

BRIDGING THE GAP: EXPLORING THE EXPERIENCES OF ENGLISH TEACHERS IN THE INTEGRATION OF NUMERACY IN DAILY LESSONS

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Abstract

Integration of numeracy in lessons is often the plight of English teachers, for most perceive it as contrary to language teaching, more so because the Department of Education has required to include it in all subject areas. This study explored English teachers' challenges and opportunities in integrating numeracy into their lessons, focusing on their professional and personal experiences at Tampakan National High School in South Cotabato. Using interviews and thematic analysis within a transcendental phenomenological design, the research identified fourteen emerging themes highlighting teachers' struggles and determination to overcome obstacles. These findings emphasize the need for targeted interventions and support to enhance teachers' ability to integrate numeracy effectively into language instruction. By understanding teachers' experiences, educational agencies can foster collaborative cultures and professional development frameworks that promote engaging and interdisciplinary teaching strategies, ultimately equipping students with essential life skills.

Keywords: English Teachers, Integration of Numeracy, Lifeworld, Phenomenology, Language Teaching.

Introduction

Numeracy is essential for critical thinking and problem-solving. Given limited resources and inadequate training, I frequently struggle to incorporate numeracy into the lessons as an English teacher. This undermines my confidence and results in inconsistent instruction. Globally, educators struggle with integrating numeracy due to systemic barriers, such as resource constraints in the Philippines (Nicolosora et al., 2024) and varying learner proficiencies in Malaysia (Ling & Mahmud, 2023). At Tampakan National High School, teachers encounter similar challenges during evaluations, highlighting gaps between curricular goals and classroom practices. Studies have explored strategies to enhance students' numeracy skills and interventions for learning difficulties (Goos & O'Sullivan, 2022; Munda et al., 2024) but often overlook teachers' experiences in implementing such curricula. This research addresses this gap by exploring English teachers' strategies and experiences at Tampakan National High School, aiming to inform teacher training, classroom practices, and policymaking. By focusing on lifeworld, the study supports DepEd's mission to produce globally competitive learners with critical thinking and numeracy skills.

Research Objective

This study explored English teachers' lifeworld, context, and views on integrating numeracy into daily lessons.

Methodology

This study used a transcendental phenomenological design to explore English teachers' experiences in integrating numeracy into their lessons. Moustakas's (1994) method guided the study, focusing on understanding participants' descriptions and meanings of their lifeworld. The researchers maintained an open-minded stance, allowing teachers' perspectives to emerge and provide insights into their challenges and strategies in integrating numeracy. This design was also employed in the various students in Philippine contexts (Alfaro & Protacio, 2025; Sonza et al., 2022; Protacio, 2021; Felongco et al., 2022; Tacogue et al., 2022; Dela Cruz & Amarillo, 2022).

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This study was conducted at Tampakan National High School (TNHS) in South Cotabato, which serves over 2,400 Junior and Senior High School students and faces persistent challenges in Mathematics and Language performance on national and regional tests. TNHS was chosen for its adherence to DepEd's directive to integrate numeracy across all subjects, making it an ideal site to explore English teachers' strategies for numeracy integration. Nine English teachers participated, meeting criteria such as three years of teaching experience, numeracy integration practices, and willingness to engage in semi-structured interviews.

This study primarily employed in-depth interviews (IDIs) as the main data collection method, allowing for detailed exploration of participants' views, experiences, and perceptions (Boyce & Neale, 2006). Experts carefully developed and validated the interview questions to ensure clarity, relevance, and alignment with the study's objectives. In addition to interviews, supporting instruments such as questionnaires, protocols, consent forms, and transcription guides were used to ensure a rigorous, accurate, and ethically sound data collection process.

Before interviews, participants provided informed consent and signed confidentiality agreements to protect the data (Polit & Beck, 2017), with study approval granted by the division superintendent and school principal to ensure ethical compliance. The researcher adopted a systematic approach to align data collection, analysis, and interpretation for validity (Miles & Huberman, 1994). Rigor and trustworthiness were maintained through continuous analysis, reflexivity, an audit trail, and peer debriefing, in line with qualitative research standards (Creswell, 2009; Shenton, 2004; Korstjens & Moser, 2018).

This study used thematic analysis to identify patterns in qualitative data, following Braun and Clarke's (2016) method. Data were repeatedly read to develop preliminary codes that captured key concepts, which were then grouped into broader themes for comprehensive representation (Braun & Clarke, 2021; Nowell et al., 2017; Protacio, 2022; Dela Cruz et al., 2023; Barroga & Tampus, 2023). These themes were refined and aligned with the theoretical framework to ensure coherence and validity, culminating in a report of the most significant findings (Creswell & Creswell, 2017).

Results and Discussion

The researcher analyzed the data on English teachers' experience integrating numeracy using thematic analysis to explore their lifeworld. This method involved identifying significant statements,

formulating initial themes, clustering them, and determining emerging themes.

ET 1: Interdisciplinary Identity and Integration

Teachers view themselves as contributors to literacy and numeracy, recognizing their dual role in connecting language with numbers. This recognition aligns with Wesley's (2020) findings that educators with higher self-efficacy in teaching reading and mathematics employ more effective instructional strategies. Teachers who feel competent in integrating numeracy into literacy lessons report greater success in engaging students and enhancing their understanding of both subjects.

The following are the participants' shared experiences translated by the researcher:

I remind myself that I am not just an English teacher but also a math teacher, making it my duty to integrate numeracy. I did so when guiding students through their activity. -P4

So, here, ma'am, it is almost like I am a Math teacher because we need it, so I do it. It allows me to guide students in applying language skills and solving real-world problems... -P7

ET 2: Challenges and Struggles in Integration

Teachers underscore difficulties in applying numeracy consistently in their lessons—whether through overthinking during lesson planning or managing the extra time required when numbers come into play. This is reinforced by the study of Baliling (2023) that English teachers reported several difficulties, including a lack of confidence in teaching numeracy concepts due to limited training on effectively blending numeracy with literacy, including insufficient teaching resources and materials that significantly hinder successful integration.

The following are the participants' shared experiences translated by the researcher:

It is not always easy to apply in discussions unless an observation is required. However, we do our best to follow the mandate of integrating numeracy in English to help students understand the connection between language and numeracy. -P2

When it comes to integrating numeracy, I find it quite difficult. Sometimes, I overthink and struggle to figure out how to integrate numeracy into my lessons... -P6

ET 3: Professional Growth and Development

Teachers evolve their teaching strategies through continuous improvement, building confidence, and expanding their instructional approaches as they

learn and share life skills with students. Ongoing support, such as mentoring and feedback, is crucial for sustained professional growth, as West and Cameron (2020) noted. Peer and expert feedback reinforces new strategies and encourages continuous improvement.

The following are the participants' shared experiences translated by the researcher:

Frankly speaking, when I was a student, I hated Math. I struggled with it... I have grown professionally and realized that it completely differs from what I thought. -P6

You need to level up by reading and researching to meet the demand. Even if you are well-versed in your topic, you still need to find ways to integrate numeracy into your lessons. It is not easy, but we can always make the effort. -P3

ET 4: Enhancing Student Engagement and Learning Outcomes

Teachers note that including numerical elements—like interpreting graphs or using statistics—leads to more active participation and stronger persuasive writing skills among students. This aligns with the findings from Pane and Patriarca (2020), which suggest that diverse learning resources, such as interactive applications and simulations, make learning more engaging and accessible for students.

The following are the participants' shared experiences translated by the researcher:

As an English teacher integrating numeracy, the aspect that stands out most for me is enhancing students' critical thinking through data literacy and problem-solving... -P9

Let us say that if the students understand the topic, it makes them more participative... -P6

ET 5: Contextual and Practical Application of Numeracy

Teachers use real-life situations, such as graphs, statistics, and measurements, to make lessons more relatable, emphasizing the importance of connecting classroom content to everyday experiences. Incorporating real-world scenarios, like calculating discounts or measuring ingredients, helps students better grasp mathematical concepts and their practical applications, as highlighted by Kangan Institute (2021). This approach fosters engagement and critical thinking by linking academic learning to real-world relevance.

The following are the participants' shared experiences translated by the researcher:

So, you should consider real-life situations. So, you can probably look for references related to your lesson, such as graphs, statistics, and reflections, that you can use. -P3

For example, we use pie charts and line graphs, which automatically involve numeracy... -P7

ET 6: Collaborative and Institutional Influence

Teachers' responses highlight the influence of school administrators, departmental mandates, and support from Math and master teachers on their daily practice. Institutional requirements and professional collaboration guide the integration process. Johnson & Johnson (2019) support this theme, noting that administrators foster an environment that encourages interdisciplinary collaboration and provides professional development opportunities to support numeracy integration.

The following are the participants' shared experiences translated by the researcher:

I told myself to embrace the changes in DepEd since this is a national mandate... I appreciate the Math teachers who help by sharing ideas. -P1

Through seminar workshops, master teachers and department heads also help teach basic ways to integrate numeracy... It is truly a collaborative effort. -P2

ET 7: Personal and Professional Impact

Numeracy integration enhances teachers' problem-solving skills, broadens instructional strategies, and fosters a holistic view of education by connecting literacy and numeracy. It encourages teachers to leave their comfort zones and improve teaching approaches. As the Kangan Institute (2021) noted, incorporating numeracy promotes better strategies and a more integrated understanding of education.

The following are the participants' shared experiences translated by the researcher:

I was happy to realize that English teachers also teach numeracy... you can balance both because you need to teach them. -P1

It was not easy initially, but my love for my profession and desire to help students motivated me to improve my teaching methods further. -P2

ET 8: Perceived Responses and Support from Significant Others

External validation for teachers comes from supportive feedback from school leaders,

colleagues, students, and family members, which helps sustain their efforts. This support is crucial, as it aligns with Goos and O'Sullivan's (2022) findings that collaborative environments enable teachers to share resources and strategies for integrating numeracy. Teachers can develop interdisciplinary approaches that make learning more cohesive and relevant for students by working together.

The following are the participants' shared experiences translated by the researcher:

For example, our school and department heads encourage us to integrate math... they enjoy lessons more when numeracy and language are combined. -P1

We all had the same impression—if I found it difficult, so did they... It is essential to use multiple sources, not just one. -P2

ET 9: Emotional Reactions and Motivations

Initially, teachers may experience stress and confusion when integrating numeracy, but as they overcome challenges, feelings of happiness, fulfillment, and pride emerge. This emotional shift aligns with Frenzel et al.'s (2021) findings that creating a richer learning environment can lead to positive emotional responses. However, this excitement can be accompanied by anxiety about teaching numeracy, as noted by Education Victoria (2024), while positive emotions like satisfaction and happiness enhance teachers' motivation, as supported by Jiang et al. (2022) and Frenzel et al. (2021).

The following are the participants' shared experiences translated by the researcher:

At first, hearing about integrating math, especially during class observations, stressed me out... -P1

At first, it is a hassle for teachers, but we must also integrate numeracy. -P2

ET 10: Physical Mental Challenges in Teaching Practices

Teachers noted that integrating numeracy into their lessons can be draining but also sharpens their minds and improves logical thinking, increasing energy and focus. This mental sharpening can enhance teachers' self-efficacy, fostering confidence and resilience, which are associated with better mental health and reduced stress, as Derakhshan et al. (2022) discussed. However, integrating numeracy can also increase workload and stress if teachers feel unprepared or students struggle with the concepts, as Franzel et al. (2021) highlighted.

The following are the participants' shared experiences translated by the researcher:

When it comes to teaching, I am always full of energy... However, staying consistent with numeracy was challenging. Honestly, I felt uneasy and uncomfortable. -P4

Maybe I became more focused on planning... I had to exert extra effort and develop a more analytical approach. -P5

ET 11: Innovative, Interdisciplinary, and Data-driven Educator

Teachers envision a future incorporating advanced statistical elements and data literacy into integrated lessons, using real-life contexts and problem-solving tasks to blend mathematical and linguistic elements, as supported by Baliling (2025) and Education Victoria (2024). This approach aims to create more analytical lessons that engage students by making numerical data central to storytelling and analysis.

The following are the participants' shared experiences translated by the researcher:

Maybe, ma'am, I see myself integrating the basics and incorporating more advanced topics in Math into my subjects. -P8

So, I see myself evolving by incorporating numeracy to enhance critical thinking, strengthen analytical skills..., and foster a deeper understanding of language through data-driven approaches. -P7

ET 12: Continuous Professional Growth and Mastery

Teachers emphasize the need for ongoing research and a willingness to evolve beyond traditional methods by embracing new strategies and continuous learning, serving as role models. According to Education Victoria (2024) and Montes (2025), self-study empowers teachers to reflect on their instructional methods and identify areas for growth, allowing them to adopt innovative approaches that can make numeracy more engaging and relevant for students.

The following are the participants' shared experiences translated by the researcher:

Since this is our current level, think about what else you can adapt for future teaching in numeracy integration... The more you research, the more you understand. -P3

I saw myself slowly moving away from the traditional way, the barrier where I just wanted to stick to what I knew... I realized that I

needed to go beyond that to be able to compete with new teachers... -P5

Emerging Theme 13: Goal-Oriented Development for Holistic Numeracy Integration

Teachers set personal and professional goals, such as incorporating infographics into reading materials, collaborating with Math teachers, and attending seminars. They also aim to improve personal routines and classroom practices. These goals align with Meiers et al.'s (2021) findings that effective literacy and numeracy instruction relies on continuous professional development, which is enhanced by cooperative settings where teachers can share best practices.

The following are the participants' shared experiences translated by the researcher:

...Professionally, in teaching numeracy, I seek materials from math teachers and ask for their guidance when needed. -P1

Professionally, I want to help students apply these strategies in the classroom and in real-life situations... Once they step outside, they can use what they have learned—even in simple tasks like purchasing. -P2

ET 14: Navigating Integration Challenges and Opportunities

Teachers face challenges like time constraints and balancing numeracy with literacy, but they also see opportunities to improve their Math skills and create engaging lessons. This readiness to tackle challenges aligns with Education Victoria's (2024) findings that effective teaching strategies can help navigate these obstacles. Professional growth and collaboration are crucial for overcoming challenges and integrating numeracy effectively, allowing teachers to enhance learning outcomes through innovative approaches and teamwork.

The following are the participants' shared experiences translated by the researcher:

During the test, many tables, graphs, and numerical data heavily incorporated math and numeracy... we contribute to the math world and help enhance students' numeracy skills. -P1

When there is no clear connection to numbers, it becomes a challenge for the teacher... a creative teacher with the right resources can overcome these challenges. -P2

Conclusion

Professional growth and collaborative environments are crucial for expanding teachers' instructional repertoire and building confidence, which enhances

student engagement and critical thinking. The evolving teaching strategies, continuous self-improvement, and collaborative environments highlighted in teachers' experiences emphasize the importance of ongoing professional development and supportive communities. Professional development, driven by changing teaching approaches and cooperative settings, is vital for developing confidence and broadening instructional repertoires. Realizing this transformative journey requires focused training, supportive communities, and creative tools to effectively integrate reading and numeracy, equipping students with vital life skills.

Conflict of Interest

There is no conflict of interest by the authors in this manuscript.

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