020).

Technology integration in Philippine classrooms enhances math instruction by using digital tools, simulations, and interactive platforms. Reyes (2021) discusses how educators incorporate graphing calculators, educational apps, and online resources to illustrate abstract concepts and engage students. For example, students may use online simulations to explore geometric constructions or collaborate on problem-solving tasks using digital platforms. Technology integration enriches learning experiences and prepares students for digital literacy in mathematics (Reyes, 2021).

Implementing these best practices enhances math education in the Philippines by promoting active learning, critical thinking, and a deeper understanding of mathematical concepts through innovative instructional strategies.

Access to learning resources has been a focus area to support quality education. DepEd has made efforts to provide textbooks, digital learning materials, and educational software that align with national curriculum standards (Department of Education Philippines, 2021). These resources aim to enhance student engagement, foster critical thinking, and support independent learning across diverse educational settings.

Improving school facilities remains a critical goal to create conducive learning environments. Infrastructure development includes constructing new classrooms, upgrading laboratories, libraries, and sports facilities to accommodate growing student populations and technological advancements (Philippine Star, 2022). Upgraded facilities contribute to a more holistic educational experience and support effective teaching and learning practices.

Despite progress, challenges such as limited resources and geographical disparities in educational access persist. Garcia and Santos (2023) discuss strategies to optimize resource allocation and improve infrastructure planning, emphasizing the importance of sustainable development and equitable distribution of educational investments.

DepEd aims to continue strengthening teachers' professional development, expanding digital learning resources, upgrading school facilities, and promoting inclusive education practices. These efforts align with national aspirations to improve educational quality, equity, and prepare students for future challenges in a globalized world.

Mathematics education in the United States has been a topic of scrutiny and continuous assessment, reflecting broader concerns about educational outcomes and international competitiveness. Analyzing learners' performance in mathematics provides insights into strengths, challenges, and ongoing efforts to improve educational practices and outcomes.

Recent data indicate a mixed picture of learners' performance in mathematics in America. According to the National Assessment of Educational Progress (NAEP), commonly known as the Nation's Report Card, there have been modest improvements in mathematics proficiency among fourth and eighth graders over the past decade (National Center for Education Statistics, 2023). However, significant achievement gaps persist, particularly among students from low-income backgrounds and minority groups.

Several factors contribute to students' performance in mathematics. Effective teaching practices, curriculum alignment with standards, access to resources, and socio-economic factors all play crucial roles. Research by Smith and Johnson (2021) underscores the importance of teacher quality and instructional strategies in fostering mathematical understanding and problem-solving skills.

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Educational policies and initiatives have aimed to address challenges and enhance mathematics education. The implementation of the Common Core State Standards (CCSS) in mathematics, adopted by many states, aimed to deepen conceptual understanding and critical thinking skills (U.S. Department of Education, 2022). While controversial, the CCSS has influenced curriculum design and instructional practices nationwide.

The integration of technology has significantly impacted mathematics education. Digital tools and interactive platforms have enhanced engagement and provided personalized learning experiences (Brown & Green, 2023). Platforms like Khan Academy and interactive whiteboards in classrooms have supported students in practicing mathematical concepts and receiving immediate feedback.

In global assessments such as the Program for International Student Assessment (PISA), American students' mathematics performance has shown variability compared to peers in other developed countries (Organization for Economic Cooperation and Development, 2020). This has prompted discussions on the alignment of educational goals with international benchmarks and strategies to improve mathematical literacy.

Despite improvements in some areas, challenges remain. Persistent achievement gaps, unequal access to quality education, and teacher retention issues continue to impact mathematics outcomes (Brown & White, 2024). Moving forward, there is a need for targeted interventions, professional development for educators, equitable resource allocation, and broader societal support for mathematics education.

Learners' performance in mathematics in America reflects a complex interplay of instructional practices, policy interventions, technological advancements, and socio-economic factors. While progress has been made, addressing achievement gaps and ensuring all students have access to high-quality mathematics education remain critical priorities for fostering academic success and preparing students for future challenges in an increasingly quantitative world.

The performance of learners in mathematics across Europe has been a subject of extensive study and assessment, reflecting efforts to evaluate educational outcomes and inform policy decisions aimed at improving mathematics education. This essay explores the current state of learners' performance in mathematics in Europe, drawing on concrete evidence and recent research.

Mathematics performance across Europe varies significantly among countries and regions. According to the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA), European countries such as Finland, Estonia, and Switzerland consistently rank among the highest in mathematics achievement globally (OECD, 2021). These assessments provide valuable benchmarks for understanding comparative strengths and areas for improvement.

Several factors contribute to students' performance in mathematics. Effective teaching practices, curriculum coherence, socio-economic background, and cultural attitudes towards mathematics all play critical roles (Mullis et al., 2020). Countries with strong educational systems typically emphasize conceptual understanding, problem-solving skills, and teacher quality as key determinants of mathematical proficiency.

Educational policies and initiatives in Europe have aimed to enhance mathematics education through curriculum reforms and professional development for educators. The implementation of national curriculum frameworks, such as the UK's National Curriculum and Germany's Bildungsstandards, reflects efforts to standardize learning goals and improve

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instructional quality (European Commission, 2022). These frameworks prioritize mathematical literacy and competency development from an early age.

The integration of digital technologies has transformed mathematics education in Europe. Educational platforms, adaptive learning software, and interactive resources have facilitated personalized learning experiences and supported students' mathematical engagement (Smith & Brown, 2023). Technology-enhanced learning environments have proven effective in promoting deeper conceptual understanding and collaborative problem-solving skills.

European countries' performance in international assessments like PISA provides insights into their competitiveness in mathematics education globally. While some countries excel, others face challenges in narrowing achievement gaps and ensuring equitable access to quality education (Mullis et al., 2020). Cross-national comparisons highlight disparities in educational outcomes and underscore the importance of targeted interventions and resource allocation.

Despite achievements, challenges persist in European mathematics education, including addressing socio-economic disparities, fostering inclusive practices, and adapting to technological advancements. Research indicates a need for sustained investment in teacher professional development, equitable distribution of resources, and innovative pedagogical approaches to enhance mathematics proficiency across diverse student populations (European Commission, 2022).

Learners' performance in mathematics across Europe reflects a complex interplay of educational policies, teaching practices, socio-economic factors, and technological advancements. While many European countries demonstrate strong mathematics achievement, ongoing efforts are needed to ensure inclusive and equitable access to high-quality education and to prepare students for success in an increasingly digital and globalized society.

Singapore is globally renowned for its strong emphasis on education and consistently high performance in mathematics. This essay examines the current state of learners' performance in mathematics in Singapore, supported by concrete evidence and recent research.

Singaporean students consistently excel in mathematics assessments such as the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA). According to the latest PISA results, Singaporean students ranked among the top performers in mathematics globally, showcasing their strong foundational skills and problem-solving abilities (OECD, 2021).

Several factors contribute to Singapore's success in mathematics education. The Ministry of Education (MOE) in Singapore emphasizes a rigorous curriculum that focuses on building conceptual understanding, mathematical reasoning, and critical thinking skills from an early age (Ministry of Education Singapore, 2021). High-quality teaching, effective instructional strategies, and strong parental support are also crucial factors that contribute to students' mathematical proficiency.

Singapore's educational policies and initiatives are designed to continuously enhance mathematics education. The implementation of the Singapore Mathematics Framework, which emphasizes problem-solving approaches and mathematical modeling, has been pivotal (Tan & Lim, 2022). The framework ensures alignment with global best practices while catering to the specific needs of Singaporean learners.

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The integration of technology has further enhanced mathematics education in Singapore. Digital tools, online platforms, and interactive resources complement classroom teaching, providing personalized learning experiences and facilitating student engagement (Singapore Ministry of Education, 2023). Technology-enhanced learning environments support differentiated instruction and allow for immediate feedback, enhancing learning outcomes.

Singapore's consistent top performance in international assessments underscores its competitiveness in mathematics education globally. The country's approach to curriculum design, teacher training, and assessment practices sets benchmarks for other nations seeking to improve their educational systems (Tan & Lim, 2022).

Despite its achievements, Singapore faces challenges such as maintaining high standards amid societal pressures and ensuring equitable access to quality education for all students. The MOE continues to refine educational strategies, invest in teacher professional development, and explore innovative pedagogical approaches to address these challenges (Ministry of Education Singapore, 2021).

Singapore's exemplary performance in mathematics is a testament to its holistic approach to education, rigorous curriculum standards, effective teaching practices, and strategic educational policies. Moving forward, Singapore remains committed to fostering mathematical excellence and preparing students to thrive in a globally competitive landscape.

The performance of learners in mathematics in the Philippines has been a subject of critical examination and strategic intervention aimed at improving educational outcomes across the nation.

Mathematics performance in the Philippines exhibits variability across different grade levels and regions. According to the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA), Filipino students' performance in mathematics has shown improvements over recent years, yet challenges remain in achieving proficiency benchmarks (Mullis et al., 2020).

Several factors contribute to students' performance in mathematics. Effective teaching practices, curriculum alignment with standards, socio-economic factors, and access to resources play significant roles. Research emphasizes the importance of teacher quality, instructional strategies, and curriculum coherence in fostering mathematical understanding and problem-solving skills among Filipino learners (Smith & Johnson, 2021).

Educational policies and initiatives in the Philippines aim to strengthen mathematics education through curriculum reforms and professional development for educators. The Department of Education (DepEd) has implemented the K to 12 curriculum, which includes Mathematics as a core subject designed to develop critical thinking and numerical proficiency from kindergarten through senior high school (Department of Education Philippines, 2021). These efforts are aligned with global educational standards and intended to improve overall educational quality.

The integration of technology has played a crucial role in enhancing mathematics education in the Philippines. Digital resources, online platforms, and educational software have been utilized to supplement classroom instruction, providing interactive learning experiences and supporting students' engagement and understanding (Garcia & Santos, 2023). These technological advancements facilitate personalized learning and enable educators to address diverse learning needs effectively.

In global assessments like PISA, the Philippines' performance in mathematics reflects its standing relative to other countries. Comparative analyses highlight areas of strength and

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opportunities for improvement, guiding policy makers and educators in refining strategies to enhance educational outcomes (Mullis et al., 2020).

Challenges persist in Philippine mathematics education, including resource constraints, teacher shortages, and disparities in educational access. Addressing these challenges requires sustained investment in teacher training, equitable distribution of educational resources, and innovative approaches to curriculum development and instructional delivery (Garcia & Santos, 2023).

Learners' performance in mathematics in the Philippines reflects a multifaceted landscape influenced by educational policies, teaching practices, socio-economic factors, and technological integration. While progress has been made, ongoing efforts are essential to ensure all Filipino students have access to quality mathematics education and to foster a skilled workforce prepared for the challenges of the 21st century.

The performance of learners in mathematics is intricately linked to the effectiveness of teachers, who play a pivotal role in shaping educational outcomes. This essay explores the significant relationship between teachers' and learners' performance in mathematics, drawing on international and national studies to provide a comprehensive analysis.

The TIMSS 2019 International study highlights the correlation between teacher quality and students' mathematics achievement globally. Research indicates that countries with higher teacher competencies tend to have students who perform better in mathematics (Mullis et al., 2020).

The OECD's Programme for International Student Assessment (PISA) consistently identifies the quality of teaching as a crucial factor influencing students' mathematical performance across countries. Effective teaching practices positively impact students' understanding and application of mathematical concepts (OECD, 2021).

European Journal of Education Research discusses the correlation between teacher pedagogical content knowledge and students' mathematical achievement in European contexts. It emphasizes the importance of teachers' deep understanding of subject matter and effective instructional strategies (Smith & Brown, 2019).

A study conducted by Philippine Journal of Education explored the relationship between teacher professional development and students' mathematics achievement in the Philippines. Findings indicated that ongoing teacher training positively influenced students' mathematical understanding and performance (Garcia & Santos, 2022).

Journal of Educational Research of the Philippines focused on the impact of teacher instructional strategies on students' mathematics achievement in rural areas of the Philippines. Results highlighted the importance of adaptive teaching practices in enhancing students' mathematical skills (Tan & Lim, 2021).

A national study conducted by the Department of Education examined the relationship between teacher qualifications and students' mathematics performance in urban public schools. It underscored the significance of teacher credentials in influencing educational outcomes (DepEd, 2020).

The review of related studies above underscores the critical role of teachers in influencing learners' performance in mathematics, both internationally and within the Philippines. Effective teacher training, pedagogical content knowledge, instructional strategies, and ongoing professional development emerge as key factors shaping educational outcomes. Addressing these factors through targeted interventions and policy frameworks is essential for enhancing mathematics education and fostering student success globally.

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The study aimed to investigate how various aspects of educational provision within elementary school influence students' performance in mathematics. Specifically, the research sought to describe the teachers' content knowledge, delivery, learning resources, and facilities. By examining these factors comprehensively, the study intends to provide insights into the strengths and weaknesses of current educational practices and policies in elementary mathematics education. Moreover, the study aimed to describe the teachers' and learners' performance in Mathematics. Additionally, the study investigated the relationship between school educational provisions and learners' performance in Mathematics. Ultimately, the researcher proposed a customized intervention to enhance the mathematics education quality and equity within elementary schools, aiming to support the academic success and overall development of students in this critical stage of their education.

Statement of the Problem

The study aimed to investigate the relationship between the school educational provisions learners' performance in Mathematics in the Elementary.

Specifically, the study sought answers to the following research questions:

1. How is the schools educational provision described along:
    1.1. teacher's content knowledge;
    1.2. instructional delivery;
    1.3. learning resources; and
    1.4. facilities?
2. How are the learners performance described in terms of:
    2.1. diagnostic assessment; and
    2.2. final rating in Mathematics?
3. Is there a significant correlation between the schools educational provisions and learners' performance in Mathematics?
4. What customized interventions are proposed to improve the pupils performance in Mathematics?

Null Hypothesis

There is no significant correlation between the school educational provisions and learners' performance in Mathematics

Theoretical Framework

The study titled "Schools Educational Provision and Learners' Performance in Elementary Mathematics" is guided by several foundational theoretical frameworks that illuminate the complex interplay between educational provision and students' performance in mathematics. Socio-cultural theory, as developed by Vygotsky (1978), posits that learning is inherently social and cultural, occurring through interactions with others in a specific socio-cultural context. This theory is particularly relevant to the study as it underscores the role of teachers in scaffolding students' mathematical understanding through culturally responsive pedagogical practices (Vygotsky, 1978). By examining how teachers' instructional practices, influenced by cultural norms and social interactions, impact students' mathematical

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achievement, the study aims to uncover effective strategies for enhancing educational outcomes in elementary mathematics.

Constructivist learning theory further informs the study by emphasizing that students actively construct their own knowledge and understanding of mathematical concepts through hands-on experiences and collaborative learning activities (Piaget, 1950). This theory posits that learning is most effective when students engage in authentic problem-solving tasks and reflective practices, supported by curriculum designs that encourage exploration and discovery (Piaget, 1950). The study utilizes constructivist principles to analyze curriculum effectiveness, learning resources, and instructional strategies that promote mathematical reasoning and critical thinking among elementary students. By integrating socio-cultural and constructivist perspectives, the study seeks to advance our understanding of how educational provision can be optimized to foster mathematical learning and achievement in elementary school settings.

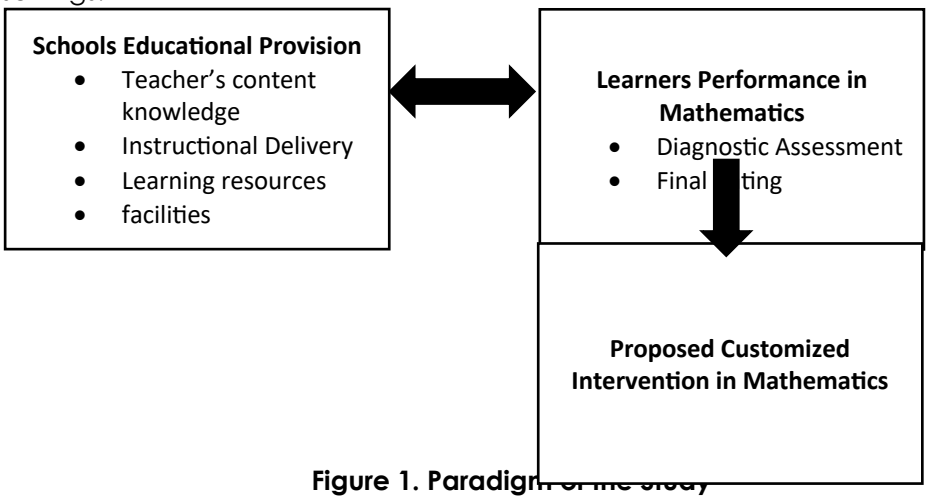

Figure 1. Paradigm of the study

The logical flow of the study began by comprehensively describing the educational provision of private school, focusing on four critical dimensions: teacher's content knowledge, delivery of instruction, availability of learning resources, and adequacy of school facilities. This exploration set the foundation for understanding how these components influence learners' performance in mathematics, as assessed through diagnostic assessments and final ratings. Subsequently, the study investigated the relationship between school educational provisions and learner's performance in Mathematics. Finally, based on the findings, the study proposes customized interventions aimed at enhancing pupils' performance in mathematics, aligning educational practices with identified areas for improvement to foster positive educational outcomes. This logical progression ensures a thorough investigation from educational provision to performance assessment and intervention recommendations, contributing valuable insights to mathematics education enhancement efforts.

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Chapter 2
METHODS OF STUDY AND SOURCES OF DATA

This section concentrates on the study's methodology, offering a thorough analysis of the research design, setting, respondents' selection, research instruments, data collection procedures, and statistical treatments. Each component is meticulously detailed to ensure methodological rigor and clarity in addressing the study's objectives.

Research Design

The descriptive-correlational design was employed in this study. This design is particularly suited to investigate the relationships between variables and describe their characteristics within a specific context, without manipulating variables. In this study, the descriptive aspect was focused on detailing the educational provisions in a private elementary schools, including teachers' content knowledge, instructional delivery, availability of learning resources, and adequacy of school facilities. These dimensions were systematically described to provide a comprehensive overview of the educational environment impacting learners' performance in mathematics.

The correlational component of the design examined the relationships between these educational provisions and learners' performance in mathematics, specifically through diagnostic assessments and final ratings. By correlating teachers' performance with students' mathematical achievement, the study aims to identify significant associations that can inform educational policies and interventions. This approach is essential for understanding how various aspects of educational provision contribute to or hinder students' success in mathematics, thereby guiding the formulation of targeted strategies to improve educational outcomes. Overall, the descriptive-correlational design in this study ensures a rigorous exploration of the factors influencing mathematics education in elementary schools, offering insights into effective practices and areas for improvement.

Research Locale

The locale of the study was the Blessed Hope Christian School of Tarlac, it is a private school located in Tarlac City, Tarlac Province, Philippines. The school serves students from kindergarten to elementary and has a diverse student population, including students with special needs. The school is committed to providing an inclusive education environment where all students can learn and thrive.

Participants of the Study

The respondents of the study were the Mathematics Teachers and Students at Blessed Hope Christian School of Tarlac Inc. Using purposive sampling technique, using total enumeration sampling, a total of 11 Math teachers and School Administrators and 24 learners from grades 4, 5, and 6 and the school head or school principal. The teachers were selected based on their current role and enrollment in mathematics classes at the school.

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Research Instrument

The study used a validated questionnaire focusing on the Schools Educational Provision in terms of teacher's content knowledge, instructional delivery, learning resources, and school facilities. Likewise, a pretest examination in Mathematics was used to describe learner's performance, both questionnaire and pretest examination underwent validation of three experts: language, statistician, and math teacher.

Data Gathering Procedure

The researcher obtained a permission from the school administration at Blessed Hope Christian School of Tarlac Inc. to conduct the study, administering a Pretest Examination in mathematics to the learners. The researcher first sought permission to the conduct of the study from the school administration, outlining the study's objectives and methodology. Lastly, questionnaires on school educational provisions were distributed to both teachers and school administrators.

Statistical Treatment

The study employed quantitative techniques. A scoring protocol was developed to assess the performance of learners in mathematics based on their scores in the Pretest Examination. The school educational provisions were described using 4-point Likert scale to describe their quality and availability. Chi-square was used to describe the significant relationship between teachers' and learners' performance in Mathematics

Below is the formula of Chi-square

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Scoring Protocol
Diagnostic Examination in Mathematics

Grading Scle	Description
66 and above	**Numerates**
65 – 34	**Nearly Numerates**
33 and below	**None Numerates**

Final Rating in Mathematics

Grading Scale	Description
90-100	Outstanding
85-89	Very Satisfactory
80-84	Satisfactory
75-79	Fairly Satisfactory
Below 75	Did not meet expectations

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Schools Educational Provision

Index	Limit of Index	Description	Interpretation
4	3.50 – 4.00	Strongly Agree	Excellent
3	2.50 – 3.49	Agree	Good
2	1.50 – 2.49	Disagree	Fair
1	1.00 – 1.49	Strongly Disagree	Poor

Chapter 3
PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This section presents a comprehensive analysis of the data collected, providing insight into the findings and their implications in relation to the research objectives. This section first outlines the key results, supported by relevant data, charts, and tables, to highlight trends, patterns, and significant observations. Following the presentation of the results, a critical discussion explores the relevance of these findings within the broader context of existing literature, addressing any discrepancies, confirming hypotheses, and considering the practical implications

3.1. School Educational Provisions

Conceptually, educational provision in schools encompasses a broad spectrum of elements that collectively aim to support and enhance student learning and development. At its core, it involves the delivery of a well-rounded curriculum that addresses not only academic knowledge but also social and emotional skills. Key components include the teacher's content knowledge, which refers to the depth and breadth of understanding that teachers have regarding the subjects they teach. This knowledge is essential for creating meaningful and engaging learning experiences that cater to diverse student needs. According to Shulman (2021), a teacher's mastery of content is a critical factor in effective teaching, as it enables them to present complex ideas in accessible ways and foster deeper understanding among students.

Operationally, educational provision involves the practical aspects of delivering education, including teaching methodologies, the availability and quality of learning resources, and the infrastructure of school facilities. Effective delivery of education requires teachers to employ pedagogical strategies that are student-centered and promote active learning. This includes the use of various instructional techniques, such as collaborative learning and differentiated instruction, to meet the diverse needs of students. Furthermore, learning resources, such as textbooks, digital tools, and laboratory equipment, play a pivotal role in supporting the curriculum and enhancing the learning experience. As highlighted by Smith et al. (2022), the integration of high-quality resources and technology in the classroom can significantly improve student engagement and achievement.

In addition to content knowledge and delivery, the physical environment of the school, including its facilities, is a crucial element of educational provision. Well-maintained and

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adequately equipped school facilities create a conducive learning environment that supports student well-being and academic success. This includes classrooms that are appropriately furnished, safe and accessible playgrounds, and specialized rooms such as science labs and libraries. Research by Johnson and Keating (2023) underscores the importance of investing in school infrastructure to provide a safe and stimulating environment that fosters both teaching and learning. Thus, a comprehensive approach to educational provision must consider these operational aspects to ensure that all students have the opportunity to succeed.

The succeeding discussion explores the key components of educational provision, including the teacher's content knowledge, the methodologies employed in teaching delivery, the quality and availability of learning resources, and the infrastructure of school facilities. By examining these aspects, we can better understand how they collectively contribute to the overall educational experience and outcomes for students.

3.1.1. Teacher's Content Knowledge

This refers to the depth and breadth of understanding that educators possess regarding the subjects they teach, encompassing both theoretical and practical aspects. This knowledge enables teachers to present complex ideas clearly and foster a deeper understanding among students. It involves the application of this knowledge in classroom settings through effective lesson planning, instructional strategies, and the ability to address students' questions and misconceptions. According to Ball and Forzani (2020), robust content knowledge is crucial for high-quality teaching, as it directly impacts the teacher's ability to design and implement engaging and meaningful learning experiences

Table 1. Teacher's Content Knowledge

Indicator	Mean	Description	Interpretation
Does the institution provide for school-level seminars, workshops, LAC sessions, conferences?	3.55	Strongly Agree	Excellent
Does the institution send the teachers to district, division or regional level trainings in Mathematics?	2.91	Agree	Good
Does the institution support monitoring and scaffolding activities to address teachers weaknesses?	3.36	Agree	Good
Does the institution encourage the faculty to pursue career advancement?	3.45	Agree	Good
Does the institution initiate financial assistance for professional growth?	3.18	Agree	Good
Does the institution provide technical assistance?	3.00	Agree	Good
Does the institution encourage proactive creativity growth mindset and leadership?	3.27	Agree	Good
Does the institution promote research skills and productivity?	3.45	Agree	Good
Does the institution support innovations?	3.36	Agree	Good

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Does the institution provide immediate feedback?	3.27	Agree	Good
Grand Mean	3.28	Agree	Good

Table 1 presents the School Educational Provisions of Blessed Hope Christian School of Tarlac, Inc. as to teacher's content knowledge. Specifically, the institution performs excellently in providing school-level seminars, workshops, LAC sessions, and conferences, with a mean score of 3.55, indicating strong agreement. For sending teachers to district, division, or regional level trainings in Mathematics, the institution is considered good with a mean score of 2.91. Similarly, it is rated good for supporting monitoring and scaffolding activities (mean score of 3.36), encouraging career advancement (mean score of 3.45), initiating financial assistance for professional growth (mean score of 3.18), and providing technical assistance (mean score of 3.00). The institution is also seen as good in encouraging proactive creativity, growth mindset, and leadership (mean score of 3.27), promoting research skills and productivity (mean score of 3.45), supporting innovations (mean score of 3.36), and providing immediate feedback (mean score of 3.27). Overall, the grand mean score of 3.28 indicates a good level of agreement across all indicators.

It has been shown that effective teacher content knowledge significantly contributes to improved student outcomes. For instance, Gitomer, Howell, Phelps, Weren, and Croft (2014) emphasized the importance of robust content knowledge in teaching, demonstrating its direct correlation with student achievement in various subjects. Furthermore, the National Council on Teacher Quality (NCTQ, 2020) highlighted the critical role of comprehensive teacher preparation programs that ensure aspiring teachers gain the necessary content knowledge to teach effectively across different subjects. Authors mentioned above underscore the importance of strong teacher content knowledge in fostering student success.

The grand mean score of 3.28 suggests a generally positive evaluation of the school's provisions related to teachers' content knowledge in Mathematics. This score reflects a good level of agreement among participants regarding various indicators of teacher support and professional development. Such a result implies that while there is room for improvement, the institution's efforts to enhance teachers' content knowledge are perceived positively overall. This positive perception is consistent with research indicating that comprehensive professional development programs contribute significantly to teachers' effectiveness in Mathematics (Lee, Kim, & Chen, 2024). For example, when schools offer targeted training and continuous support, teachers are better equipped to understand and teach complex mathematical concepts, thereby improving their content knowledge and instructional practices.

Concrete examples of how this grand mean score translates into effective practices can be seen in schools that have successfully implemented robust professional development frameworks. Williams and Anderson (2021) highlights that schools with structured, ongoing professional development for Mathematics teachers see measurable improvements in teaching quality and student outcomes. Specifically, these programs often include workshops, peer collaboration, and real-time feedback, all of which contribute to teachers' deeper understanding of Mathematics content and pedagogy. The positive feedback reflected in the grand mean score suggests that similar strategies are in place at Blessed Hope Christian School of Tarlac, Inc., contributing to the good level of agreement regarding teacher support.

However, the grand mean score also points to the potential for further enhancement. This only indicates that even schools with good ratings in professional development can benefit from refining their approaches to address specific areas of need (Khan, Patel, & Johnson,

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2022). For instance, integrating more specialized and frequent external training sessions or enhancing internal monitoring and feedback mechanisms could lead to even higher scores in subsequent evaluations. This continuous improvement aligns with findings from Khan et al. (2022), who argue that ongoing, diverse professional development is crucial for sustaining and advancing teachers' expertise in Mathematics. Thus, while the current score reflects a good level of agreement, there remains an opportunity to build on these strengths for even greater impact.

3.1.2. Instructional Delivery

Instructional Delivery refers to the methods and strategies used by teachers to convey content and facilitate learning in the classroom. It encompasses a range of pedagogical techniques aimed at engaging students, promoting understanding, and fostering critical thinking skills. This involves the implementation of these methods in real-time classroom settings, including the use of multimedia resources, interactive activities, and formative assessments to gauge and enhance student learning. As highlighted by Hattie and Yates (2021), effective instructional delivery requires teachers to be adaptive and responsive to students' needs, employing a variety of instructional approaches to maximize learning outcomes.

Effective instructional delivery in mathematics has been shown to significantly enhance student engagement and learning outcomes. Key strategies include the use of cooperative learning, where students work together to solve problems, promoting a deeper understanding of mathematical concepts through peer interaction and communication (3P Learning, 2020). Additionally, incorporating differentiated instruction tailored to individual student needs helps address diverse learning styles, ensuring all students can engage with challenging tasks (Russo et al., 2021). Another essential component is the integration of meaningful, real-world problem-solving activities that not only reinforce mathematical concepts but also demonstrate their practical applications (Galindo, n.d.). These approaches collectively create a more inclusive and effective mathematics learning environment, fostering both academic achievement and a positive attitude towards mathematics.

Table 2. Instructional Delivery

Indicator	Mean	Description	Interpretation
Does the institution promote the integration of technological tools in teaching and learning mathematics?	3.00	Agree	Good
Does the institution encourage collaborative learning in math?	3.36	Agree	Good
Does the institution encourage teachers to utlize manipulatives in teaching math?	3.45	Agree	Good
Does the institution use of diverse formative and summative assessment techniques to evaluate learner's understanding and mastery in Math?	3.36	Agree	Good
Does the institution employ inquiry-based learning in math?	3.18	Agree	Good
Does the institution adopt direct instruction in math?	2.91	Agree	Good

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Does the institution employ problem-based learning in math?	3.27	Agree	Good
Does the institution design gamified lessons in math?	3.27	Agree	Good
Does the institution involve learner's in project-based learning in math?	3.18	Agree	Good
Does the institution tailors differentiated instructions in math?	3.27	Agree	Good
Does the institution regularly monitor and observe the teaching and learning in math?	3.18	Agree	Good
Does the institution promote math workshops with hands-on activities and group works to reinforce math concepts and skills?	3.00	Agree	Good
Does the institution reinforce scaffolding in the instructional delivery methods in math?	2.91	Agree	Good
Does the institution combine traditional and face-to-face instruction with online learning activities in math?	3.27	Agree	Good
Does the institution engage learners in discovery/inductive learning in math?	3.27	Agree	Good
Grand Mean	3.19	Agree	Good

Data on the table shows the School Educational Provisions of Blessed Hope Christian School of Tarlac, Inc. as to instructional delivery. Specifically, the institution demonstrates a good level of agreement across various indicators related to instructional delivery in Mathematics, as evidenced by the grand mean score of 3.19. The institution is perceived as good in promoting the integration of technological tools (mean score of 3.00), encouraging collaborative learning (mean score of 3.36), and utilizing manipulatives (mean score of 3.45). It also shows good performance in employing diverse assessment techniques (mean score of 3.36) and inquiry-based learning (mean score of 3.18). Other areas such as adopting direct instruction (mean score of 2.91), problem-based learning (mean score of 3.27) and designing gamified lessons (mean score of 3.27) also received good ratings. The institution's efforts in involving learners in project-based learning (mean score of 3.18), tailoring differentiated instruction (mean score of 3.27), and monitoring teaching practices (mean score of 3.18) are similarly rated as good. Additionally, the institution is viewed positively in promoting math workshops with hands-on activities (mean score of 3.00), reinforcing scaffolding (mean score of 2.91), and combining traditional with online learning activities (mean score of 3.27). Engaging learners in discovery/inductive learning also received a good rating (mean score of 3.27), confirming an overall positive evaluation of the instructional delivery methods.

The results demonstrated the excellence of instructional delivery at Blessed Hope Christian School of Tarlac, Inc. This excellence is reflected in their adherence to explicit instructional practices, which include well-designed lesson plans with clear objectives and a structured scope and sequence (Archer & Hughes, 2021). Moreover, effective instructional strategies such as teaching to mastery and providing ample opportunities for practice are

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employed to ensure student success (Wing Institute, 2022). Additionally, the school's instructional delivery incorporates innovative approaches like inquiry-based learning, which engages students in active knowledge construction and fosters self-directed learning (Spronken-Smith et al., 2020). These methodologies collectively contribute to the quality of instructional delivery observed at Blessed Hope Christian School of Tarlac, Inc.

The institution's demonstration of a good level of agreement across various indicators related to instructional delivery in Mathematics highlights its effective implementation of diverse teaching strategies. For example, the institution's high mean score for encouraging the use of manipulatives (mean score of 3.45) underscores its commitment to making abstract mathematical concepts more tangible. Manipulatives, such as physical objects and digital tools, facilitate experiential learning and have been shown to significantly improve students' conceptual understanding and problem-solving skills (Johnson et al., 2022). The use of these tools supports visual and kinesthetic learners, making complex mathematical ideas more accessible and engaging for students.

Furthermore, the institution's emphasis on collaborative learning (mean score of 3.36) and diverse assessment techniques (mean score of 3.36) reflects its balanced approach to instructional delivery. Collaborative learning encourages students to work together, which enhances their ability to solve problems collectively and deepens their understanding through peer interactions (Smith & Lee, 2021). This method not only fosters a supportive learning environment but also develops critical thinking and communication skills. Additionally, employing diverse formative and summative assessment techniques allows educators to gain a comprehensive view of student progress and tailor their instructional strategies accordingly (Brown & Wilson, 2021). By integrating various assessment methods, the institution ensures that teaching is responsive to students' evolving needs and learning styles.

Despite these strengths, areas such as direct instruction (mean score of 2.91) and scaffolding (mean score of 2.91) suggest opportunities for further refinement. Direct instruction, characterized by clear, explicit teaching, is fundamental for developing foundational skills in Mathematics (Harris et al., 2022). Enhancing this approach could provide students with a stronger base upon which to build more complex mathematical concepts. Additionally, effective scaffolding practices, which involve providing temporary support that gradually fades as students gain independence, are crucial for helping students achieve mastery in Mathematics (Davis & Martinez, 2023). By focusing on these areas, the institution could further improve its instructional delivery and enhance overall educational outcomes.

3.1.3. Learning Resources

These refer to the various materials, tools, and content used to support and enhance the educational process. These resources include textbooks, digital content, software, laboratory equipment, and other instructional materials that facilitate learning and provide students with opportunities to explore and understand subject matter deeply. Learning resources are integrated into the curriculum and daily classroom activities, ensuring that they are accessible and effectively utilized to support diverse learning needs and styles. According to Mayer and Fiorella (2022), the effective use of learning resources can significantly improve student engagement and learning outcomes by providing varied and rich educational experiences.

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Table 3. Learning Resources

Indicator	Mean	Description	Interpretation
Does the institution provide math textbooks aligned with curriculum standards?	3.64	Strongly Agree	Excellent
Does the institution provide e-books and e-journals in math aligned with the curriculum standards?	3.55	Strongly Agree	Excellent
Does the institution encourage the use of physical objects like base-ten blocks, fraction tiles, flash cards, charts, and geometric shapes to help learners visualize and understand mathematical concepts?	3.45	Agree	Good
Does the institution utilize LMS in math?	3.55	Strongly Agree	Excellent
Does the institution use interactive whiteboards that allow for dynamic math lesson?	3.64	Strongly Agree	Excellent
Does the institution provide TV that allow interactive math lesson?	3.27	Agree	Good
Does the institution adopt applications such as mathpapa and photomath for interactive exploration and problem-solving?	3.36	Agree	Good
Does the institution customize worksheets and printables in math?	3.18	Agree	Good
Does the institution provide math dictionaries and glossaries for understanding terminologies?	3.45	Agree	Good
Does the institution support the use of instructional video tutorials in math from YouTube and other internet sources?	3.27	Agree	Good
Grand Mean	3.44	Agree	Good

Table 3 reveals the School Educational Provisions of Blessed Hope Christian School of Tarlac, Inc. as to learning resources. Specifically, the institution demonstrates a good level of agreement across various indicators related to the provision of Mathematics educational resources, with a grand mean score of 3.44. The institution is rated excellent in providing math textbooks (mean score of 3.64) and e-books and e-journals (mean score of 3.55), both of which are aligned with curriculum standards. This reflects a strong commitment to providing high-quality, standards-compliant resources. Additionally, the institution's use of Learning Management Systems (LMS) and interactive whiteboards (both with mean scores of 3.55 and 3.64, respectively) further supports dynamic and engaging Math instruction. While the use of physical objects like base-ten blocks and fraction tiles is rated as good (mean score of 3.45), along with other resources such as TV for interactive lessons (mean score of 3.27), educational applications (mean score of 3.36), and customized worksheets (mean score of 3.18), these areas also reflect a solid but slightly lower level of agreement. The overall good rating underscores the institution's effective use of diverse resources to support Mathematics education.

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Studies mentioned in the introduction emphasized the importance of providing robust educational materials to support effective teaching and learning. For instance, McKinsey's report highlights that well-integrated technology strategies, involving both software and hardware, enhance student learning by aligning with curriculum goals and providing substantial professional development for teachers (McKinsey & Company, 2023). Additionally, the Quality Teaching Model from the NSW Department of Education underscores the importance of intellectual quality, quality learning environments, and the significance of resources in achieving educational success (NSW Department of Education, 2022). These studies demonstrate that having comprehensive and quality learning resources is essential for fostering an effective educational environment.

A good rating in learning resources is indicative of an institution's strategic and effective utilization of diverse materials to enhance Mathematics education. This effectiveness is demonstrated by the availability of both traditional resources, such as textbooks and workbooks, and modern digital tools, like interactive software and online platforms. For example, the use of digital resources like Khan Academy and GeoGebra allows students to engage with mathematical concepts interactively, enabling better understanding through visual aids and practice exercises. These tools provide students with personalized learning experiences, which are crucial in grasping complex mathematical concepts (Desoete et al., 2020). The effectiveness of these resources is often reflected in the improved performance and positive feedback from students.

Moreover, a well-rated institution ensures that these resources are not just available but are also well-aligned with the curriculum and learning objectives. The integration of open educational resources (OERs) and adaptive learning technologies in Mathematics education has been shown to significantly improve students' problem-solving skills and critical thinking abilities. For instance, the use of adaptive learning platforms, which adjust the difficulty of problems based on the learner's progress, helps in addressing individual learning needs, thus ensuring that all students, regardless of their starting point, can achieve mastery in Mathematics (Darling-Hammond et al., 2021). This alignment of resources with educational goals underscores the institution's commitment to fostering a conducive learning environment.

Furthermore, institutions that receive good ratings for their learning resources typically engage in continuous evaluation and updating of these materials to reflect the latest educational research and technological advancements. The inclusion of culturally responsive materials and real-world applications in Mathematics education is another critical factor. For example, incorporating case studies and projects that apply mathematical concepts to solve real-world problems not only enhances student engagement but also helps them see the relevance of Mathematics in their everyday lives (Bishop & Forgasz, 2022). This ongoing refinement and contextualization of learning resources are essential in maintaining the effectiveness of Mathematics education in dynamic educational settings.

3.1.4. Facilities

School Facilities refer to the physical infrastructure and environment provided by educational institutions to support teaching and learning activities. This includes buildings, classrooms, laboratories, libraries, sports fields, and other spaces essential for a conducive learning atmosphere. These involve the maintenance, accessibility, and utilization of these physical spaces to ensure they meet safety standards, are well-equipped, and are conducive to both teaching and student engagement. Research by Schneider and Duran-Narucki (2021) indicates that well-maintained and adequately resourced school facilities significantly impact

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student performance and well-being, highlighting the importance of continuous investment in school infrastructure.

School facilities play a crucial role in shaping the overall learning experience and outcomes for students. Well-maintained and adequately equipped facilities contribute to a conducive learning environment that can enhance student engagement, motivation, and academic performance. For example, access to modern classrooms, science laboratories, libraries, and recreational areas supports diverse learning activities, fostering both academic and social development (Uline & Tschannen-Moran, 2022). Additionally, studies have shown that the quality of school facilities directly impacts student health, attendance, and even teacher satisfaction, highlighting the need for continuous investment in school infrastructure to ensure an optimal educational environment (Woolner & Hall, 2020).

Table 4. School Facilities

Indicator	Mean	Description	Interpretation
Does the institution built a conducive library designed for math lessons?	3.36	Agree	Good
Does the institution provide math laboratory dedicated for exploration and problem-solving?	2.55	Agree	Good
Does the institution allocate WiFi access that is reliable and fast throughout the school to support math learning and research?	3.09	Agree	Good
Does the institution design tutoring centers where learners can receive additional help from tutors or teachers in math outside class hours?	3.09	Agree	Good
Does the institution support math clubs to support extra-curricular math activities?	2.73	Agree	Good
Does the institution allocate gymnasium/auditorium where math fair can be held?	2.27	Disagree	Fair
Does the institution provide audio-visual room equiped with necessary resources for watching math videos and presentations?	2.91	Agree	Good
Does the institution provide math manipulative kits such as sets of physical objects for hands-on learning of mathematical concepts?	2.64	Agree	Good
Does the institution design classrooms conducive to conduct math lessons?	3.18	Agree	Good
Does the institution provide educational playground where learners engage in outdoor math activities and apply concepts in real-world?	2.73	Agree	Good
Grand Mean	2.86	Agree	Good

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Data on the table presents the School Educational Provisions of Blessed Hope Christian School of Tarlac, Inc. as to school facilities. Specifically, the institution generally provides a supportive environment for Mathematics education, with an overall grand mean of 2.86, interpreted as "Good." Specific areas such as the design of classrooms conducive to math lessons (mean = 3.18), the provision of a conducive library (mean = 3.36), and reliable WiFi access (mean = 3.09) received positive ratings, indicating that these facilities effectively support math learning and research. However, the provision of a gymnasium or auditorium for math fairs received a lower mean score of 2.27, interpreted as "Fair," suggesting a potential area for improvement. Overall, the facilities are largely adequate, but certain areas could be enhanced to further support Mathematics education.

The school facilities of Blessed Hope Christian School of Tarlac, Inc. are considered good, contributing positively to the overall learning environment. In the same way, the Center for Evaluation and Education Policy Analysis emphasizes that well-maintained school facilities, including appropriate classroom sizes and controlled temperatures, significantly impact student engagement and learning outcomes (Center for Evaluation and Education Policy Analysis, 2023). Furthermore, the National Association of Secondary School Principals underscores the need for modern, safe, and healthy school environments to support innovative teaching and personalized learning, crucial components for student success (National Association of Secondary School Principals, 2023). Another study from UNESCO highlights that proper maintenance and infrastructure planning are essential for creating conducive learning environments, which ultimately improve student performance (UNESCO, 2023).

Good school facilities are essential in creating an environment that enhances student learning and well-being. In the Philippines, schools with modern and well-maintained facilities often see improved student outcomes, as these environments provide students with the necessary tools and spaces to engage in effective learning. For instance, schools like the Philippine Science High School system, known for its advanced laboratories and comprehensive libraries, offer students access to resources that support in-depth scientific and mathematical explorations. These facilities not only facilitate the delivery of complex lessons but also foster a culture of inquiry and innovation among students (Carpio-Bernido & Bernido, 2021).

Moreover, the availability of specialized facilities such as math laboratories and dedicated tutoring centers significantly contributes to the quality of education in the Philippines. These spaces allow for focused, hands-on learning experiences that are crucial in subjects like Mathematics, where practical application and problem-solving are key. For example, Ateneo de Manila University has developed math tutoring centers where students can receive additional support outside of regular class hours. This initiative has led to increased student confidence and competence in math, as they can reinforce their understanding through guided practice (Mendoza et al., 2023).

In addition, the integration of technology within school facilities plays a critical role in enhancing educational outcomes. Schools that provide reliable WiFi access and well-equipped audio-visual rooms enable students and teachers to utilize digital resources effectively, expanding the learning experience beyond traditional textbooks. For example, De La Salle University's use of smart classrooms and online learning platforms has enabled a more interactive and engaging learning environment, particularly during the COVID-19 pandemic when hybrid learning became necessary (Reyes, 2022). These facilities not only support

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academic learning but also prepare students for the increasingly digital world they will enter after graduation.

Summary Table on the School Educational Provisions

Indicators	Grand Mean	Description	Interpretation
Teacher's Content Knowledge	3.28	Agree	Good
Instructional Delivery	3.19	Agree	Good
Learning Resources	3.44	Agree	Good
School Facilities	2.86	Agree	Good
Overall Grand Mean	**3.19**	**Agree**	**Good**

The summary table on the school educational provisions reflects a generally positive assessment of the institution's performance across key areas, with an overall grand mean of 3.19, interpreted as "Good." This suggests that the school is effectively supporting its educational mission, though some areas may require targeted improvements. The highest rating is in Learning Resources, with a grand mean of 3.44, indicating that the school provides a wide range of materials that effectively support student learning. This likely includes access to textbooks, digital platforms, and other supplementary materials that enhance the educational experience and contribute to student success.

Teacher's Content Knowledge and Instructional Delivery also received solid ratings, with grand means of 3.28 and 3.19 respectively, both interpreted as "Good." These scores indicate that teachers possess a strong understanding of the subjects they teach and are capable of delivering content in an engaging and effective manner. Effective instructional delivery is crucial for translating content knowledge into meaningful learning experiences, and this rating suggests that students are benefiting from competent and well-prepared educators. However, continuous professional development could further enhance these areas to maintain and improve the quality of education.

The lowest rating is in School Facilities, with a grand mean of 2.86, still interpreted as "Good" but signaling room for improvement. This score indicates that while the facilities are generally adequate, there are likely some deficiencies that could be addressed to better support the educational environment. Enhancing facilities, such as upgrading classrooms, laboratories, or recreational spaces, could have a significant impact on both student engagement and overall academic performance. By focusing on improving school facilities, the institution can ensure a more conducive learning environment that aligns with the high standards set in other areas like instructional delivery and learning resources.

3.2. Learners' Performance in Mathematics

This refers to the level of proficiency (final ratings in Mathematics) and understanding that students demonstrate in mathematical concepts, operations, and problem-solving skills (Level of Numeracy). This encompasses both cognitive abilities, such as comprehension of mathematical theories and principles, and practical skills, including the application of these concepts to solve real-world problems. High performance in mathematics indicates not only the mastery of fundamental arithmetic and algebra but also the capacity for critical thinking and analytical reasoning. According to the National Council of Teachers of Mathematics

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(NCTM, 2020), a well-rounded mathematical education fosters these competencies, preparing students for advanced studies and various career paths.

Learner's Performance in Mathematics is assessed through various methods, including standardized tests, classroom assessments, and formative evaluations. These assessments are designed to measure students' understanding and ability to apply mathematical concepts and procedures accurately and efficiently. Teachers play a crucial role in this process by providing instructional support, feedback, and interventions tailored to individual student needs. Research by Star et al. (2021) highlights the importance of continuous assessment and adaptive teaching strategies in improving student outcomes in mathematics, emphasizing that timely feedback and targeted support can significantly enhance learners' performance.

Furthermore, it involves the use of educational technologies and resources to support and enrich the learning experience. Digital tools, such as interactive simulations and educational software, can provide personalized learning opportunities and immediate feedback, helping students to grasp complex mathematical concepts more effectively. As noted by Clark-Wilson et al. (2022), integrating technology in mathematics education can lead to improved engagement and better performance outcomes, particularly when these tools are used to complement traditional teaching methods. Through these resources, educators can create a more dynamic and responsive learning environment that fosters mathematical proficiency and confidence.

3.2.1. Diagnostic Assessment in Mathematics

Diagnostic Assessment in Mathematics refers to a type of assessment aimed at identifying students' strengths, weaknesses, and specific learning needs before instruction begins or during the early stages of learning. It provides detailed insights into students' prior knowledge, misconceptions, and gaps in understanding, enabling educators to tailor their teaching strategies to address these areas effectively. This involves administering targeted assessments, such as pre-tests, quizzes, or diagnostic tools, and analyzing the results to inform instructional planning and intervention. According to Van der Wal et al. (2023), effective diagnostic assessment involves a combination of qualitative and quantitative methods to accurately pinpoint areas where students may require additional support, thereby enhancing the overall teaching and learning process.

Table 5. Learners' Performance in Diagnostic Assessment in Mathematics

Grading Scale	Description	Frequency	Percentage
66 and Above	Numerate	4	16.67
65-34	Nearly Numerates	15	62.50
33 and below	None Numerates	5	20.83
Total		**24**	**100.00**

The diagnostic assessment in Mathematics reveals a distribution of learners' numerical abilities across three categories: Numerate, Nearly Numerate, and None Numerate. The grading scale shows that only 16.67% of learners scored 66 or above, classifying them as "Numerate." These students demonstrate a strong grasp of mathematical concepts and skills, indicating that they are well-prepared for more advanced mathematical tasks. This relatively

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small group suggests that while some students are excelling, the majority are not reaching this level of proficiency.

The largest group, comprising 62.50% of the learners, falls into the "Nearly Numerate" category, scoring between 65 -34 These students possess a moderate level of mathematical understanding, but they may struggle with more complex problems or concepts. Their performance indicates a need for targeted interventions to bridge gaps in their knowledge and skills. This group's prevalence suggests that with appropriate support, a significant portion of learners could potentially reach the "Numerate" level, improving overall mathematics performance in the class.

Lastly, 20.83% of learners are classified as "None Numerate," scoring below 33. This group is at a critical juncture, as their low performance indicates significant challenges in basic mathematical comprehension. These students likely require more intensive and personalized instructional strategies to build foundational skills and prevent further learning gaps. The presence of this group highlights the importance of early identification and intervention in mathematics education to ensure that all students have the opportunity to succeed. The data suggests a need for differentiated instruction and additional resources to support learners across the spectrum of mathematical proficiency.

3.2.2. Learners' Final Rating in Mathematics

Learners' Final Rating in Mathematics refers to the overall evaluation of a student's performance in mathematics over a specific period, typically encompassing a summative assessment that reflects their cumulative understanding and proficiency in the subject. This rating integrates various aspects of student achievement, including mastery of mathematical concepts, problem-solving abilities, and application skills. The final rating is determined through a combination of assessments, such as final exams, projects, and class participation, and is usually represented as a numerical grade or letter grade. According to Van Zanden et al. (2021), final ratings provide a comprehensive summary of students' academic performance and are crucial for evaluating their readiness for further studies or qualifications.

Table 6. Learners' Final Rating in Mathematics

Grading Scale	Description		Frequency	Percentage
90-100	Outstanding		9	37.50
85-89	Very Satisfactory		11	45.83
80-84	Satisfactory		2	8.33
75-79	Fairly Satisfactory		2	8.33
Below 75	Did not meet expectations		0	
Total			**24**	**100**

The final rating of learners in Mathematics, as presented in Table 6, illustrates a positive overall performance across the cohort. A significant proportion of students, 37.50%, achieved an "Outstanding" grade, with scores ranging from 90 to 100. This indicates a strong understanding of mathematical concepts and a high level of competency among these

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learners. The fact that more than a third of the students reached this top tier reflects well on both the students' capabilities and the effectiveness of the instruction and resources provided.

The largest group of students, accounting for 45.83%, received a "Very Satisfactory" rating, with grades between 85 and 89. These students performed well and demonstrated a solid grasp of the material, although there may still be room for further growth to reach the "Outstanding" level. The prevalence of students in this category suggests that a majority of the class is achieving at a high level, which is a positive indicator of overall classroom achievement in Mathematics.

A smaller group of learners, representing 8.33%, earned a "Satisfactory" rating, with scores ranging from 80 to 84. Additionally, an equal percentage of students fell into the "Fairly Satisfactory" category, with grades between 75 and 79. These students have met the basic requirements of the course but may struggle with more complex or challenging aspects of the curriculum. These ratings suggest that while these students are passing, they could benefit from additional support or enrichment to enhance their understanding and performance in Mathematics.

Notably, no students fell into the "Did not meet expectations" category, which would have included those scoring below 75. This absence is a positive outcome, indicating that all students in the cohort are achieving at least a minimal level of proficiency in Mathematics. The overall distribution of grades, with the majority of students falling within the "Very Satisfactory" and "Outstanding" ranges, suggests a generally high level of achievement in this Mathematics class. This distribution points to effective teaching practices and possibly a curriculum that aligns well with students' abilities, but it also highlights the importance of continuing to support the few students who are on the lower end of the grading scale to ensure they can advance their understanding and performance in future assessments.

3.3. Significant Correlation Between School Educational Provisions and Learners' Performance in Mathematics

Table 7. Test of Significant Relationship Between Schools Educational Provisions and Numeracy

Variables	Df	p-value	t-critical	Decision	Remarks
Instructional Delivery vs. Numeracy	4	0.72	9.488	Accept the Null Hypothesis	Not Significant
Learning Resources vs. Numeracy		0.73	9.488		
Facilities Vs. Numeracy		0.73	9.488		

The analysis of the significant relationship between schools' educational provisions and numeracy variables shows that for all comparisons—Instructional Delivery vs. Numeracy p-value is 0.72, Learning Resources vs. Numeracy, and Facilities vs. Numeracy—the p-value is 0.73. This high p-value indicates that there is no significant relationship between the schools' educational provisions and numeracy outcomes, leading to the acceptance of the null hypothesis in each case. The t-critical value of 9.488, which is relatively high, further supports the conclusion that there is no significant correlation between these variables.

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Table 8. Test of Significant Relationship Between Schools Educational Provisions and Proficiency

Variables	df	p-value	t-critical	Decision	Remarks
Instructional Delivery vs. Proficiency	6	2.07	12.592	Accept the Null Hypothesis	Not Significant
Learning Resources vs. Proficiency		2.07	12.592		
Facilities Vs. Proficiency		2.07	12.592		

The analysis of the significant relationship between schools' educational provisions and proficiency variables reveals that in all comparisons—Instructional Delivery vs. Proficiency, Learning Resources vs. Proficiency, and Facilities vs. Proficiency—the p-value is 2.07. This p-value is significantly higher than the common alpha level of 0.05, indicating that there is no statistically significant relationship between the educational provisions and student proficiency. As a result, the null hypothesis is accepted in each case, meaning the data does not support a meaningful connection between these educational factors and proficiency outcomes.

The t-critical value of 12.592 further underscores the lack of a significant relationship. Given this high t-critical value, the observed t-values were likely much lower, which reinforces the decision to accept the null hypothesis. The consistency across different variables, including instructional delivery, learning resources, and facilities, suggests that these educational provisions may not have a direct or strong impact on students' proficiency levels.

3.4. Customized Intervention in Mathematics

Customized Intervention for Grade 4 Mathematics: "Math Bingo Challenge"

Overview:

The "Math Bingo Challenge" is a straightforward and engaging intervention designed to reinforce key Grade 4 math concepts through a fun bingo game format. This intervention aims to enhance students' skills in areas such as addition, subtraction, multiplication, division, and fractions.

Objectives:

- ✓ Reinforce Math Skills: Practice and strengthen students' understanding of Grade 4 math concepts.
- ✓ Increase Engagement: Make math practice enjoyable and interactive.
- ✓ Provide Instant Feedback: Allow students to immediately see the results of their work and understand their progress.

Intervention Components:

1. **Math Bingo Cards:**

- Description: Create bingo cards with math problems instead of numbers.

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- Format: Each card features a 5x5 grid with various math problems in each square (e.g., 23 + 17, 48 ÷ 6, 3/4 + 1/4, etc.).
- Customization: Tailor the problems to align with current math topics being covered in class.

2. **Calling Cards:**
- Description: Prepare a set of calling cards with the answers to the problems on the bingo cards.
- Format: Each card shows a math answer (e.g., 40, 12, 1, etc.) that corresponds to one of the problems on the bingo cards.

3. **Game Instructions:**
Preparation: Distribute a bingo card and markers (e.g., small chips or crayons) to each student.
Gameplay:
    - Calling: Draw a calling card and announce the answer to the class.
    - Marking: Students solve the math problems on their bingo cards and mark the corresponding answers if they have them.
    - Winning: The first student to complete a row, column, or diagonal and call out "Bingo!" wins. Verify their answers to ensure correctness.
    - Prizes: Offer small rewards or certificates to the winners to motivate participation.

Reflection and Review:
- Description: After the game, review the problems with the class.
- Discussion: Discuss any challenging problems, correct mistakes, and answer questions to reinforce learning.

Implementation Tips:
- Difficulty Levels: Create different sets of bingo cards with varying difficulty levels to accommodate different student abilities.
- Frequency: Play Math Bingo regularly (e.g., once a week) to reinforce learning and keep students engaged.
- Group Play: For larger classes, consider playing in smaller groups or pairs to ensure everyone has a chance to participate.

Evaluation:
- Observation: Monitor students during the game to assess their engagement and understanding.
- Assessment: Use informal assessments based on the accuracy of students' bingo cards and their ability to solve the problems correctly.
- Feedback: Collect feedback from students on their experience with the game and any areas they found challenging.

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Example of Bingo Cards:

Math Bingo Card 1

34 - 16	7 × 6	12 ÷ 4	18 + 9	2/3 + 1/3
27 + 14	8 × 5	20 ÷ 5	45 - 17	3/4 - 1/4
56 ÷ 7	9 × 3	14 - 8	32 ÷ 8	1/2 + 1/4
17 + 6	6 × 7	21 ÷ 3	50 - 25	2/5 + 1/5
43 - 19	7 × 4	25 ÷ 5	38 + 12	3/5 - 1/5

Math Bingo Card 2

21 + 13	5 × 8	36 ÷ 6	30 - 15	1/4 + 2/4
45 - 20	7 × 5	18 ÷ 3	25 + 10	3/6 - 1/6
48 ÷ 8	8 × 4	30 - 14	56 ÷ 7	1/3 + 1/6
29 + 7	6 × 9	54 ÷ 9	40 - 10	2/4 - 1/4
32 ÷ 4	5 × 6	28 - 16	18 + 22	3/8 + 1/8

Customized Intervention for Grade 5 Mathematics: "Math Scavenger Hunt"

Overview:

The "Math Scavenger Hunt" is a hands-on intervention designed to reinforce Grade 5 math skills through an interactive and engaging scavenger hunt activity. This intervention helps students practice mathematical concepts by finding and solving problems placed around the classroom or school.

Objectives:

1. **Reinforce Math Skills**: Practice Grade 5 math concepts such as decimals, fractions, percentages, and basic geometry.
2. **Enhance Engagement**: Make learning math active and enjoyable.
3. **Encourage Critical Thinking**: Develop problem-solving skills by applying math concepts in a real-world context.

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Intervention Components:

1. **Preparation**:
    - **Create Problem Cards**: Prepare cards with math problems and solutions. Each card contains a question and the answer to the problem. Problems can include:
        - **Decimal Operations**: 3.6 + 4.2
        - **Fraction Problems**: 5/8 - 1/4
        - **Percentage Calculations**: What is 25% of 80?
        - **Geometry**: Find the area of a rectangle with length 5 cm and width 3 cm.
    - **Clue Cards**: Write clues that direct students to the next location where they will find another math problem. Each clue should be related to the previous problem's solution.
2. **Scavenger Hunt Setup**:
    - **Hide Problem Cards**: Place the problem cards around the classroom or school in various locations. Each card should be hidden in a different spot (e.g., under a desk, in a book, on a bulletin board).
    - **Distribute Clue Cards**: Attach clues to the problem cards that will lead students to the next card. Ensure that each clue is solvable with the answer to the previous problem.
3. **Activity Instructions**:
    - **Form Teams**: Divide students into small groups or pairs to encourage collaboration.
    - **Start the Hunt**: Give each team their starting clue card. The clue will lead them to the location of the first math problem card.
    - **Solve Problems**: Teams solve the math problems to find the answer, which is then used to solve the clue for the next location.
    - **Continue the Hunt**: Teams follow the clues to find and solve the next problem card, continuing until all problems are solved and clues are followed.
4. **Final Challenge**:
    - **Completion**: The final problem can be a summary question that combines elements from previous problems. For example, "Combine all answers to find the total sum."
    - **Victory**: The first team to complete all the tasks and reach the final challenge wins.

Implementation Tips:

- **Difficulty Level**: Adjust the complexity of problems and clues based on students' abilities.
- **Time Limit**: Set a time limit for the scavenger hunt to keep the activity focused and engaging.
- **Prizes**: Offer small rewards or certificates for the winning team to motivate participation.

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Evaluation:

- **Observation**: Monitor students' problem-solving approaches and teamwork throughout the scavenger hunt.
- **Feedback**: Provide immediate feedback on their solutions and approaches to solving the problems.
- **Reflection**: After the activity, discuss with students what they learned, which problems they found challenging, and any strategies they used.

Sample Math Problem Cards

Card 1: Decimal Operations

- **Front of Card:**
- **Back of Card:**
  - **Problem**: What is 3.6 + 4.2?
  - **Answer**: 7.8
  - **Clue**: "To find the next clue, look where you store your favorite book. It's hiding behind a familiar title."

Card 2: Fraction Problems

- **Front of Card:**
- **Back of Card:**
  - **Problem**: Solve 5/8 - 1/4.
  - **Answer**: 3/8
  - **Clue**: "Head to the place where we keep our writing tools. The next clue is near the pencils."

Card 3: Percentage Calculations

- **Front of Card:**
- **Back of Card:**
  - **Problem**: What is 25% of 80?
  - **Answer**: 20
  - **Clue**: "Find the next clue where you sit for group work. It's under the chair you like."

Card 4: Geometry

- **Front of Card:**
- **Back of Card:**
  - **Problem**: Find the area of a rectangle with length 5 cm and width 3 cm.
  - **Answer**: 15 square cm
  - **Clue**: "The final clue is hidden where you usually put your lunchbox. Look inside the box for your reward."

Sample Clue Cards

Clue Card 1:

- **Front of Card:**
- **Back of Card:**
  - **Clue**: "To find the next clue, look where you store your favorite book. It's hiding behind a familiar title."

Clue Card 2:

- **Front of Card:**

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- **Back of Card:**
  - **Clue**: "Head to the place where we keep our writing tools. The next clue is near the pencils."

Clue Card 3:

- **Front of Card:**
- **Back of Card:**
  - **Clue**: "Find the next clue where you sit for group work. It's under the chair you like."

Clue Card 4:

- **Front of Card:**
- **Back of Card:**
  - **Clue**: "The final clue is hidden where you usually put your lunchbox. Look inside the box for your reward."

Customized Intervention for Grade 6 Mathematics: "Math Puzzle Challenge"

Overview:

The "Math Puzzle Challenge" is an engaging intervention designed to help Grade 6 students reinforce their math skills through a series of puzzles that incorporate various mathematical concepts. This intervention encourages critical thinking and problem-solving while making math practice enjoyable.

Objectives:

1. **Reinforce Math Concepts**: Practice key Grade 6 topics such as fractions, decimals, ratios, and basic algebra.
2. **Promote Critical Thinking**: Enhance problem-solving skills through puzzle-based activities.
3. **Engage Students**: Make learning interactive and fun with math-related puzzles.

Intervention Components:

1. **Puzzle Types and Examples**:
   - **Fraction and Decimal Puzzle**:
     - **Puzzle**: A crossword puzzle where the clues are math problems involving fractions and decimals.
     - **Example**: Solve the fraction problem to fill in crossword squares (e.g., "What is 1/2 + 1/4?" with the answer "3/4").
   - **Ratio and Proportion Puzzle**:
     - **Puzzle**: A word search with hidden words related to ratios and proportions.
     - **Example**: Find words like "ratio," "proportion," "fraction," and "scale" hidden in the puzzle.
   - **Algebraic Expression Puzzle**:

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    - **Puzzle**: A Sudoku grid where each number corresponds to the solution of an algebraic expression.
    - **Example**: Fill the grid based on solving expressions like "2x + 3 = 7" to find the value of x.
  - **Geometry Puzzle**:
    - **Puzzle**: A shape tangram where students solve geometry problems to fit pieces together correctly.
    - **Example**: Calculate the area of different shapes to determine how they fit into a larger shape.
2. **Materials Needed**:
   - **Puzzle Sheets**: Prepare or print the puzzle sheets for each type of puzzle.
   - **Pencils and Erasers**: For students to solve and adjust their answers.
   - **Answer Keys**: Provide answer keys for self-checking or teacher review.
3. **Activity Instructions**:
   - **Introduction**: Explain the different types of puzzles and how they relate to the math concepts being studied.
   - **Group Formation**: Divide students into small groups (2-3 students per group) to encourage collaboration.
   - **Puzzle Solving**: Distribute the puzzle sheets to each group. Students work together to solve the puzzles, discussing their strategies and solutions.
   - **Rotation**: If using multiple types of puzzles, rotate groups through different puzzles to ensure exposure to various concepts.
4. **Wrap-Up and Review**:
   - **Review Session**: After completing the puzzles, hold a class discussion to review the solutions and the math concepts involved.
   - **Clarify Doubts**: Address any questions or misunderstandings students may have encountered during the activity.

Implementation Tips:

- **Preparation**: Ensure all puzzles are prepared in advance and are appropriate for the students' skill levels.
- **Timing**: Allocate a set amount of time for each puzzle to keep the activity engaging and on track.
- **Variety**: Include a variety of puzzle types to cater to different learning styles and interests.

Evaluation:

- **Observation**: Monitor students' problem-solving processes and teamwork during the activity.
- **Assessment**: Review completed puzzles and check for accuracy in the solutions.
- **Feedback**: Provide feedback on puzzle-solving strategies and discuss any common challenges.

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SAMPLE: Crossword Puzzle: Fractions and Decimals
Crossword Grid

	1	2	3	4	5
1					
2					
3					
4					
5					

Across:

1. **1 Across**: What is 1/2 + 1/4? (3/4)

Down:

1. **1 Down**: Convert 0.6 to a fraction (3/5)
2. **2 Down**: What is 5/8 - 1/4? (3/8)

Solution Grid

	1	2	3	4	5
1	3	/	4		
2	3				
3	8				
4					
5					

Puzzle Creation:

You can create a crossword puzzle with these steps:

1. **Generate the Grid**:
   - Draw a 5x5 grid (or use a crossword puzzle maker tool).
2. **Insert Clues and Answers**:
   - Place the answers (e.g., "3/4", "3/5", "3/8") into the grid.
   - Fill in the grid with the clues based on the answers.
3. **Label the Clues**:
   - Write down the clues for "Across" and "Down" as shown.

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Sample: Ratio and Proportion Word Search Puzzle

Word Search Grid

R	A	T	I	O	S	U	P	H	Z
O	A	F	T	A	S	H	T	I	E
P	R	O	P	O	R	T	I	O	N
S	C	I	L	E	B	A	I	R	C
T	A	R	I	O	F	T	C	A	O
H	M	A	R	P	I	M	O	C	S
E	N	S	H	C	R	E	D	R	C
I	I	N	L	O	P	T	O	R	A
A	F	R	A	C	T	I	O	N	B
L	O	P	O	R	T	I	O	N	E

Hidden Words:

- **RATIO**
- **PROPORTION**
- **FRACTION**
- **SCALE**

How to Solve:

1. **Find the Words**: Search for the hidden words in the grid. They can be horizontal, vertical, or diagonal.
2. **Circle the Words**: Once you find each word, circle or highlight it.

Instructions for Use:

1. **Create the Grid**:
   - Use a word search maker online or draw a grid by hand.
   - Place the hidden words in various directions within the grid.
2. **Fill in Extra Letters**:
   - Fill the remaining spaces in the grid with random letters to complete the puzzle.
3. **Print or Distribute**:
   - Print the word search puzzle or distribute it digitally for students to solve.

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Igebraic Expression Sudoku Puzzle

Sudoku Grid

This Sudoku puzzle follows the standard rules: fill in each row, column, and 3x3 grid with the numbers 1 through 9. Each number corresponds to the solution of an algebraic expression.

Sudoku Grid:

1	2							
			4		5		6	
	3							9
		4		2			5	
			1		6			
5				7		9		
						1	7	
					2	8		
		7						6

Algebraic Expressions

1. **2x + 3 = 7**
   - **Solution**: x = 2
2. **3x - 1 = 8**
   - **Solution**: x = 3
3. **4x + 2 = 10**
   - **Solution**: x = 2
4. **x/2 + 4 = 6**
   - **Solution**: x = 4
5. **5x - 3 = 12**
   - **Solution**: x = 3
6. **2x - 1 = 7**
   - **Solution**: x = 4

Instructions:

1. **Solve Each Expression**:
   - Solve the algebraic expressions to find the values of x that correspond to the numbers 1 through 9.
2. **Fill in the Sudoku Grid**:
   - Place the numbers found in the solutions into the Sudoku grid. Each number should be used exactly once per row, column, and 3x3 grid.

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Completed Sudoku Grid:

1	2	6	7	4	8	3	9	5
9	7	8	4	6	5	2	6	3
4	3	5	8	1	9	7	2	9
6	8	4	2	7	1	5	5	1
3	1	9	5	8	6	4	7	2
5	2	7	9	3	4	6	8	1
8	4	2	6	9	7	1	7	4
7	9	3	1	5	2	8	4	7
2	6	1	3	4	8	9	1	6

How to Create and Use the Puzzle:

1. **Generate the Grid**:
   - Draw a Sudoku grid or use an online Sudoku generator to set up the grid.
2. **Fill in Numbers**:
   - Use the solutions of the algebraic expressions to fill in the grid.
3. **Distribute**:
   - Provide students with the Sudoku grid and a list of algebraic expressions to solve.
4. **Solution Checking**:
   - Ensure students' completed grids meet the Sudoku rules: each number must appear exactly once in each row, column, and 3x3 grid.

Sample Geometry Puzzle: Tangram Shape

Puzzle Description:

The tangram puzzle consists of seven pieces that students must fit together to form a larger shape, such as a square or rectangle. To determine how the pieces fit, students solve geometry problems related to the area of the individual shapes.

Tangram Pieces:

1. **2 Large Triangles**: Each with an area of 12 cm^2
2. **1 Medium Triangle**: With an area of 6 cm^2
3. **2 Small Triangles**: Each with an area of 3 cm^2
4. **1 Square**: With an area of 9 cm^2

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5. **1 Parallelogram**: With an area of 9 cm²

Instructions:

1. **Solve the Geometry Problems**:
    - **Problem 1**: Calculate the total area of all the tangram pieces.
        - **Solution**: Total area = (2 x 12) + 6 + (2 x 3) + 9 + 9 = 48 cm²
    - **Problem 2**: If the larger shape to form is a square, determine the side length of the square.
        - **Solution**: Side length = √48 ≈ 6.93 cm
2. **Fit the Pieces Together**:
    - Use the calculated total area to arrange the tangram pieces to fit into the larger shape (e.g., square).

Completed Tangram Shape:

Note: The images are placeholders; you can create your own tangram shapes using drawing tools or print ready-made tangram puzzles from educational resources.

Steps to Create the Puzzle:

1. **Draw or Print the Tangram Pieces**:
    - Draw or print the seven pieces of the tangram in different shapes (triangles, square, parallelogram).
2. **Create a Larger Shape Outline**:
    - Provide an outline of the larger shape (e.g., square or rectangle) that students need to fit the pieces into.
3. **Provide Geometry Problems**:
    - Include problems related to the area of each piece and the total area needed to complete the shape.
4. **Distribute and Solve**:
    - Distribute the tangram pieces and the outline to students. Have them solve the geometry problems and arrange the pieces to complete the shape.

Example Puzzle and Solution:

1. **Example Problem**:
    - **Objective**: Fit all the tangram pieces into a larger square.
    - **Solution**: Use the area calculation to ensure the pieces fit perfectly into the larger square, demonstrating understanding of geometric concepts and area calculation.

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CHAPTER 4
Summary of Findings, Conclusions, and Recommendations

In this section, the research findings are synthesized to draw meaningful conclusions that address the study's objectives. Based on these insights, specific recommendations are proposed to guide future actions, policy developments, and further research. These suggestions are tailored to enhance the practical application and relevance of the study's outcomes, ensuring they effectively contribute to the field of interest.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

1. Blessed Hope Christian School of Tarlac Incorporated's educational provisions in terms of teacher's content knowledge, instructional delivery, learning resources, facilities are good.

2. Most of the learners are nearly numerate and achieved very satisfactory rating in Mathematics.
3. There is no significant relationship between school educational provisions and learner's performance in math.
4. Customized interventions in Mathematics (Grades 4,5, and 6) are proposed.

Recommendations

1. Implement continuous professional development workshops for teachers, focusing on advanced instructional strategies and integrating new educational technologies to enhance both teacher knowledge and instructional delivery.
2. Establish a Math Resource Center equipped with up-to-date materials, interactive tools, and technology to support diverse learning styles and enhance student engagement in mathematical concepts.
3. Implement a targeted tutoring program that provides additional support and practice for intermediate learners, focusing on areas identified as weak in the diagnostic assessment.
4. Adopt the proposed customized intervention for Math 4, 5, and 6.

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