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Lived Experiences of Mathematics Teachers on Values Integration

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ABSTRACT

Values integration is expected across all learning areas in Philippine basic education, yet Mathematics teachers receive little structured guidance in integrating values into lessons that are often perceived as purely cognitive or technical. Grounded in Husserl's phenomenology and supported by Kolb's Experiential Learning Theory, this study explored how Mathematics teachers perceived, implemented, and reflected on values integration in Mathematics instruction. A qualitative descriptive-phenomenological design was used with 18 purposively selected secondary Mathematics teachers from a public school in Quezon Province, Philippines. Data were gathered in February 2026 through semi-structured individual interviews with six teachers and two focus group discussions with the remaining 12, transcribed verbatim, and analyzed using Braun and Clarke's six-step thematic analysis with the support of NVivo 14; three specialist informants validated the emerging themes. Teachers perceived values integration as a vital and intentional part of effective instruction that promotes both cognitive growth and character formation. Their approaches were shaped by formative educational backgrounds, mentorship, teaching philosophies, and responsiveness to learners. They connected mathematical concepts to real-life situations, particularly financial and everyday decisions, to cultivate discipline, responsibility, perseverance, respect, and critical thinking, using contextualized examples, collaborative learning, reflective questioning, inquiry-based tasks, and structured classroom routines. Challenges included time constraints and curriculum demands, learner readiness and diversity, topic-related difficulties, and limited professional development, which teachers addressed through adaptive instruction, inclusive practices, value modeling, and supportive teacher–student relationships. Values integration also fostered teachers' professional growth and improved learners' behavior, participation, and character. The study concludes that values integration in Mathematics is a transformative but largely individually sustained practice that requires structured pedagogical and professional support. A Math CORE (Character-Oriented Reflective Education) program brief was proposed to guide schools and division offices in strengthening values integration practices.

Keywords: *values integration, mathematics teachers, lived experiences, character education, phenomenology, Math CORE*

INTRODUCTION

Mathematics provides learners with an avenue to develop logical reasoning, problem-solving, and the ability to analyze and interpret information, while values integration plays a vital role in learners' development of character and identity and in their understanding of classroom content (Dandan, 2024). Values integration in Mathematics instruction strengthens learners' cognitive, ethical, and social development (Maglasang et al., 2025) and helps learners see personal meaning in what teachers teach (Dandan, 2024). Through this approach, teachers

connect cognitive learning with affective growth by encouraging values such as honesty, collaboration, critical thinking, and ethical reasoning within mathematical activities.

Educational systems have increasingly recognized that academic proficiency alone does not prepare learners for the demands of the 21st century, and countries including Indonesia, Malaysia, Nepal, and the Philippines have strengthened the implementation of values integration in their educational systems (Zurqoni et al., 2018). In the Philippines, the 1987 Constitution mandates the inculcation of patriotism, moral character, and personal discipline at all educational levels (Constitution of the Republic of the Philippines, 1987, Art. XIV, Sec. 3), while Republic Act No. 10533 (2013) requires a curriculum that uses integrative pedagogical approaches so that learners acquire both cognitive and moral competencies. The MATATAG curriculum likewise emphasizes holistic learner development through intensified values education (Maguate, 2024), and the Department of Education (DepEd) reaffirms the integration of values across learning areas, including Mathematics (Reyes, 2024).

Despite these policies, Mathematics teachers receive minimal guidance or training on integrating values into lessons that are often perceived as purely cognitive or technical (Maglasang et al., 2025). In one secondary public school in Quezon Province, all teachers are expected to integrate core values in all subject areas and to make these values explicit in their Detailed Lesson Plans, which are monitored during classroom observations. Teachers, however, struggle to sustain meaningful values integration because of the demand to complete mandated competencies, limited time, difficulty identifying values in technical topics, and learner diversity and resistance, and no specific programs or workshops exist to equip Mathematics teachers with strategies for values integration (Maglasang et al., 2025).

Few studies have explored the lived experiences of Mathematics teachers in integrating values into instruction, particularly in the Philippine secondary school context, and existing studies point to the lack of professional development programs and structured frameworks for doing so (Maglasang et al., 2025; Maguate, 2024). This study therefore explored the lived experiences of Mathematics teachers in integrating values within the teaching-learning process. Specifically, it examined (a) teachers' perceptions of the importance of values integration; (b) the personal and professional beliefs that influence their approach; (c) their actual experiences in incorporating values; (d) the strategies and classroom practices they use; (e) how they relate mathematical concepts to real-life situations that promote positive values; (f) the challenges they encounter; (g) how they cope with these challenges; (h) the realizations and insights they have gained; and (i) how values integration has influenced their professional growth and learners' attitudes toward Mathematics. Based on the findings, a Math CORE (Character-Oriented Reflective Education) program brief was developed to guide schools and division offices in designing professional development programs for public and private schools. The findings may benefit Mathematics teachers, school administrators, learners, and future researchers.

Literature Review

Values Integration and Holistic Education

Philippine policy situates values integration within the broader goal of holistic education. The 1987 Constitution emphasizes the role of the education system in inculcating patriotism, love for humanity, respect for human rights, ethical and spiritual values, and moral character (Constitution of the Republic of the Philippines, 1987), and Republic Act No. 11476 (2020) institutionalized Good Manners and Right Conduct and Values Education in the K to 12 curriculums, focusing on values such as respect, discipline, honesty, and love of country. These policies highlight the critical role of teachers in integrating values through curriculum planning, assessment, and classroom management, including in subjects such as Mathematics that learners often perceive as procedural and detached from moral and social development.

In Mathematics education, values refer to the deep affective qualities that education nurtures through mathematical processes, and these values appear to remain in learners' memories longer than conceptual and procedural knowledge, which tends to fade unless used regularly (Seah, 2019). The integration of real-life contexts

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strengthens both conceptual understanding and values formation: learners understand mathematical problems more effectively through real-world examples (Abaño et al., 2024), and linking abstract concepts to real-world applications improves engagement and deepens conceptual understanding (Sujatha & Vinayakan, 2023).

Values integration is also a cross-disciplinary practice. In Araling Panlipunan, values are integrated into competencies through teaching strategies, activities, and assessments rather than treated as separate content (Loisaga, 2019), and integration across subject areas provides opportunities for learners to develop character alongside academic competencies (Tuico, 2019). In Science, values integration promotes critical thinking, responsibility, and ethical behavior (Naquines et al., 2025), and activity-based values education has been found to promote responsibility (Yaman & Anilan, 2021). In English, learning activities foster personality development and moral formation (Prahaladaiah, 2021; Sugiono, 2022). These studies support the premise that values can be embedded across learning areas, including Mathematics.

Teachers' Perceptions and Beliefs in Values Integration

Teachers' perceptions play an essential role in how values are embedded into classroom practice. Teachers who hold positive perceptions of values integration are more likely to implement strategies that promote ethical behavior, critical thinking, and social responsibility (Naquines et al., 2025). Group activities have been found to positively influence learners' social behavior in Mathematics (Shouib & Aslam, 2024), suggesting that values such as respect and cooperation can emerge when they are intentionally embedded in instruction.

Teachers' approaches are also shaped by their formative foundations. The internalized values of teachers from Catholic institutions influence their thinking, action, and instructional decision-making (Castillo & Barrameda, 2024); mentor teachers' cognitive and emotional strategies help shape the professional identity of those they mentor (Zhang et al., 2025); and seasoned teachers tend to integrate values more effectively because broader experience enhances their pedagogical approaches (Tiblero, 2025). Learners, however, often perceive Mathematics as difficult and value-neutral, which places teachers in a significant role in transforming learners' attitudes toward the subject (Lee, 2021).

Effective values integration also requires teachers to be adaptive and responsive to learners' needs and contexts. Responsive instruction is strengthened when teachers adapt to learners' developmental needs (Darling-Hammond et al., 2020), and addressing learner diversity requires differentiation because a "one size fits all" approach is not applicable (Tomlinson, 2017). Teachers are therefore expected to remain context-sensitive and flexible when integrating values.

Strategies and Practices in Values Integration

Studies identify a range of strategies that support values integration. Contextualized lessons grounded in learners lived experiences, safe classroom environments, and authentic dialogue are effective (Naquines et al., 2025), while problem-based and ethical tasks promote deeper engagement and many teachers embed values through real-life financial and environmental contexts (Maglasang et al., 2025). In Mathematics, narrative-based media, ethnomathematics, and real-world problem-solving promote value-based learning experiences (Musthofa et al., 2025), and collaborative learning motivates learners to learn through interaction in group activities (Gebreyohannes, 2017).

Interactive, inquiry-based, and reflective strategies further contribute to values development. Inquiry-based learning and supportive classroom climates are associated with learners' growth mindsets (Yu et al., 2022), and reflective practices promote thoughtfulness, accountability, and responsibility (Vale et al., 2024). Inclusive learning environments enhance learners' confidence and motivation to participate (Lubicz-Nawrocka & Bao, 2025), and culturally inclusive Mathematics instruction encourages learners to share ideas by recognizing their diverse backgrounds (Averill et al., 2025).

Teachers themselves are central to the success of values integration. Teacher role modeling significantly influences learners' character development (Khathi et al., 2022; Sahwal & Yohamintin, 2025), and the involvement of teachers and school leaders strengthens the promotion of civic and ethical values (Monigir & Tarusu, 2025).

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Teachers serve as role models and guides who help learners internalize values (Brahmbhatt, 2025), compassionate teaching can reduce anxiety and empower learners in Mathematics (Morales-Hernandez, 2025), and self-reflection enables teachers to examine their practices and identify areas for improvement (Juma, 2024).

Outcomes and Challenges of Values Integration

Values integration has been associated with positive changes in learners' behavior, including honesty, hard work, respect, cooperation, and forgiveness (Shrestha & Gupta, 2019), and with improved self-discipline and environmental awareness (Naquines et al., 2025). Not all studies, however, report consistent outcomes: some found minimal or no significant influence of values integration on learners' behavior (Reyes, 2024; Tuico, 2019), suggesting that effectiveness may depend on learners' backgrounds, instructional approaches, and implementation consistency.

Teachers encounter several challenges in implementation. A rigid curriculum, limited instructional time, and the pressure to cover prescribed competencies hinder consistent integration (Maglasang et al., 2025), particularly as education increasingly prioritizes academic competence and future-oriented outcomes (Sugiono, 2022). Learners may struggle to reflect on, evaluate, and apply values to mathematical concepts (Nurhayati et al., 2024), and teachers may hesitate to integrate identified values (Dandan, 2024). Limited access to materials and professional development further constrains effective implementation, underscoring the need for structured support systems (Maglasang et al., 2025; Maguate, 2024).

Theoretical Framework

The study was primarily anchored on Edmund Husserl's phenomenology, which seeks to discover and understand human experiences as they are consciously lived and to draw out the essence of those experiences (Neubauer et al., 2019). Phenomenology guided the use of individual interviews and focus group discussions to obtain rich descriptions of teachers' perceptions, beliefs, strategies, challenges, and insights regarding values integration.

The study was supported by Experiential Learning Theory, which holds that learning occurs through a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb & Kolb, 2017). This lens framed teachers not as mere implementers of a requirement but as professionals who continuously learn from their encounters with learners, the challenges they face, and their own reflective practice. Values integration frameworks from national policy, including the integrative pedagogical approach mandated by Republic Act No. 10533 (2013) and the values orientation of the MATATAG curriculum (Maguate, 2024), provided a basis for examining whether teachers' practices align with institutional expectations.

Research Gap and Theoretical Paradigm

Although studies emphasize values integration across learning areas, few have explored the lived experiences of Mathematics teachers in integrating values into their instructional practice in the Philippine secondary school context, and existing work highlights the absence of professional development programs and structured frameworks for values integration in Mathematics (Maglasang et al., 2025; Maguate, 2024). This study addressed that gap by examining teachers lived experiences and translating them into a program brief for professional development.

Figure 1 presents the Input–Process–Output paradigm of the study. The input consisted of teachers' perceptions of values integration, personal and professional beliefs, lived experiences, strategies and practices, ways of relating mathematical concepts to real life, challenges encountered, coping strategies, realizations and insights, and the influences of values integration. The process involved thematic analysis of these lived experiences using Braun and Clarke's six-step method. The output was the proposed Math CORE (Character-Oriented Reflective Education) program brief on values integration in Mathematics, intended as a guide for a detailed professional development program relevant to both public and private schools.

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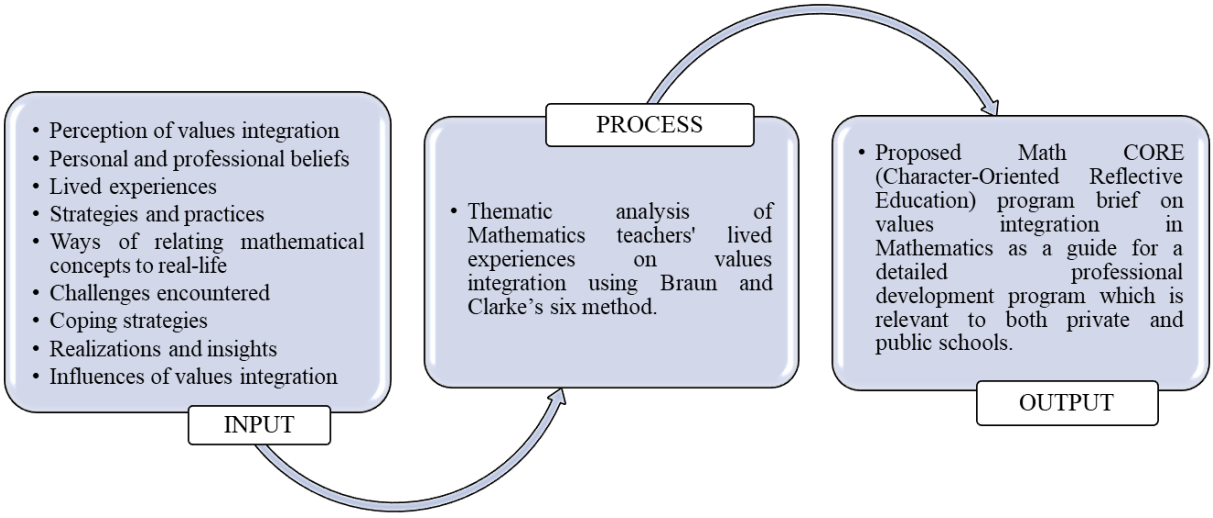


Figure 1. The Theoretical Paradigm of the Lived Experiences of Mathematics Teachers on Values Integration

METHODS

Research Design

The study used a qualitative descriptive-phenomenological research design anchored on Husserl's phenomenology (Neubauer et al., 2019) to describe and interpret Mathematics teachers' perceptions, beliefs, experiences, strategies, challenges, coping mechanisms, and insights related to values integration. The design focused on how teachers incorporated values into the teaching and learning process, connected concepts to real-life situations, and fostered positive attitudes among learners. The findings served as the basis for the program brief.

Research Locale

The study was conducted in one public secondary school in Quezon Province, Philippines, during School Year 2025–2026. The locale was purposively selected because all teachers in the school are expected to integrate values across learning areas in line with DepEd mandates, and its Mathematics teachers were already integrating values while expressing difficulty with implementation. The school was therefore a suitable site for exploring the lived experiences, practices, challenges, and coping strategies of Mathematics teachers.

Participants and Sampling Technique

The participants were 18 secondary Mathematics teachers, a number within the range of three to 25 participants considered reasonable for phenomenological studies (Creswell, 2013). They were selected through purposive sampling based on the following criteria: (a) teaching Mathematics subjects, (b) teaching in a secondary high school, and (c) willingness to participate. Six teachers, one from each grade level from Grade 7 to Grade 12, took part in individual interviews, while the remaining 12 took part in two focus group discussion (FGD) sessions. Participants were identified by codes (P1–P6 for individual interviews and FGD P1–FGD P12 for FGD participants).

Research Instrument

A semi-structured interview guide served as the primary instrument, and an FGD guide was used to gather supporting data. The questions addressed teachers' perceptions and understanding, experiences and practices,

challenges and coping mechanisms, and insights and reflections on values integration. Content validity was established by three experts: two Master Teachers in Mathematics and one school principal. The validated instruments were approved by the oral examination committee before administration, and a pilot interview with one participant was conducted to assess the clarity, relevance, and effectiveness of the questions.

Data Gathering Procedure

The researcher secured approval from the Research Ethics Committee, the Schools Division Superintendent, and the principal of the participating school. After schedules were confirmed, the researcher met the participants, explained the purpose of the study, the nature of their participation, and their rights, and obtained informed consent to conduct and record the sessions. Data were collected from February 4 to February 10, 2026. Individual interviews were held according to each participant's availability without compromising class schedules. Because the school operated shifting classes, two FGD sessions were held, with morning-shift teachers participating in the afternoon and afternoon-shift teachers in the morning. The FGDs were used to validate and deepen the themes emerging from the individual interviews.

Data Analysis

Audio-recorded interviews and FGDs were transcribed verbatim and analyzed using Braun and Clarke's six-step thematic analysis: (1) familiarization, (2) coding, (3) constructing themes, (4) reviewing themes, (5) defining themes, and (6) writing the thematic analysis (Braun & Clarke, 2013). NVivo 14 was used to support coding and the generation of themes and subthemes, which were reviewed for coherence and relevance to the research questions. Three specialist informants examined the transcriptions, themes, and subthemes and verified that the themes appropriately represented the participants' statements. The resulting themes served as the basis for the program brief.

Ethical Consideration

Participants were fully informed of the study's purpose, procedures, and their rights, including the right to withdraw at any time, and informed consent was obtained. Privacy and anonymity were maintained in accordance with the Data Privacy Act of 2012 (Republic Act No. 10173, 2012). The pilot participant was also briefed and gave consent, and pilot data were used solely to refine the instrument and were excluded from the final analysis. Data were stored in password-protected digital files accessible only to the researcher and were permanently deleted upon completion of the study. Ethical clearance and administrative permissions were secured before data collection.

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RESULTS AND DISCUSSION

The thematic analysis yielded 25 major themes across the nine research questions. Table 1 summarizes the themes and subthemes for teachers' perceptions, beliefs, experiences, strategies, and real-life connections, and Table 2 summarizes those for challenges, coping strategies, insights, and the influence of values integration. The number of participants contributing to each theme is also reported. The findings are discussed in the order of the research questions.

Table 1. *Themes on Perceptions, Beliefs, Experiences, Strategies, and Real-Life Connections in Values Integration*

Major theme	Subthemes	n
Perceptions of values integration		
Values integration as meaningful and holistic learning	Essential for real-life relevance; holistic development	10
Values integration as intentional moral and pedagogical practice	Foundation for discipline and responsibility; intentional and essential teaching practice	7
Personal and professional beliefs		
Formative foundations of values integration	Religious and values-oriented formation; professional training and mentorship; industry and professional life experiences	9
Teaching philosophy as moral and transformative practice	Character over intelligence; discipline and process-oriented learning; Mathematics is difficult but transformative	7
Adaptive and context-responsive values integration	Adjusting to learner needs; evolving practices over time	4
Lived experiences		
Navigating challenges in values integration	Initial student adjustment; variability across mathematical topics	2
Implementing values integration through real-life contexts	Real-life applications; financial and life decisions; anchoring mathematical meaning in learners' daily lives	4
Recognizing learner transformation as evidence of meaningful values integration	Growth in responsibility and self-discipline; values emerging through mathematical struggle	10
Strategies and classroom practices		
Classroom management as values integration	Discipline, respect, and responsibility through routines; modeling values through "walk the talk"	2
Learner-centered and contextualized instructional strategies	Active and collaborative learning approaches; contextualized and experiential learning strategies	13
Reflective and inquiry-based pedagogical approaches	Oral and written reflective practices; inquiry-based and values-oriented questioning	4
Relating Mathematics to real-life situations		
Integrating Mathematics with students' lives and contexts	Everyday life and personal experiences; careers and financial contexts	13
Promoting values through reflection and meaningful engagement	Reflection, accountability, and integrity	5

Note. n = number of participants (of 18) whose responses contributed to the theme.

Perceptions of Values Integration in Mathematics Instruction

Teachers perceived values integration as meaningful and holistic learning (n = 10). They emphasized that connecting abstract ideas to real-life experiences helps learners appreciate Mathematics: "By integrating values and highlighting how Mathematics applies to real-life situations, we help learners see that Math is all around us" (P3). They also viewed learning as encompassing character as well as knowledge, as one participant put it: "Learning is not limited to knowledge and skills; it also involves attitude" (FGD P6). These views are consistent with findings that real-world examples deepen learners' understanding and engagement (Abaño et al., 2024; Sujatha & Vinayakan, 2023).

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Teachers also perceived values integration as an intentional moral and pedagogical practice (n = 7) rather than an incidental add-on. One participant stated, "When I prepare a lesson plan, it seems incomplete if there is no values integration" (P1), while another observed that values were visible "during group activities, when students respect one another's opinions and communicate effectively with classmates" (FGD P1). This aligns with evidence that group work fosters positive social behavior (Shouib & Aslam, 2024) and that intentionally integrating values in Mathematics develops both cognitive competence and moral awareness (Musthofa et al., 2025). Teachers nonetheless relied largely on personal interpretations of how values should be integrated, pointing to a need for structured pedagogical guidance.

Personal and Professional Beliefs Influencing Values Integration

Three themes described the beliefs that shaped teachers' approaches. Formative foundations (n = 9) included religious and values-oriented schooling, professional training and mentorship, and accumulated professional experience. One participant explained, "Since I studied in a Catholic school, values were strongly instilled in us, and I feel they have become part of who I am" (P1), and another recalled a professor's maxim, "Teach a little, but teach it well" (FGD P3). A teacher who had handled Math 9 for 12 years noted that familiarity with the topics made it "easier to connect values to the lessons" (P4). These accounts mirror findings on the influence of teachers' internalized values (Castillo & Barrameda, 2024), mentorship (Zhang et al., 2025), teaching experience (Tiblero, 2025), and training (Nugroho, 2024).

Teaching philosophy as moral and transformative practice (n = 7) reflected beliefs that character matters more than intelligence ("Being intelligent is not enough; if a person lacks good character, intelligence becomes meaningless," P6), that Mathematics is learned through discipline and process, and that the subject, though often disliked, can be transformed from the "3D" view into "3E," "making Mathematics easy, enjoyable, and exciting" (FGD P11). Teachers thus saw themselves as agents in reshaping learners' negative perceptions of Mathematics (Lee, 2021). The third theme, adaptive and context-responsive values integration (n = 4), showed that teachers adjusted their approaches to learners: "While my belief remains the same, the way it is applied has changed over time due to many factors" (P3). This is consistent with the need for differentiation in diverse classrooms (Darling-Hammond et al., 2020; Tomlinson, 2017).

Lived Experiences in Integrating Values

Teachers' experiences revealed three themes. In navigating challenges (n = 2), they described learners' initial unfamiliarity with reflective questioning— "values integration was very challenging because students were not yet familiar with reflective questioning" (P1)—and the variability of topics, some of which integrate values "easy and natural" while others are more difficult (FGD P11). Reflective thinking requires higher-order processes that learners do not engage in naturally (Lee, 2021), and abstract topics limit opportunities for integration (Maglasang et al., 2025).

In implementing values integration through real-life contexts (n = 4), teachers drew on business planning tasks, government budgeting, financial decisions, and learners' daily experiences. One participant connected a lesson to how "public funds should be distributed equally and fairly to prevent corruption" (FGD P2), and another asked learner, "Who here has bought a laptop or cellphone?" or "Whose parents have taken a loan to build a house?" (P3). Such real-world problem-solving supports both cognitive and moral development (Musthofa et al., 2025). Teachers also recognized learner transformation as evidence of meaningful values integration (n = 10), observing growth in responsibility and self-discipline and values emerging through mathematical struggle. One participant described a quiet learner who "helps a classmate by explaining, 'This is how it works'" as a sign of growing confidence (FGD P6).

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Strategies and Classroom Practices for Values Integration

Three themes captured teachers' strategies. Classroom management as values integration (n = 2) involved routines that establish discipline, respect, and responsibility, and modeling values through "walk the talk": "You cannot give what you do not have" (FGD P7). Learner-centered and contextualized instructional strategies (n = 13) were the most widely shared, combining active and collaborative approaches with contextualized and experiential tasks. One teacher emphasized that through group work, "students who may not be as strong in Mathematics can still participate," and another simulated market shortages and surpluses so that learners could understand the law of demand "through learning by experience" (FGD P12). Collaborative learning motivates learners through interaction (Gebreyohannes, 2017), and teachers' role modeling shapes learners' moral development (Brahmbhatt, 2025).

Reflective and inquiry-based pedagogical approaches (n = 4) included oral and written reflection and values-oriented questioning: "I usually use reflection as a strategy, sometimes in written form and sometimes orally" (P1). Reflective practice promotes accountability and responsibility (Vale et al., 2024), and inquiry-oriented, supportive classrooms are associated with learners' growth mindsets (Yu et al., 2022). These findings show that values integration often emerges in interactive, learner-centered environments, but its effectiveness depends on teachers' ability to intentionally design learning experiences that connect mathematical concepts with value-oriented discussion.

Relating Mathematical Concepts to Real-Life Situations

Teachers integrated Mathematics with learners' lives and contexts (n = 13), drawing on everyday life, personal experiences, careers, and financial contexts. One participant explained that newly added financial literacy topics in Math 8 help learners "save, budget, and become accountable for their resources" (FGD P3), and another asked learner to identify situations at home or school showing direct or inverse variation (P4). Teachers also promoted values through reflection and meaningful engagement (n = 5), using reflection after checking activities so that learners view mistakes as learning opportunities and "develop integrity and a growth-oriented mindset" (FGD P4). These practices are consistent with findings that real-life applications such as managing allowances and budgeting build both mathematical and life skills (Sujatha & Vinayakan, 2023) and that contextualized financial and environmental tasks support values integration (Maglasang et al., 2025).

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Table 2. *Themes on Challenges, Coping Strategies, Insights, and Influences of Values Integration*

Major theme	Subthemes	n
Challenges encountered		
Implementation and consistency issues	Balancing content, time, and values integration	4
Student readiness and engagement challenges	Learner readiness, mindset, and negative perceptions; learner diversity and background	11
Topic-related difficulties in values integration	Identifying appropriate values per lesson; some topics are difficult to integrate with values	4
Professional development and structured support	Need for training and capacity-building; need for reflection and feedback mechanisms	5
Coping strategies		
Strategic instructional approaches for effective values integration	Contextualized and relatable teaching; reflective and flexible lesson delivery	4
Supporting student engagement, mindset, and diversity	Fostering active participation and collaboration; nurturing growth mindset and inclusivity	8
Classroom management and reinforcement of values	Consistency and positive reinforcement; teacher–student relationships and support	5
Realizations and insights		
Teaching with heart as a core realization of values integration	Compassionate and empathetic teaching; modeling values through teacher identity and passion	10
Values integration as transformative learning beyond academic performance	Shaping learners' mindset and affective development; teacher intentionality and recognition of long-term impact	9
Influence on teachers and learners		
Professional growth through values integration	Continuous self-reflection and improvement; deliberate lesson planning and holistic practice	8
Immediate classroom outcomes of values integration	Improved respect, discipline, and classroom behavior; increased participation, confidence, and openness	6
Long-term impact on learners' character and life skills	Acquisition of core values such as responsibility, honesty, and perseverance; sustained influence beyond the classroom	4

Note. n = number of participants (of 18) whose responses contributed to the theme.

Challenges in Integrating Values

Four themes described the challenges teachers encountered (Table 2). Implementation and consistency issues (n = 4) arose from balancing content coverage, time, and values integration: "With the many competencies we need to cover, the immediate goal is often to finish the lesson within the allotted time" (FGD P1). Student readiness and engagement challenges (n = 11) were the most widely shared, encompassing learners' negative perceptions of Mathematics and their diverse backgrounds. As one participant observed, "Many students dislike Mathematics and immediately assume that it is difficult, which affects their willingness to learn" (FGD P6), while another noted that "a teacher cannot instantly instill values that learners did not consistently learn during childhood."

Topic-related difficulties (n = 4) involved identifying appropriate values per lesson and integrating values into highly technical content: one teacher recalled learners asking whether quadratic equations are used when buying bread (P3). Teachers also identified a need for professional development and structured support (n = 5), noting that in-service training tends to focus on curriculum concerns and least-mastered competencies and suggesting sessions, "even if only during selected LAC meetings, that focus on how to integrate values properly" (P3). Teachers further found values integration difficult to assess, since "it takes time for learners to apply what they have learned outside the classroom" (FGD P12). These challenges correspond with documented constraints of time, curriculum rigidity, abstract content, and limited training (Maglasang et al., 2025; Nurhayati et al., 2024; Sugiono, 2022).

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Coping Strategies

Teachers coped through strategic instructional approaches (n = 4), such as contextualized and relatable teaching and reflective, flexible lesson delivery. One participant translated questions into Filipino and provided relatable examples when learners did not respond, while another encouraged learners, even in highly technical lessons, "to focus on the values they develop while facing mathematical challenges." Supporting student engagement, mindset, and diversity (n = 8) involved fostering participation and collaboration and nurturing a growth mindset and inclusivity: "I want students to feel that they belong, regardless of their behavior or personality" (FGD P3). This aligns with evidence that inclusive environments enhance learners' confidence and motivation (Averill et al., 2025; Lubicz-Nawrocka & Bao, 2025).

Classroom management and reinforcement of values (n = 5) relied on consistency, positive reinforcement, and supportive teacher–student relationships. One participant stated, "I intentionally make time for my students. I believe personal connection is important" (FGD P1), and another summarized the approach as "strictness with love, fairness with love, and justice with love" (FGD P11). Positive teacher–student relationships support learners' participation and achievement (Dai, 2024; Polydoros et al., 2025). Teachers' reliance on individual effort, however, underscores the need for systematic support and shared strategies.

Realizations and Insights

Teachers realized that teaching with heart is a core part of values integration (n = 10), involving compassionate and empathetic teaching and modeling values through teacher identity and passion: "I have realized that I cannot teach values effectively if I do not embody them myself" (FGD P7). This resonates with calls for compassionate Mathematics teaching (Morales-Hernandez, 2025) and with the role of teachers as ethical role models (Feliza, 2025). Teachers also viewed values integration as transformative learning beyond academic performance (n = 9). As one participant reflected, "While values integration may not immediately improve a student's academic standing, it strongly supports affective learning" (P3), and another recounted former students who later expressed gratitude in public places (P2).

Influence on Teachers' Professional Growth and Learners' Attitudes

Values integration contributed to teachers' professional growth (n = 8) through continuous self-reflection and deliberate, holistic lesson planning: "This process of self-reflection became part of my professional growth" (FGD P3). This is consistent with the view that self-reflection empowers teachers to improve their practice (Juma, 2024) and with the reflective cycle described by Kolb and Kolb (2017). Among learners, teachers observed immediate classroom outcomes (n = 6), including improved respect, discipline, participation, confidence, and openness: "When students see genuine concern and passion from the teacher, they respond with respect" (FGD P12), and "students gradually become more open" (P1). Such outcomes parallel reports of more harmonious classroom relationships and strengthened respect and responsibility through values integration (Win & Wilang, 2025).

Teachers also described long-term impacts on learners' character and life skills (n = 4), including responsibility, honesty, and perseverance, and influences sustained beyond the classroom: "When former students return and demonstrate that they retained routines, discipline, and learning habits, it serves as evidence that they carried something meaningful" (P5). These findings agree with studies linking values integration to positive behavior change (Naquines et al., 2025; Shrestha & Gupta, 2019), although other studies report minimal effects (Reyes, 2024; Tuico, 2019), suggesting that outcomes depend on consistent and intentional implementation.

Proposed Math CORE Program Brief

The findings show that teachers value integration and use varied approaches, yet they face time constraints, learner engagement issues, inconsistent implementation, and limited professional development. In response, the study developed the program brief "MATH CORE (Character-Oriented Reflective Education) Program: Strengthening Values Integration in Mathematics Instruction." The brief includes a rationale, objectives, target participants, program description, implementation plan, expected outcomes, and monitoring and evaluation,

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and it was crafted from the participants' findings and recommendations. It is intended to provide schools and division offices with a structured reference for designing comprehensive professional development programs that strengthen teachers' practices and strategies in values integration, consistent with calls for collaborative institutional support and systematic training in values integration (Maglasang et al., 2025; Maguate, 2024).

CONCLUSION

Mathematics teachers recognized values integration as a vital and intentional part of the teaching and learning process that helps learners connect mathematical concepts to real life and promotes character development. Their approaches were shaped by personal beliefs, educational backgrounds, mentorship, and professional experiences, and they continuously adapted these approaches to their learners. Through collaborative learning, inquiry-based and reflective questioning, contextualized tasks, and real-life applications, teachers fostered values such as responsibility, cooperation, discipline, perseverance, respect, and critical thinking.

Teachers faced time constraints, learner readiness and diversity, topic-related difficulties, a lack of structured materials, and limited professional development, which affected the consistency of values integration. They demonstrated resilience by adapting instruction, contextualizing lessons, practicing inclusivity, managing classrooms consistently, and building caring relationships with learners. Values integration emerged as a transformative practice that fosters teachers' reflection and professional growth and improves learners' behavior, engagement, and character, yet its reliance on individual teachers' interpretation and effort indicates that sustaining these outcomes requires structured pedagogical guidance and professional development. The proposed Math CORE program brief responds to this need by translating teachers' lived experiences into a basis for professional development. As a phenomenological study of 18 teachers in one public school, the findings describe this group's experiences and may be transferable, with caution, to similar contexts.

Recommendation

School administrators may organize professional development programs, seminars, training sessions, or workshops focused on effective strategies for integrating values into Mathematics instruction, using the Math CORE program brief as a reference. They may also encourage collaborative professional learning communities such as Learning Action Cells, where teachers can share experiences, strategies, and best practices, and allocate resources, including training funds, to support values integration.

Mathematics teachers are encouraged to intentionally integrate values into lesson planning and instruction by connecting mathematical concepts with real-life contexts, and to use collaborative tasks, reflective questioning, and contextualized activities that deepen both mathematical understanding and values formation. Teachers may also engage in continuous professional development and reflective practice to strengthen their approaches. Learners are encouraged to participate actively in collaborative activities and discussions, to connect mathematical concepts to real-life situations, and to reflect on how Mathematics contributes to their academic and personal growth.

Future researchers may conduct similar studies in different educational contexts or with larger groups of participants, examine the effectiveness of the Math CORE program brief once implemented, and explore values integration in other subject areas in relation to learners' academic performance, character development, and attitudes toward learning.

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