

Triadic pressure and teacher resilience: A qualitative case study of mathematics teachers navigating instructional accountability, administrative workload and digital distraction

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Abstract

The increasing complexity of educational environments has intensified the professional demands placed upon Mathematics teachers. Beyond instructional responsibilities, teachers are expected to satisfy accountability requirements, perform administrative tasks, and manage technology-rich classroom environments. This qualitative case study explored the lived experiences of Mathematics teachers as they navigated instructional accountability, administrative workload, and digital distractions in a Philippine public-school setting. Three Mathematics teachers were purposively selected as key informants based on their extensive experience with instructional demands, ancillary functions, and technology-mediated instruction. Data was collected through semi-structured interviews and analyzed using thematic analysis. Four major themes emerged: (1) Teaching Under Pressure and Competing Demands, (2) Technology as Both Support and Distraction, (3) Coping Through Support, Adjustment, and Organization, and (4) Resilience as Flexibility, Endurance, and Commitment. Findings revealed that teachers experience overlapping workplace pressures that simultaneously influence instructional practices, classroom management, and professional well-being. Despite these challenges, participants demonstrated resilience through adaptive pedagogical practices, social support, organizational strategies, reflective practices, and technology-assisted coping mechanisms. The study proposes the Triadic Pressure Framework, which explains how instructional accountability, administrative workload, and digital distraction interact to shape teacher experiences and resilience. Findings highlight the need for institutional support systems, workload reduction initiatives, and effective digital classroom management policies to sustain teacher well-being and instructional effectiveness.

Keywords: Mathematics teachers; Teacher resilience; Instructional accountability; Administrative workload; Digital distraction; Qualitative case study

1. Introduction

Educational systems worldwide continue to emphasize accountability, curriculum reform, technological integration, and learner achievement. While these developments are intended to improve educational quality, they have also increased teachers' professional responsibilities. Mathematics teachers face unique challenges because they are expected to improve learner performance in a subject traditionally perceived as difficult while simultaneously responding to administrative and technological demands.

Research indicates that instructional accountability has become a major source of teacher stress. Jerrim and Sims (2022) reported that accountability systems significantly increase teacher stress due to heightened performance expectations.

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Similarly, Alave and Temelo (2022) found that Mathematics teachers experience pressure associated with learner achievement expectations and professional accountability requirements.

In the Philippine educational context, accountability pressures are accompanied by increasing administrative responsibilities. Pacaol (2021) described this phenomenon as workload intensification, in which teachers perform tasks that extend beyond classroom instruction. Pagela (2024) further reported that administrative workload negatively affects lesson preparation, work-life balance, and teacher well-being.

The rapid integration of digital technologies has introduced additional challenges. Although technology enhances engagement and access to information, it also creates classroom management concerns related to social media use, gaming applications, and digital distractions. Martin et al. (2025) identified digital distraction as a major challenge affecting instructional effectiveness, while Guintu et al. (2025) highlighted the disruptive effects of smartphone use among secondary school learners.

Existing studies have generally examined instructional accountability, administrative workload, and digital distraction separately. Consequently, limited research has examined how these pressures interact to shape Mathematics teachers' lived experiences and resilience. This study addresses this gap by exploring how Mathematics teachers experience and respond to these interconnected workplace pressures.

1.1. Research Questions

This study sought to answer the following questions:

- How do Mathematics teachers describe their experiences of working under instructional performance pressure and administrative demands?
- How do students' digital engagement patterns influence teachers' classroom management and instructional delivery?
- What coping strategies do Mathematics teachers use to manage professional stress in a digitally demanding school environment?
- What does resilience mean for Mathematics teachers working under performance pressure in contemporary public-school contexts?

2. Materials and Methods

2.1. Research Design

This study employed a qualitative case study design with a phenomenological orientation. The design was selected because it allowed an in-depth exploration of teachers' lived experiences within their natural educational setting.

2.2. Research Locale

The study was conducted in a public secondary school within the Department of Education system in the Philippines. The selected school provided an appropriate context for examining Mathematics teachers who regularly encounter accountability requirements, administrative responsibilities, and digitally mediated classroom challenges.

2.3. Participants and Sampling

Three Mathematics teachers were purposively selected as key informants. Participants met the following criteria:

- Currently employed as a mathematics teacher in a public secondary school;
- Possessed at least three years of teaching experience;
- Actively performed instructional and administrative duties;
- Had experience teaching in technology-rich classrooms; and
- Voluntarily agreed to participate.

Purposive sampling was used because it allows researchers to select information-rich participants who can provide meaningful insights into the phenomenon under investigation.

2.4. Research Instrument

Data was collected using a semi-structured interview guide developed from research questions, a conceptual framework, and related literature. The instrument consisted of open-ended questions focusing on instructional accountability, administrative workload, digital distraction, coping mechanisms, and resilience.

2.5. Data Gathering Procedure

Data collection followed four phases:

- Securing institutional approval;
- Recruitment of qualified participants;
- conduct of semi-structured interviews;
- Transcription and participant verification.

Each interview lasted approximately 45–60 minutes and was audio-recorded with participant consent.

2.6. Data Analysis

The study utilized thematic analysis. The analysis involved:

- Familiarization with the data;
- Initial coding;
- Categorization of codes;
- Theme development;
- Interpretation and synthesis.

2.7. Trustworthiness

Trustworthiness was established through:

- Credibility through participant validation;
- Dependability through systematic documentation;
- Confirmability through audit trails;
- Transferability through thick descriptions.

2.8. Ethical Considerations

Participation was voluntary. Information consent was obtained prior to data collection. Participant anonymity and confidentiality were protected using pseudonyms and secure data storage procedures.

3. Results and Discussion

3.1. Teaching Under Pressure and Competing Demands

Participants described significant pressure arising from instructional accountability and administrative responsibilities. Teachers reported balancing curriculum expectations, learner performance targets, lesson preparation, documentation requirements, and school-related programs simultaneously.

The findings suggest that accountability and administrative workload function as interconnected workplace pressures competing for limited time, energy, and attention.

The results support Jerrim and Sims (2022), Alave and Temelo (2022), Pacaol (2021), and Pagela (2024), who similarly reported that accountability and workload demand contribute to teacher stress and reduced instructional preparation time.

3.2. Technology as Both Support and Distraction

Participants viewed technology as both an instructional resource and a classroom challenge. While digital tools increased learner engagement and instructional flexibility, students' use of social media, gaming applications, and mobile devices frequently disrupted learning.

These findings support Martin et al. (2025), Guintu et al. (2025), Ventouris et al. (2021), and Deng et al. (2025), who reported that technology may either facilitate learning or contribute to distraction depending on classroom implementation.

3.3. Coping Through Support, Adjustment, and Organization

Participants employed multiple coping mechanisms, including:

- Social support from colleagues and family;
- Organizational strategies;
- Time management;
- Technology-assisted planning tools;
- Reflective practices;
- Faith-based coping.

The findings suggest that resilience is strengthened through both interpersonal and technological resources.

The results align with Belleza (2025), Escasinas (2025), and Reintjes et al. (2025).

3.4. Resilience as Flexibility, Endurance, and Commitment

Participants defined resilience as the ability to continue teaching effectively despite workplace challenges. Resilience was associated with flexibility, adaptability, perseverance, and commitment to student success.

The findings support Xenofontos and Mouroutsou (2023), Reintjes et al. (2025), and Belleza (2025), who identified adaptability and professional commitment as essential dimensions of teacher resilience.

3.5. Cross-Case Analysis

Across all cases, participants experienced accountability pressure, administrative workload, and digital distraction. Differences emerged in coping approaches; however, all participants demonstrated flexibility, commitment, and adaptive problem-solving.

3.6. The Triadic Pressure Framework

The study proposes the Triadic Pressure Framework as a conceptual explanation of how:

- Instructional Accountability Pressure;
- Administrative Workload Pressure; and
- Digital Distraction Pressure
- interact to shape teachers' professional experiences.

The framework suggests that resilience emerges through teachers' continuous adaptation to these overlapping workplace demands.

4. Conclusion

This study explored the lived experiences of Mathematics teachers navigating instructional accountability, administrative workload, and digital distraction in a public-school setting. Findings revealed that these pressures operate simultaneously and collectively influence teachers' instructional practices, professional well-being, and classroom management responsibilities.

Four major themes emerged: Teaching Under Pressure and Competing Demands; Technology as Both Support and Distraction; Coping Through Support, Adjustment, and Organization; and Resilience as Flexibility, Endurance, and Commitment.

The study contributes to the growing body of teacher resilience literature by developing the Triadic Pressure Framework, which explains how multiple workplace pressures interact to shape teachers' experiences and adaptive responses.

Recommendations

- For School Administrators

Reduce unnecessary administrative workload and strengthen teacher support systems.

- For Mathematics Teachers

Continue developing adaptive coping strategies, reflective practices, and digital classroom management skills.

- For Policymakers

Evaluate workload reduction policies and strengthen teacher well-being initiatives.

- For Teacher Education Institutions

Integrate resilience-building, workload management, and digital classroom management competencies into teacher preparation programs.

- For Future Researchers

Conduct larger-scale qualitative and mixed-methods studies to further validate the Triadic Pressure Framework.

Compliance with ethical standards

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Disclosure of conflict of interest

The author declares no conflict of interest.

Statement of ethical approval

Participant identities were protected through pseudonyms and secure handling of research data.

Statement of informed consent

Informed consent was obtained from all participants prior to data collection.

Artificial Intelligence (AI) Use Disclosure

Artificial Intelligence tools were utilized to assist in language refinement, organization, and manuscript preparation. All content was critically reviewed and validated by the author.

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