

Implementing Multisensory Learning Strategies to Support Diverse Learners: Grade Two Teachers in Focus

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Abstract: This qualitative phenomenological study explored the lived experiences of Grade Two teachers in implementing multisensory learning strategies to support diverse learners in public elementary schools. This aimed to uncover how teachers understand, apply, and adapt multisensory approaches in real classroom settings. Using purposive sampling, Grade 2 teachers from San Isidro North District, Division of Davao Oriental participated in the study. Data were analyzed using thematic analysis to identify recurring patterns and deeper meanings across participants' narratives. The findings revealed major themes grouped into three core areas: Teachers' Experiences, including applying teachers' knowledge and skills, implementing effective classroom management and organization, and understanding diverse learning needs; Coping Mechanisms, such as engaging in professional collaboration, exhibiting classroom adaptability and resourcefulness, and fostering emotional resilience; and Educational Management Insights, highlighting the importance of valuing teacher autonomy and trust, providing psychological support, and cultivating a collaborative school culture. The results underscored the powerful role of multisensory learning in promoting inclusive education while also revealing persistent challenges, including limited training, resource constraints, and the need for systemic support. The study emphasized the need for sustained professional development, resource allocation, and policies that empower educators to meet the diverse needs of 21st-century learners through effective, inclusive instruction.

Keywords: *Multisensory Learning Strategies; Diverse Learners; Grade Two Teachers; Philippines; Basic Education.*

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I. INTRODUCTION

➤ Background of the Study

As a teacher, I have seen firsthand how every child learns differently. Some learners respond best to stories, while others learn more effectively through visuals, hands-on activities, or movement. This inspired the study on multisensory learning, which integrates visual, auditory, tactile, and kinesthetic strategies to create more engaging and inclusive classrooms. These approaches are especially beneficial for learners with learning disabilities, language barriers, and diverse cognitive abilities. This research seeks to provide teachers with practical, evidence-based strategies while helping all learners become more engaged, confident, and successful.

Globally, multisensory learning has been recognized as an effective approach for improving comprehension, retention, and learner participation. However, its implementation remains inconsistent due to limited resources, insufficient teacher training, and varying educational contexts. In the United States, underfunded schools often lack access to sensory materials and professional development opportunities

(Smith & Brown, 2021). Similarly, educators in the United Kingdom face challenges in consistently aligning multisensory strategies with the national curriculum (Greenwood et al., 2022), while resource constraints and large class sizes continue to hinder implementation in India (Sharma et al., 2023).

In the Philippines, the implementation of multisensory learning also faces significant barriers. Many schools lack manipulatives, sensory aids, assistive technologies, and other instructional resources needed to support diverse learners (Del Rosario & Santos, 2023). Teachers likewise report limited professional development on multisensory instruction, often relying on self-directed learning and peer collaboration (Garcia et al., 2022). Moreover, curriculum demands, standardized assessments, limited follow-through after training, and heavy workloads make it difficult for teachers to consistently apply learner-centered, multisensory approaches (Rodriguez & Cruz, 2021; Formanes & Caliba, 2024; Olavarria, 2023; Navarro & Santos, 2022; Abellana et al., 2023; Torres & Dizon, 2020; Llego & Bagaoisan, 2021).

These challenges are also evident in schools in Davao Oriental, particularly in rural and geographically isolated areas, where limited access to instructional materials, electricity, internet connectivity, and technology-supported learning constrains effective multisensory instruction (Villareal & Santos, 2023). This study aims to explore how teachers implement multisensory learning despite these barriers and identify strategies that can support more inclusive teaching. The findings may contribute to the development of government-supported training programs, affordable instructional resources, and stronger partnerships that will enhance multisensory learning in Philippine classrooms.

➤ Theoretical Lens

The implementation of multisensory learning strategies in Grade Two classrooms can be understood through several theoretical perspectives. One of the most relevant is Multiple Intelligences Theory (Gardner, 1983), which explains that learners possess different types of intelligences and therefore benefit from varied instructional approaches. This theory highlights the value of engaging multiple senses to address diverse learning needs. Supporting this view, Lee and Tran (2021) found that multisensory strategies enable learners to interact with content according to their individual strengths by integrating visual, auditory, and kinesthetic activities.

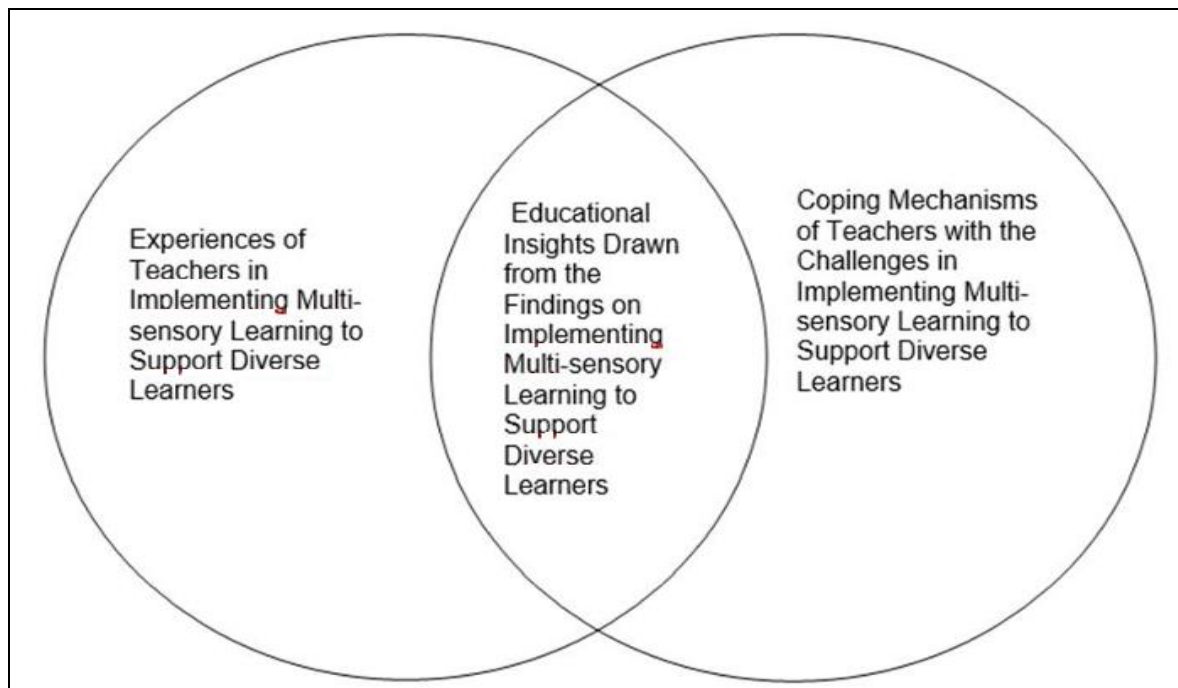


Fig 1 Conceptual Framework of the Study

Another important framework is Cognitive Load Theory (Sweller, 1988), which emphasizes that learning is more effective when cognitive demands are properly managed. Multisensory instruction helps reduce cognitive overload by presenting information through multiple sensory channels, making it easier for learners to process, understand, and retain new concepts. Harris and Lee (2023) further noted that combining visual, auditory, and kinesthetic experiences enhances memory retention and promotes deeper learning, making multisensory strategies particularly beneficial for young learners in Grade Two classrooms.

➤ Research Questions

In line with the purpose of exploring the strategies of teachers in implementing multi-sensory learning to support diverse learners including the coping mechanisms with the challenges that they encountered, this study specifically sought answers to the following research questions:

- What are the experiences of teachers in implementing multisensory learning to support diverse learners?

- How do teachers cope with the challenges encountered in implementing multisensory learning to support diverse learners?
- What educational insights can be drawn on implementing multi-sensory learning to support diverse learners?

II. METHODOLOGY

➤ Design and Procedure

This study employed a qualitative research approach using a phenomenological design to explore the lived experiences of Grade 2 teachers in implementing multisensory learning to support diverse learners. Phenomenology seeks to understand individuals' experiences from their own perspectives, allowing researchers to gain meaningful insights into how teachers perceive and respond to the challenges of inclusive instruction (Lester, 1999, as cited in Bhandari, 2020). Following Qutoshi (2021), data collection and analysis occurred simultaneously to allow themes to emerge naturally. Data were gathered through in-depth interviews and open-ended questionnaires, providing rich and detailed accounts while encouraging broader teacher participation (Delve & Limpaecher, 2022).

This qualitative design focused on understanding the how and why behind teachers' challenges and coping strategies rather than producing generalizable findings. Using purposive sampling, the study prioritized depth of understanding, with data systematically coded to identify recurring themes and patterns. The analysis considered both participants' responses and the way they expressed their experiences, ensuring an authentic representation of the realities of implementing multisensory learning in Grade 2 classrooms.

➤ *Research Participants*

The participants in this study were ten (10) purposively selected Grade 2 teachers from the San Isidro North District, Division of Davao Oriental. To qualify, participants had to hold a plantilla position from Teacher I to Teacher III (T1–T3), have at least three (3) years of Grade 2 teaching experience, and consistently obtain a Very Satisfactory performance rating for the past three consecutive school years. Of the ten participants, six took part in In-Depth Interviews (IDI), while four participated in a Focus Group Discussion (FGD).

The study employed purposive sampling to select information-rich participants with relevant experiences in implementing multisensory learning. This sampling approach ensured the collection of authentic, context-specific data on the challenges and coping strategies of Grade 2 teachers in rural settings, providing meaningful insights to inform interventions and policy improvements for early childhood education in underserved communities.

➤ *Research Instrument*

This study employed multiple qualitative data collection methods to explore the experiences of Grade 2 teachers in implementing multisensory learning for diverse learners. Data were gathered through audio-recorded unstructured in-depth interviews, focus group discussions (FGDs), and field notes. Participants attended several sessions over four days, with each session lasting approximately 1 hour and 15 minutes. An interview guide with open-ended questions was used to encourage teachers to share their experiences, challenges, and coping strategies while ensuring alignment with the study's objectives.

In-depth interviews allowed participants to provide rich, personal narratives about their teaching experiences (Fuster-Guillén, 2020), while FGDs generated shared insights and collective coping strategies through group interaction (Stewart & Shamdasani, 2020). Six teachers participated in individual interviews, and four joined the FGDs. As noted by Krueger and Casey (2020), FGDs capture both individual perspectives and group consensus, enriching the findings. Together, these methods provided a comprehensive understanding of how Grade 2 teachers implement multisensory learning, address challenges, and support diverse learners.

➤ *Data Analysis*

This study employed thematic analysis to systematically examine qualitative data gathered from in-depth interviews and focus group discussions with Grade 2 teachers. The analysis followed the step-by-step model of Creswell (2012, as cited in Chali, Eshete, & Debela, 2022), which guided the identification, analysis, and reporting of themes. The researcher first became familiar with the data through repeated reading of the transcripts, followed by coding meaningful responses that reflected teachers' experiences, challenges, and coping strategies in implementing multisensory learning.

The coded data were then organized into broader themes, which were reviewed, refined, and clearly defined to ensure they accurately represented participants' experiences. Finally, the findings were presented through a narrative supported by direct participant quotations and interpreted in relation to existing literature on multisensory learning and early grade education. This process provided a comprehensive understanding of teachers' lived experiences and informed practical recommendations for strengthening support for diverse learners in Grade 2 classrooms.

➤ *Framework Analysis*

This study utilized framework analysis, a qualitative approach well suited for applied educational research involving complex data. The method provided a systematic yet flexible process for examining the challenges Grade 2 teachers encounter in implementing multisensory learning and the coping strategies they use to support diverse learners. Guided by Fuchs (2023) and Goldsmith (2021), the analysis began by organizing and transcribing data from in-depth interviews and focus group discussions, followed by coding recurring ideas and categorizing key concepts related to teachers' experiences.

The coded data were then grouped into overarching themes that reflected teachers' instructional adaptations and coping mechanisms. To ensure trustworthiness, the study employed triangulation, member checking, and peer debriefing with the research adviser. Findings were presented through thematic narratives supported by direct participant quotations, relevant literature, and visual displays such as tables and matrices. As noted by Ritchie and Spencer (1994, as cited in Goldsmith, 2021), framework analysis combines systematic rigor with flexibility, making it an effective approach for generating meaningful insights into real-world educational challenges.

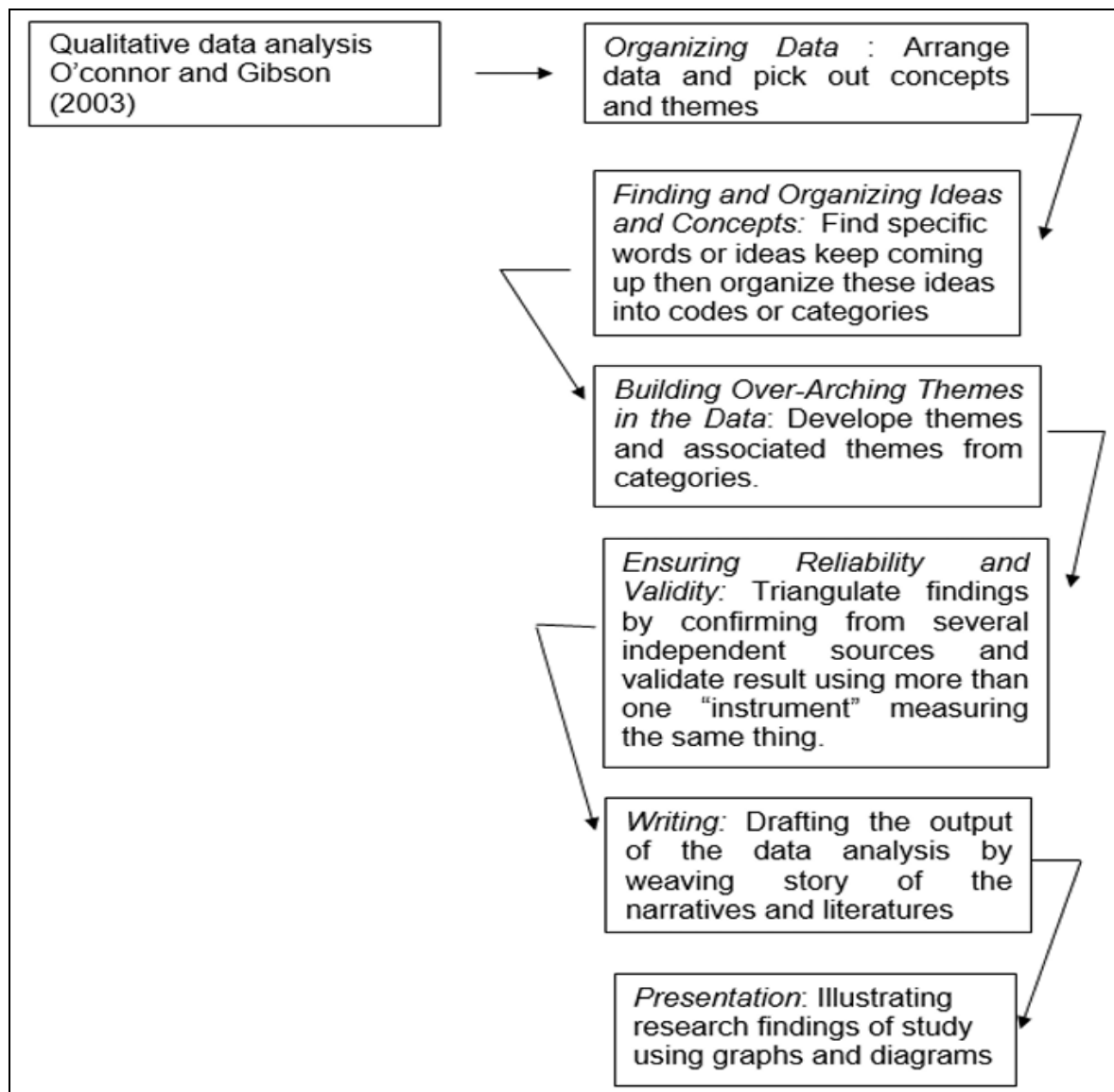


Fig 2 Analytical Framework of the Study

III. RESULTS AND DISCUSSIONS

➤ Experiences of Teachers in Implementing Multi-Sensory Learning to Support Diverse Learners

Grade Two teachers increasingly recognize the importance of implementing multisensory learning strategies to address the diverse learning needs in their classrooms. Teachers report that engaging multiple senses, such as sight, sound, touch, and movement, not only enhances retention but also increases engagement, particularly among students with learning differences

From a research perspective, a core assumption guiding this study is that multisensory learning approaches are not merely supplementary but are fundamentally effective and, in many cases, indispensable for supporting diverse learners, particularly those with specific learning differences. This assumption is strongly supported by the contemporary research of Campbell et al. (2022), who empirically demonstrated the efficacy of multisensory methods for learners with dyslexia, ADHD, and other language-based

difficulties. The underlying theory here is that by engaging multiple sensory pathways (visual, auditory, kinesthetic, tactile), information is encoded and retrieved more robustly in the brain, thereby enhancing memory, improving processing efficiency, and facilitating personalized instruction that bypasses common barriers faced by these learners.

Furthermore, the study posits that the practical application of these multisensory techniques is crucial for fostering active learning. This aligns with the observations of Fletcher-Watson and Durkin (2020), who noted the widespread adoption and effectiveness of specific multisensory tools such as tactile writing, color-coded phonics games, and movement-based vocabulary activities. The theoretical implication is that active engagement through varied sensory inputs transforms passive reception into an interactive learning experience, making abstract concepts more concrete and accessible. Therefore, from a researcher's standpoint, this study operates on the premise that embracing and systematically implementing multisensory strategies is a data-driven and theoretically sound approach to creating more

inclusive and effective learning environments that cater to the cognitive processing needs of all students, especially those who learn differently.

- *Applying Teacher's Knowledge and Skills*

A deep understanding of multisensory principles and practical skills in integrating various sensory modalities (visual, auditory, tactile, kinesthetic) are crucial. This includes the ability to adapt lessons, use various media, and respond to student "tantrums" or mood swings often seen in diverse learners. The foregoing results of the study were consistent with the findings of teachers emphasizing that implementing these strategies requires intentional planning and flexibility, especially in diverse classrooms where learners' needs and learning styles vary widely (Knight et al., 2023; Morales et al., 2022).

Likewise, the study's findings are also supported by the study of many educators who have noted positive outcomes such as improved reading fluency and comprehension, they also report facing challenges related to time constraints, large class sizes, and insufficient access to multisensory resources (Lindstrom & Richards, 2021; Ahmed et al., 2023). Most of the teachers' narratives regarding the application of knowledge and skills were reflected in the following statements:

"Para i-promote ang multi-sensory learning, aktibo kong ginagamit ang aking kaalaman sa iba't ibang teaching strategies. Halimbawa, sa pagtuturo ng math, hindi lang ako nagbibigay ng visual aid kundi pinapahawakan ko rin sila ng counters o blocks para maramdaman nila ang konsepto. Sa pagtuturo ng reading, pinapabasa ko sila nang malakas habang sinusundan ng daliri ang salita. Napansin ko na kapag nalalantad ang mga mag-aaral sa multi-sensory learning, mas nagiging mabilis ang kanilang pag-unawa at pagtanda sa mga aralin, lalo na sa mga diverse learners na may iba't ibang learning styles." ("To promote multi-sensory learning, I actively use my knowledge of various teaching strategies. For example, when teaching math, I don't just provide visual aids but also let them hold counters or blocks so they can feel the concept. When teaching reading, I have them read aloud while tracing the words with their finger. I've noticed that when students are exposed to multi-sensory learning, their understanding and retention of lessons become faster, especially for diverse learners with different learning styles.") (P1)

"Ang aking kasanayan sa paggawa ng customized learning materials ay malaking tulong sa pagpapatupad ng multi-sensory learning. Dahil mayroon akong diverse learners, kailangan kong maging adaptable. Ginagawa ko itong interactive sa pamamagitan ng paggamit ng textures, iba't ibang kulay, at maging amoy kung akma. Napansin ko na kapag mas maraming senses ang ginagamit sa pagtuturo, mas nagiging engaged ang mga bata at mas naiintindihan nila ang kumplikadong konsepto. Mahalaga ang multi-sensory learning para sa mga diverse learners dahil nagbibigay ito ng iba't ibang paraan para ma-access ang impormasyon, na nagpapataas ng posibilidad ng pagkatuto." ("My skill in creating customized learning materials is a great help in

implementing multi-sensory learning. Because I have diverse learners, I need to be adaptable. I make it interactive by using textures, different colors, and even scents if appropriate. I've noticed that when more senses are used in teaching, children become more engaged and understand complex concepts better. Multi-sensory learning is important for diverse learners because it provides different ways to access information, increasing the likelihood of learning.") (P2)

As I analyzed the narration from the lived experience of teachers, P1 emphasized that actively integrating diverse teaching strategies, such as using manipulatives in math and tracing in reading, enhances understanding and retention for all students, particularly diverse learners, by engaging multiple senses. Then, P2 highlighted the importance of creating customized, interactive learning materials that incorporate various sensory elements like textures, colors, and even scents, to increase engagement and comprehension of complex concepts for diverse learners.

Additionally, teachers highlight the importance of training and professional development in building confidence to use such strategies effectively (Morgan & Ramsey, 2020). Collaboration with special education professionals and peer support within schools also emerged as a crucial factor in successful implementation (Doyle & Bramwell, 2021; Singh & McWilliam, 2022). Another participant inferred the same theme. She quoted:

"Para i-promote ang multi-sensory learning, ginagamit ko ang aking kaalaman sa child development para maunawaan kung paano natututo ang bawat bata. Halimbawa, para sa mga auditory learners, nag-iinclude ako ng mga kanta at chants. Para sa mga visual learners, gumagamit ako ng mga charts at diagrams. Para sa mga kinesthetic learners, mayroon kaming movement activities. Napansin ko na kapag ang pagtuturo ay nakatuon sa kanilang strengths, mas nagiging masaya sila sa pag-aaral at mas tumataas ang kanilang confidence. Ang multi-sensory learning ay napakahalaga para sa diverse learners dahil kinikilala nito ang kanilang indibidwal na paraan ng pagkatuto." ("To promote multi-sensory learning, I use my knowledge of child development to understand how each child learns. For example, for auditory learners, I include songs and chants. For visual learners, I use charts and diagrams. For kinesthetic learners, we have movement activities. I've noticed that when teaching focuses on their strengths, they become happier in learning and their confidence increases. Multi-sensory learning is very important for diverse learners because it recognizes their individual learning styles.") (P6)

It can be gleaned from the responses of the participants that leveraging knowledge of child development to tailor multi-sensory approaches like songs for auditory learners, charts for visual learners, and movement for kinesthetic learners boosts student happiness and confidence by aligning with their individual learning strengths.

This corroborates that teachers of Grade Two learners are increasingly integrating multisensory learning strategies to accommodate the wide range of student abilities, learning

styles, and needs in diverse classrooms. These strategies involve engaging multiple senses: visual, auditory, kinesthetic, and tactile to reinforce learning and improve literacy, numeracy, and comprehension outcomes (Birsh & Carreker, 2021).

The experiences of Grade Two teachers show that multisensory learning not only supports cognitive development but also promotes inclusivity and equity in early education settings. The use of varied sensory pathways in instruction enables students to access content in multiple ways, reinforcing the idea that one size does not fit all in education (Santos et al., 2024).

- *Implementing Effective Classroom Management and Organization*

Implementing multisensory activities, particularly those involving movement and hands-on engagement, requires effective classroom management strategies to ensure a conducive learning environment for all students.

The findings of the study agree with the findings of implementing multisensory learning strategies in Grade Two classrooms require not only pedagogical innovation but also strong classroom management and organizational skills. Multisensory instruction often involves dynamic, hands-on activities that demand structured routines and clear expectations to maintain focus and prevent classroom disruption (Knight et al., 2023). Teachers must manage transitions between learning stations, materials distribution, and group collaboration while ensuring all students remain engaged and on-task (Morgan & Ramsey, 2020). This is especially critical in classrooms that serve diverse learners, including those with attention deficits, sensory processing issues, or behavioral challenges. Some of the responses of the participants provided the following statements:

"Para i-promote ang multi-sensory learning sa aming Grade Two classroom, mahalaga ang maayos na classroom management. Dahil marami kaming gumagamit ng iba't ibang materyales at galaw, sinisikap kong magkaroon ng malinaw na rules at routines. Halimbawa, may designated areas para sa hands-on activities at alam ng mga bata kung paano ibalik ang mga materyales nang maayos. Napansin ko na kapag organisado ang espasyo at malinaw ang expectations, mas nagiging produktibo ang multi-sensory activities at mas natututo ang mga mag-aaral." ("To promote multi-sensory learning in our Grade Two classroom, effective classroom management is crucial. Since we use many different materials and movements, I strive to have clear rules and routines. For example, there are designated areas for hands-on activities and the children know how to return materials properly. I've noticed that when the space is organized and expectations are clear, multi-sensory activities become more productive, and students learn more.") (P3)

"Ang aking approach sa pagpapatupad ng multi-sensory learning ay kinabibilangan ng maingat na pagpapalano ng activities para maiwasan ang kalat at ingay na maaaring makagambala sa pagkatuto. Pinaghahandaan ko ang mga materyales bago magsimula ang klase at tinitiyak kong

madali itong ma-access ng mga bata. Napag-alaman ko na kapag maayos ang daloy ng aktibidad, mas nagiging focused ang mga mag-aaral, lalo na ang mga diverse learners na madaling ma-distract. Mahalaga ang organisasyon para maging maayos ang transisyon mula sa isang sensory activity patungo sa isa pa." ("My approach to implementing multi-sensory learning involves careful planning of activities to avoid clutter and noise that could disrupt learning. I prepare the materials before class starts and ensure they are easily accessible to the children. I've found that when the flow of the activity is smooth, students become more focused, especially diverse learners who are easily distracted. Organization is important for seamless transitions from one sensory activity to another.") (P5)

With the narration above, P3 emphasized that effective classroom management, including clear rules, routines, and designated areas, is crucial for promoting productive multi-sensory activities and enhancing student learning, especially when diverse materials and movements are involved. Similarly, P5 highlighted the importance of careful planning and organization of multi-sensory activities, including preparing and easily accessing materials, to ensure a smooth flow, minimize distractions, and maintain student focus, particularly for diverse learners.

One significant factor is the physical arrangement of the classroom, which can greatly influence the success of multisensory activities. Flexible seating, designated sensory corners, and well-labeled material zones support smoother navigation and reduce downtime during tasks (Campbell et al., 2022). Moreover, visual schedules and auditory cues are often used to signal transitions and reinforce instructions, helping learners understand the flow of lessons and manage their expectations (Doyle & Bramwell, 2021; Fletcher-Watson & Durkin, 2020). These tools are especially helpful for students with autism spectrum disorder (ASD) and those who benefit from visual-spatial learning supports. Two of them voiced during the discussions had the same theme:

"Para mas mahusay na ma-promote ang multi-sensory learning, mahalagang i-set up ang classroom sa paraang nagbibigay ng iba't ibang espasyo para sa iba't ibang uri ng pagkatuto. Mayroon kaming reading corner na may soft cushions, isang area para sa math manipulatives, at isang espasyo para sa art projects. Napansin ko na kapag ang kapaligiran ay nakakapag-accommodate ng iba't ibang sensory needs, mas nagiging kumportable ang mga bata sa pagtuklas at pag-eksperimento. Ang multi-sensory learning ay mahalaga para sa diverse learners dahil nagbibigay ito ng flexibility sa kung paano nila ginagamit ang kanilang senses sa pagkatuto." ("To better promote multi-sensory learning, it's important to set up the classroom in a way that provides different spaces for various types of learning. We have a reading corner with soft cushions, an area for math manipulatives, and a space for art projects. I've noticed that when the environment accommodates different sensory needs, children become more comfortable exploring and experimenting. Multi-sensory learning is important for diverse learners because it provides flexibility in how they use their senses in learning.") (P9)

"Ang paggamit ng visual schedules at task cards ay malaking tulong sa classroom management habang nagpapatupad ako ng multi-sensory activities. Dahil marami silang ginagawang iba't ibang bagay, ang mga visual cues ay nakakatulong para manatili silang on track at alam nila kung ano ang susunod na gagawin. Napansin ko na kapag malinaw ang expectations at structured ang environment, mas nagiging independent ang mga bata sa paggawa ng multi-sensory tasks. Mahalaga ito para sa diverse learners na madalas nangangailangan ng mas malinaw na direksyon at istruktura para makapag-excel." ("Using visual schedules and task cards is a great help in classroom management while I implement multi-sensory activities. Since they are doing many different things, visual cues help them stay on track and know what to do next. I've noticed that when expectations are clear and the environment is structured, children become more independent in performing multi-sensory tasks. This is important for diverse learners who often need clearer directions and structure to excel.") (P10)

As a teacher, P9 showed the importance of classroom setup with varied learning spaces (e.g., reading corner, math area, art space) to accommodate diverse sensory needs, allowing children to explore and experiment comfortably and providing flexibility in how they engage their senses in learning. While P10 highlighted that visual schedules and task cards are vital for classroom management during multi-sensory activities, as they provide clear expectations and structure, helping students, especially diverse learners, stay on track and fostering greater independence.

Effective classroom management in this context also requires behavioral strategies tailored to individual student needs. Teachers often use positive reinforcement systems, such as taking economies or verbal praise, to encourage participation in multisensory tasks (Lindstrom & Richards, 2021). Additionally, collaborative learning is strategically used not only to reinforce academic content but also to model social behaviors and support peer-to-peer engagement (Singh & McWilliam, 2022).

- *Understanding Diverse Learning Needs*

Teachers' ability to identify and respond to the specific learning profiles of their diverse learners, including those with special educational needs, is paramount.

The said findings were also supported by Grade Two teachers play a critical role in addressing the wide range of learning needs present in today's inclusive classrooms. A key foundation for successfully implementing multisensory learning strategies lies in their deep understanding of diverse learners, including those with learning disabilities, attention deficits, language delays, and sensory processing challenges (Santos et al., 2023).

Certainly, the findings of the study were affirmed by the teachers must be adept at recognizing that students process information differently and that traditional, one-size-fits-all instructional methods may not meet the needs of every child (Birsh & Carreker, 2021). This understanding shapes how multisensory instruction is adapted to fit the profiles of

learners who require varied inputs-visual, auditory, kinesthetic, and tactile, to achieve meaningful comprehension and skill mastery. The participants' responses support the theme above:

"Kapag naiintindihan ko ang indibidwal na pangangailangan ng bawat estudyante, mas madali kong naisasama ang multi-sensory strategies sa aming mga aralin. Halimbawa, para sa isang batang nahihirapan sa phonics na visual learner, gumagamit ako ng colored letter tiles at picture cards. Para naman sa auditory learner, nagpapatugtog ako ng songs na may sounds ng letters. Napag-alaman ko na kapag ang aralin ay nakaayon sa kanilang specific needs, mas mabilis nilang naiintindihan at natatandaan ang mga konsepto. Ang multi-sensory learning ay kritikal para sa diverse learners dahil kinikilala at sinusupportahan nito ang kanilang natatanging paraan ng pagkatuto." ("When I understand the individual needs of each student, it's easier for me to integrate multi-sensory strategies into our lessons. For example, for a child struggling with phonics who is a visual learner, I use colored letter tiles and picture cards. For an auditory learner, I play songs with letter sounds. I've found that when the lesson is tailored to their specific needs, they understand and retain concepts more quickly. Multi-sensory learning is critical for diverse learners because it acknowledges and supports their unique ways of learning.") (P4)

"Ang pag-unawa sa mga batang may learning difficulties ay mahalaga rin sa pagpapatupad ng multi-sensory learning. Alam kong ang ilang estudyante ay mas nangangailangan ng tactile at kinesthetic activities. Kaya, nagbibigay ako ng mga oportunidad para sa hands-on activities tulad ng paggawa ng letters gamit ang clay, o pag-tracing ng words sa sand. Napansin ko na ang multi-sensory approach ay nakakatulong sa mga batang ito na mas maintindihan ang abstrak na konsepto sa pagbabasa at pagsulat. Ito ay mahalaga para sa diverse learners dahil binibigyan sila ng kongkretong karanasan sa pagkatuto." ("Understanding children with learning difficulties is also important in implementing multi-sensory learning. I know that some students need more tactile and kinesthetic activities. So, I provide opportunities for hands-on activities like forming letters with clay, or tracing words in sand. I've noticed that the multi-sensory approach helps these children better understand abstract concepts in reading and writing. This is important for diverse learners because it gives them concrete learning experiences.") (P7)

As I analyzed the narration of teachers, the first statement highlighted the benefits of group work in enhancing peer learning and building confidence among shy students. However, it also emphasized the necessity of proper teacher guidance to ensure a structured and productive collaboration. While, the second statement underscored the importance of recognizing students' efforts, even when they make mistakes, as this fosters resilience and persistence. Additionally, it stressed that praise for correct answers enhances motivation, encouraging students to stay engaged and strive for success.

Educators' awareness of neurodiversity is particularly crucial when selecting and designing multisensory activities. Students with dyslexia, for instance, benefit from integrating auditory and visual cues during phonics instruction, while students with ADHD may require movement-based learning opportunities to sustain attention and regulate behavior (Ahmed & Kim, 2022; Lindstrom & Richards, 2021). Teachers report that being equipped with knowledge about how different conditions affect information processing allows them to modify their instructional delivery, pacing, and grouping strategies accordingly (Doyle & Bramwell, 2021). The participant's responses during discussion revealed the same theme:

"Ang pag-unawa sa emosyonal at sosyal na pangangailangan ng aking diverse learners ay nakakatulong din sa pagpapatupad ng multi-sensory learning. Kung ang isang bata ay anxious o madaling ma-overwhelm, sinisigurado kong ang multi-sensory activities ay hindi masyadong magulo at nagbibigay ako ng sapat na personal space. Napag-alaman ko na kapag ang bata ay komportable at secure, mas handa silang makilahok at matuto. Ang multi-sensory learning ay mahalaga para sa diverse learners dahil maaari itong iakma hindi lamang sa kanilang akademikong pangangailangan kundi pati na rin sa kanilang emosyonal na kapakanan sa loob ng klase." ("Understanding the emotional and social needs of my diverse learners also helps in implementing multi-sensory learning. If a child is anxious or easily overwhelmed, I make sure the multi-sensory activities are not too chaotic and I provide enough personal space. I've found that when a child is comfortable and secure, they are more willing to participate and learn. Multi-sensory learning is important for diverse learners because it can be adapted not only to their academic needs but also to their emotional well-being in the classroom.") (P8)

As mentioned earlier, the importance of considering the emotional and social needs of diverse learners when implementing multi-sensory activities, ensuring a comfortable and secure environment that encourages participation and learning by adapting activities to prevent overwhelm and provide personal space.

From a research perspective, the central assumption of this study is that effective implementation of culturally responsive teaching (CRT) and differentiated instruction (DI) directly contributes to the creation of inclusive learning environments where all students feel a profound sense of connection. This assumption is firmly grounded in Gay's (2020) work, which posits that teachers who prioritize these pedagogical approaches are instrumental in fostering spaces where diversity is not just acknowledged but celebrated, leading to enhanced student belonging. The theoretical underpinning here is that cultural relevance in pedagogy bridges the gap between students' lived experiences and academic content, thereby increasing engagement and reducing alienation for diverse learners.

Building upon this, the study further assumes that strong teacher-student relationships are a critical, synergistic factor in amplifying student motivation, engagement, and ultimately, academic resilience. This aligns with the findings of Roorda et al. (2022), whose research highlights that the presence of trust, consistent emotional support, and constructive feedback from teachers directly cultivates a sense of belonging. The underlying theory is that these relational elements create a psychological safety net, empowering students to take academic risks, persist through challenges, and develop the necessary resilience to succeed. Therefore, culturally responsive and differentiated instruction, when delivered within a foundation of strong, supportive teacher-student relationships, forms a powerful nexus for creating truly inclusive, motivating, and academically resilient learning communities for all students.

Based on the figure, three themes emerged from the responses of the participants which were applying teacher's knowledge and skills, implementing effective classroom management and organization and understanding diverse learning needs.

The first theme, applying teacher's knowledge and skills, underscores the pedagogical foundation of multisensory instruction. As Sousa and Pilecki (2020) explain, activating multiple brain areas simultaneously through visual, auditory, and kinesthetic stimuli is crucial for effective learning. This highlights how teachers' understanding and skillful application of these varied approaches directly impact student engagement and comprehension.

The second theme, implementing effective classroom management and organization, emphasizes the practical considerations of multisensory learning. While the text mentions assistive technologies (Rao and Meo, 2020) as a way to provide diverse sensory feedback, this theme broadly covers the teacher's ability to create an environment where these tools and strategies can be effectively utilized. This includes managing resources, organizing learning spaces, and ensuring a smooth flow of activities when integrating different sensory elements into lessons.

Understanding diverse learning needs forms the third critical theme. This involves teachers' awareness of the varying ways students learn and process information. Bourne, McEvoy, and Zwart (2020) highlight the foundational role of manipulatives and visual aids in multisensory instruction across grade levels. This points to the teacher's ability to tailor their multisensory approaches to cater to specific learning styles and challenges, ensuring that all learners, regardless of their individual needs, can benefit from the instruction.

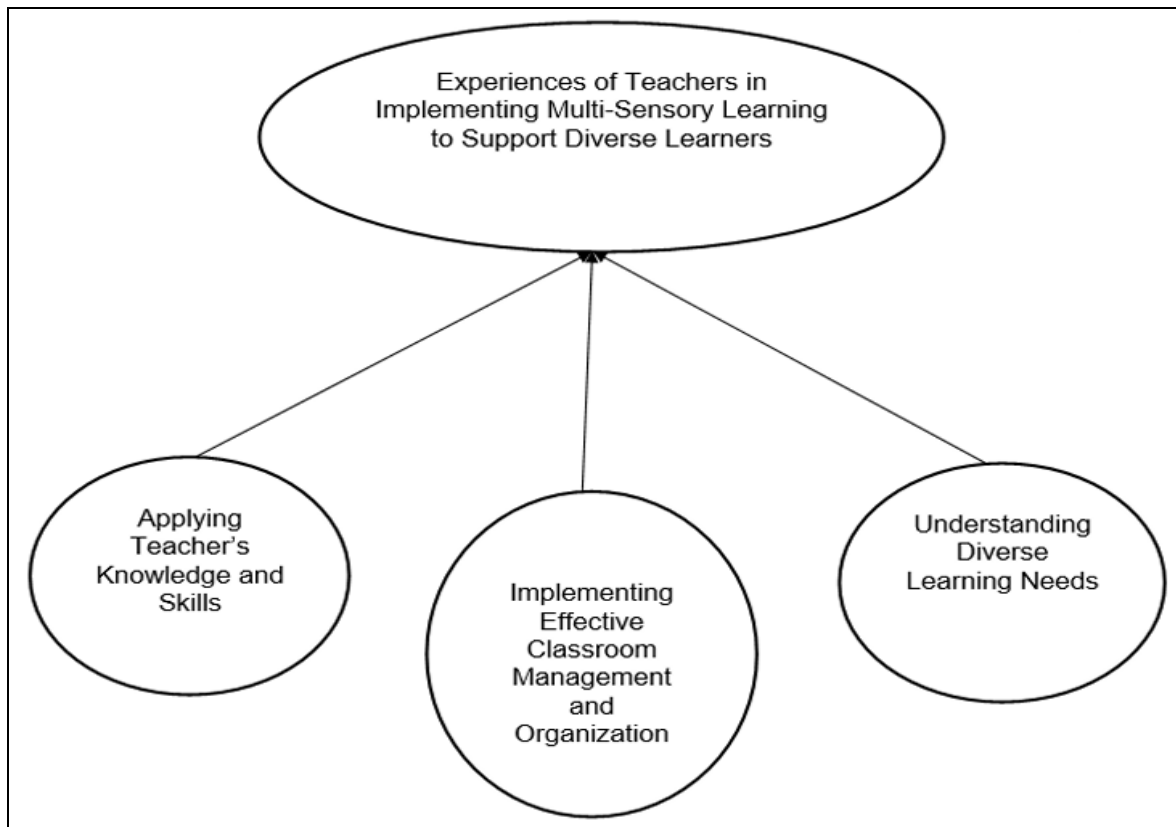


Fig 3 Emerging Themes on the Experiences of Teachers in Implementing Multi-Sensory Learning to Support Diverse Learners

➤ *Coping Mechanisms with the Challenges of Teachers in Implementing Multi-Sensory Learning to Support Diverse Learners*

Teachers in Grade Two classrooms face a range of challenges when implementing multisensory learning strategies, particularly when addressing the needs of diverse learners. To navigate these challenges, educators employ various coping mechanisms that promote resilience, innovation, and sustained engagement. One major coping strategy is professional collaboration, where teachers work together to share resources, lesson plans, and best practices for multisensory instruction.

- *Engaging in Professional Collaboration*

Collaboration with special education professionals and occupational therapists also enhances teachers' ability to tailor sensory-based interventions effectively. Professional collaboration has emerged as a vital coping mechanism for Grade Two teachers navigating the complexities of implementing multisensory learning strategies to support diverse learners. Given the wide range of student needs, including those with sensory processing difficulties, learning disabilities, or language barriers, collaborative environments enable teachers to share strategies, co-develop instructional materials, and offer mutual support (Knight et al., 2023).

As noted by Zhang and Ellis (2023), aligning instructional techniques with learner profiles through coordinated team efforts results in more inclusive and effective classroom practices. Collaborative frameworks promote shared expertise and continuous professional development, equipping teachers to implement evidence-

based multisensory strategies successfully. Here are some statements mentioned by the participants:

"Ang isa sa mga pangunahing nakakaapekto sa aking pagpapatupad ng multi-sensory learning ay ang kakulangan ng sapat na resources at training sa simula. Nahirapan akong maghanap ng mga ideya at materyales. Ang ginawa ko para matugunan ito ay ang pagiging aktibo sa aming professional learning community. Nakikipagtulungan ako sa ibang mga guro sa Grade Two at sa iba pang antas para magbahagi ng mga multi-sensory activities at tips. Kami ay nagtutulungan sa paglikha ng mga materyales at pagpapalitan ng mga karanasan sa aming mga klase." ("One of the main factors affecting my implementation of multi-sensory learning was the lack of sufficient resources and training initially. I struggled to find ideas and materials. What I did to cope with this was to be active in our professional learning community. I collaborate with other Grade Two teachers and those from other levels to share multi-sensory activities and tips. We work together in creating materials and exchanging experiences from our classes.") (P1)

"Ang pagkakaiba-iba ng learning needs ng aking mga estudyante ay isang hamon sa pagpapatupad ng multi-sensory approach. May mga batang mas mabilis matuto, at mayroon ding nangangailangan ng mas maraming tactile at kinesthetic activities. Ang ginawa ko para malagpasan ito ay ang regular na pakikipag-ugnayan sa aming school psychologist at mga espesyal na edukador. Sa aming collaboration, natututo ako ng mga bagong estratehiya para sa assessment at differentiation sa multi-sensory learning, na nagpapabuti sa aking pagtuturo sa mga diverse learners." ("The varying

learning needs of my students are a challenge in implementing a multi-sensory approach. Some children learn faster, and some need more tactile and kinesthetic activities. What I did to overcome this was to regularly connect with our school psychologist and special educators. Through our collaboration, I learn new strategies for assessment and differentiation in multi-sensory learning, which improves my teaching for diverse learners.")(P9)

Teacher P1 coped with initial resources and training limitations by actively engaging in their professional learning community, collaboratively creating materials and sharing experiences with other Grade Two teachers and those from different levels. In comparison, Teacher P9 addressed the challenge of diverse student learning needs by regularly collaborating with the school psychologist and special educators to acquire new assessment and differentiation strategies for multisensory learning.

According to Lindstrom and Richards (2021), structured collaboration sessions, such as co-planning and reflective teaching meetings, reduce the isolation often experienced in inclusive classrooms and allow for real-time problem-solving. Moreover, professional learning communities (PLCs) foster an environment of continuous growth and adaptability, allowing educators to trial and refine multisensory techniques based on collective feedback (Doyle & Bramwell, 2021). The participant shared:

"Nahirapan din ako sa pamamahala ng klase kapag sabay-sabay silang gumagamit ng iba't ibang senses. Maaari itong maging magulo at maingay. Ang ginawa ko para matugunan ito ay ang paghingi ng payo mula sa mga mas experienced na guro tungkol sa classroom management sa multi-sensory environment. Nag-observe ako sa kanilang mga klase at natutunan ko ang mga estratehiya sa pag-oorganisa ng stations, pagbibigay ng malinaw na panuto, at paglikha ng predictable routines. Malaki ang naitulong ng mga insights na ito sa pagpapanatili ng focus sa aking klase." ("I also struggled with classroom management when they were all using different senses simultaneously. It could get chaotic and noisy. What I did to cope with this was to seek advice from more experienced teachers about classroom management in a multi-sensory environment. I observed their classes and learned strategies for organizing stations, giving clear instructions, and creating predictable routines. These insights greatly helped in maintaining focus in my class.")(P10)

The response above revealed that participant had addressed classroom management challenges in a multisensory environment by seeking advice from experienced teachers, observing their classes, and implementing strategies for organizing stations, giving clear instructions, and creating predictable routines to maintain focus.

Through these communities, teachers gain access to evidence-based practices, including tactile tracing, kinesthetic spelling, and rhythmic chanting, which they can contextualize to fit local needs (Ahmed & Kim, 2022). These collegial

exchanges also serve as an emotional anchor, enhancing resilience and job satisfaction (Santos et al., 2023).

• *Exhibiting Classroom Adaptability and Resourcefulness*

In the face of challenges associated with implementing multisensory learning strategies for diverse learners, Grade Two teachers often rely on classroom adaptability and resourcefulness as key coping mechanisms. The diverse learning profiles of students ranging from those with learning disabilities to multilingual learners require teachers to constantly adapt their instructional methods and materials.

The study's findings agree with resourceful teachers creatively modify everyday objects into tactile or kinesthetic tools, such as using sand trays for letter formation or bottle caps for phoneme segmentation activities, to ensure learning remains inclusive and sensory-rich (Knight et al., 2023). On the other hand, the findings of the study were affirmed by the study of adaptability which extends to modifying classroom layouts to create movement spaces, quiet corners, and interactive stations that support sensory integration (Lytle & Sánchez, 2022). The participants expressed:

"Ang isa sa mga pangunahing nakakaapekto sa aking pagpapatupad ng multi-sensory learning ay ang limitadong budget para sa mga pormal na instructional materials. Hindi kami palaging makakabili ng mga ready-made tools. Ang ginawa ko para matugunan ito ay ang pagiging resourceful. Gumagawa ako ng sarili kong mga visual aids gamit ang mga lumang cardboard at magasin, at gumagamit ng mga natural na bagay tulad ng dahon o bato para sa tactile activities. Napansin ko na ang pagiging resourceful ay hindi lang nakakatipid kundi nagbibigay din ng personal touch sa mga aralin." ("One of the main factors affecting my implementation of multi-sensory learning is the limited budget for formal instructional materials. We can't always buy ready-made tools. What I did to cope with this was to be resourceful. I create my own visual aids using old cardboard and magazines, and I use natural objects like leaves or stones for tactile activities. I've noticed that being resourceful not only saves money but also adds a personal touch to the lessons.")(P2)

"Ang pagkakaroon ng iba't ibang learning needs sa aking klase ay isang hamon sa pagpapatupad ng isang 'one-size-fits-all' multi-sensory approach. May mga batang kailangan ng mas maraming galaw, habang ang iba ay mas gusto ang tahimik na visual input. Ang ginawa ko para malagpasan ito ay ang pagiging adaptable. Sa isang aralin, maaaring gumamit ako ng movement activity para sa isang grupo, habang ang isa naman ay nagtatrabaho sa isang puzzle na may kinalaman sa konsepto. Binibigyan ko sila ng choices kung paano sila matututo sa pamamagitan ng kanilang senses." ("Having diverse learning needs in my class is a challenge in implementing a 'one-size-fits-all' multi-sensory approach. Some children need more movement, while others prefer quiet visual input. What I did to overcome this was to be adaptable. In one lesson, I might use a movement activity for one group, while another works on a puzzle related to the concept. I give them choices on how they want to learn through their senses.")(P3)

Teacher P2 coped with a limited budget for instructional materials by demonstrating resourcefulness, creating DIY visual aids and using natural objects for tactile activities. In contrast, Teacher P3 addressed the challenge of diverse learning needs by being adaptable, offering students choices in multisensory activities to cater to varying preferences for movement or quiet visual input.

In contexts where resources are limited, such as rural or underfunded schools, adaptability becomes essential. Teachers often innovate by repurposing low-cost materials to simulate multisensory tools, thereby promoting equity in learning opportunities (Campbell et al., 2022). Additionally, flexibility in lesson planning and instructional pacing helps teachers respond effectively to the individual progress and needs of learners (Ahmed & Kim, 2022). The two shared:

"Nahirapan din ako sa pag-oorganisa ng aming classroom para sa iba't ibang multi-sensory activities, lalo na sa limitadong espasyo. Ang ginawa ko para matugunan ito ay ang pagiging adaptable sa pag-rearrange ng furniture at paggawa ng flexible learning zones. May movable tables kami at portable bins para sa materials para madaling makapag-shift mula sa isang activity patungo sa isa pa. Ang aking pagiging resourceful sa paggamit ng bawat sulok ng silid ay nakatulong para maging mas maayos at functional ang multi-sensory learning." ("I also struggled with organizing our classroom for various multi-sensory activities, especially with limited space. What I did to cope with this was to be adaptable in rearranging furniture and creating flexible learning zones. We have movable tables and portable bins for materials so we can easily shift from one activity to another. My resourcefulness in utilizing every corner of the room has helped make multi-sensory learning smoother and more functional.") (P5)

"Minsan, ang kawalan ng teknolohiya ay nagiging hamon sa pagpapatupad ng multi-sensory learning, lalo na kung ang lesson ay nangangailangan ng audio o video. Ang ginawa ko para malagpasan ito ay ang pagiging resourceful sa paggawa ng sarili kong audio recordings gamit ang aking personal na cellphone, o kaya naman ay nagda-drawing ako ng mga larawan sa halip na magpakita ng video. Pinapaawit ko rin ang mga bata o pinapagawa ng body movements para ma-engage ang kanilang auditory at kinesthetic senses. Ang aking pagiging adaptable ay nakakatulong para patuloy akong makapagbigay ng multi-sensory experiences kahit na limitado ang aming tech resources." ("Sometimes, the lack of technology becomes a challenge in implementing multi-sensory learning, especially if the lesson requires audio or video. What I did to overcome this was to be resourceful in making my own audio recordings using my personal cell phone, or I draw pictures instead of showing a video. I also have the children sing or do body movements to engage their auditory and kinesthetic senses. My adaptability helps me continue to provide multi-sensory experiences even with limited tech resources.") (P7)

This statement from Teacher P5 addressed limited classroom space for multisensory activities by being adaptable in rearranging furniture and creating flexible learning zones

with movable tables and portable bins. Similarly, Teacher P7 coped with a lack of technology by being resourceful in creating her own audio recordings, drawing visuals, and engaging students' auditory and kinesthetic senses through singing and body movements. This deals with the idea of Santos et al. (2023) highlights that adaptive instruction boosts student engagement, especially among learners with attention or processing difficulties, by meeting them at their functional level. Moreover, teachers who exhibit high adaptability tend to maintain a growth mindset, which enhances their ability to troubleshoot implementation setbacks (Doyle & Bramwell, 2021).

• *Fostering Emotional Resilience*

Fostering emotional resilience has become an essential coping mechanism for Grade Two teachers navigating the challenges of implementing multisensory learning strategies to support diverse learners. Emotional resilience refers to a teacher's capacity to remain positive, composed, and solution-oriented amid difficulties such as resource scarcity, behavioral issues, and varied learner needs

The foregoing results of the study were consistent with the findings of the study made in multisensory instruction, where planning and delivery demand high levels of creativity and differentiation, emotionally resilient teachers are better positioned to sustain their motivation and ensure consistent, responsive teaching (Green, 2023). Teachers who practice mindfulness, engage in self-reflection, and set realistic expectations are found to manage stress more effectively and maintain productive classroom environments (Jennings et al., 2020). The participants revealed:

"Nahirapan din ako sa pagpapanatili ng focus ng mga diverse learners kapag sabay-sabay kaming gumagawa ng multi-sensory activities na nangangailangan ng iba't ibang uri ng atensyon. Ang ginawa ko para malagpasan ito ay ang pagtuturo sa kanila ng mga self-regulation strategies. Halimbawa, mayroon kaming 'calm-down corner' na may sensory tools para sa mga kailangan ng break, o nagtuturo ako ng simple breathing exercises bago kami magsimula sa isang bagong activity. Nakakatulong ito sa kanila na i-manage ang kanilang emosyon at maging mas handa sa pagkatuto. Mahalaga ang pagbuo ng emotional resilience para sa diverse learners dahil nagbibigay ito sa kanila ng kakayahang i-manage ang frustrations na kaakibat ng pag-aaral." ("I also struggled with maintaining the focus of diverse learners when we were simultaneously doing multi-sensory activities that required different types of attention. What I did to cope with this was to teach them self-regulation strategies. For example, we have a 'calm-down corner' with sensory tools for those who need a break, or I teach simple breathing exercises before we start a new activity. This helps them manage their emotions and be more ready to learn. Building emotional resilience is important for diverse learners because it gives them the ability to manage the frustrations that come with learning.") (P4)

"Minsan, ang pagkakaiba-iba ng background at karanasan ng mga estudyante ay nakakaapekto sa kanilang willingness na sumubok ng mga multi-sensory activities na

hindi pamilyar sa kanila. Ang ginawa ko para matugunan ito ay ang paglikha ng isang supportive at inclusive classroom environment kung saan nararamdaman nilang ligtas silang mag-eksperimento. Pinupuri ko ang bawat maliit na pag-unlad at ipinapakita ko na lahat ng tao ay may iba't ibang paraan ng pagkatuto. Ang pagtutok sa pagbuo ng emotional resilience ay nakakatulong para maging mas bukas sila sa mga bagong karanasan at mas maging aktibo sa multi-sensory learning." ("Sometimes, the differing backgrounds and experiences of students affect their willingness to try multi-sensory activities that are unfamiliar to them. What I did to cope with this was to create a supportive and inclusive classroom environment where they feel safe to experiment. I praise every small progress and show that everyone has different ways of learning. Focusing on building emotional resilience helps them become more open to new experiences and more active in multi-sensory learning.") (P6)

P4 addressed challenges in maintaining focus during multisensory activities by teaching self-regulation strategies and creating a "calm-down corner," thus fostering emotional resilience in diverse learners by equipping them to manage frustrations. Similarly, P6 built emotional resilience by creating a supportive and inclusive classroom environment to encourage students with diverse backgrounds to engage in unfamiliar multisensory activities, celebrating small progress and normalizing different learning styles.

The inclusion of students with disabilities, language barriers, or sensory processing challenges often evokes emotional strain, yet teachers who foster emotional resilience are more capable of viewing such challenges as opportunities for growth rather than obstacles (Chang et al., 2022). Resilient educators are also more likely to develop strong relationships with their students, a factor linked to improved engagement and emotional well-being among diverse learners (Longobardi et al., 2020). The participant commented:

"Ang limitadong oras sa pagtuturo ay nagiging hamon din sa pagpapatupad ng multi-sensory activities, at kung minsan, pakiramdam ko ay kailangan kong magmadali. Ito ay maaaring magdulot ng stress sa mga bata. Ang ginawa ko para malagpasan ito ay ang pagtutok sa quality over quantity ng multi-sensory experiences. Nagbibigay ako ng sapat na oras para sa bawat activity at hindi ako nagmamadali. Bukod pa rito, regular akong nakikipag-ugnayan sa kanila para malaman ang kanilang nararamdaman at matugunan ang kanilang mga alalahanin. Ang pagpapalakas ng emotional resilience ay nagbibigay sa kanila ng kakayahang harapin ang mga bagong hamon sa pagkatuto nang may mas positibong pananaw." ("Limited instructional time also becomes a challenge in implementing multi-sensory activities, and sometimes, I feel like I have to rush. This can cause stress for the children. What I did to cope with this was to focus on quality over quantity of multi-sensory experiences. I allocate enough time for each activity and I don't rush. Furthermore, I regularly check in with them to understand how they're feeling and address their concerns. Strengthening emotional resilience gives them the ability to face new learning challenges with a more positive outlook.") (P8)

In essence, Teacher 8 addressed the challenge of limited instructional time and potential student stress by prioritizing quality over quantity in multisensory experiences, ensuring sufficient time for each activity, and regularly checking in with students to foster their emotional resilience and a positive learning outlook.

From a research perspective, implementing multisensory learning strategies to support diverse learners, particularly among Grade Two teachers, is deeply intertwined with the concept of emotional resilience. This aligns with the comprehensive study by Cross and Hong (2021), who posited that emotional resilience can be cultivated through structured professional development, peer collaboration, and access to school-based mental health supports. This means that for teachers to effectively adopt and sustain multisensory approaches, they need a robust support system that addresses not just pedagogical skills but also their emotional well-being.

Furthermore, the work of Miller and Brown (2020) provides a crucial lens, highlighting that emotionally resilient teachers demonstrate adaptive capacity. This adaptive capacity is precisely what's needed when teachers venture into new pedagogical territories like multi-sensory instruction. They're more likely to adjust their teaching styles, embrace trial-and-error methods with multi-sensory tools, and even celebrate small wins. This iterative process, facilitated by resilience, not only builds the teacher's own perseverance but also models and cultivates perseverance in their students, which is essential for diverse learners navigating new learning pathways. Therefore, from a research standpoint, successful implementation of multi-sensory learning isn't just about training; it's about fostering an environment where teachers' emotional resilience is prioritized and nurtured.

Based on the themes identified from the figure, the coping mechanisms of teachers with the challenges of teachers encountered were engaging in professional collaboration, exhibiting classroom adaptability and resourcefulness and fostering emotional resilience.

One significant coping strategy highlighted in the literature is engaging in professional collaboration. Teachers actively seek and leverage supportive networks to address the complexities of multi-sensory instruction. Riese and Robertson (2020) underscore the importance of professional learning communities (PLCs) in this regard. These communities serve as vital platforms where teachers can exchange ideas, share successful lesson plans, and pool resources specifically tailored to multi-sensory approaches. Such collaborative environments not only disseminate effective strategies but also provide a sense of shared understanding and support, reducing feelings of isolation when encountering difficulties in implementation. The collective wisdom and shared experiences within PLCs empower teachers to refine their multi-sensory techniques and overcome common hurdles.

Another crucial coping mechanism observed among teachers is exhibiting classroom adaptability and resourcefulness. Faced with potential limitations in readily

available multi-sensory materials, educators often demonstrate remarkable ingenuity in creating engaging learning experiences. Cutting and Dunn (2021) provide compelling examples of this resourcefulness, documenting how teachers repurpose everyday household items such as fabric scraps, rice, buttons, and textured paper. These repurposed items are transformed into tactile learning tools that effectively engage students' senses, demonstrating a proactive approach to overcoming resource constraints. This adaptability not only ensures the continuity of multi-sensory learning but also showcases teachers' commitment to meeting the diverse needs of their students through innovative, low-cost solutions.

Fostering emotional resilience emerges as an essential coping mechanism for teachers navigating the demands of multi-sensory learning. The ongoing effort to differentiate

instruction and provide rich sensory experiences can be taxing, requiring a sustained level of dedication and persistence. While Martinez (2023) primarily discusses how digital tools like interactive apps and virtual reality augment multi-sensory learning and engage Grade Two students in more dynamic ways, the underlying implication is the need for teachers to be emotionally resilient to continuously explore and integrate such innovative approaches. The willingness to embrace new technologies, adapt to evolving pedagogical landscapes, and consistently refine multi-sensory strategies speaks to a deep well of emotional strength. This resilience enables teachers to persevere through initial challenges, learn from their experiences, and maintain a positive outlook on the transformative potential of multi-sensory education for diverse learners.

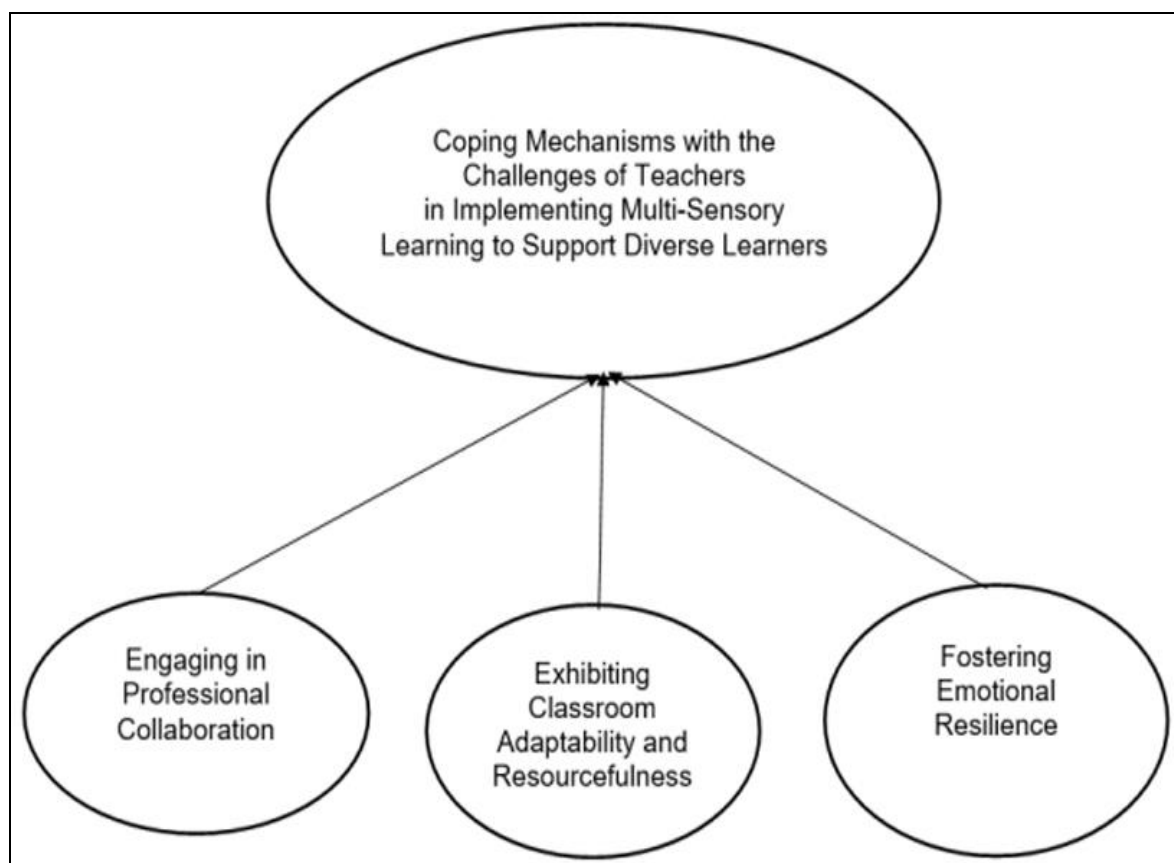


Fig 4 Emerging Themes on the Coping Mechanisms with the Challenges of Teachers in Implementing Multi-Sensory Learning to Support Diverse Learners

➤ *Educational Management Insights Drawn from the Findings of the Study on Implementing Multi-Sensory Learning to Support Diverse Learners*

Implementing multisensory learning strategies to support diverse learners in Grade Two classrooms presents several valuable insights for educational management, particularly in areas such as leadership, teacher support, professional development, and resource allocation. The participants shared their educational management insights, and it was narrowed down into one to generate the themes. These themes were carefully analyzed and formulated based on what came from informants' accounts and reflections. The subthemes are shown below:

• *Valuing Teacher's Autonomy and Trust*

Teacher autonomy and trust in decision-making emerge as pivotal for the practical adaptation of multisensory instruction. When teachers are given professional space and confidence, they are more likely to innovate and tailor content to their learners' sensory profiles.

The implementation of multisensory learning strategies in Grade Two classrooms reveal that teacher autonomy and institutional trust are vital components in the successful adoption of inclusive pedagogies. Teachers who are trusted to make professional decisions based on the unique needs of their diverse learners are more likely to innovate and adapt

strategies such as visual, auditory, kinesthetic, and tactile learning approaches (Darling-Hammond et al., 2020). Educational leaders who foster a culture of trust and empowerment enable teachers to exercise professional judgment in real-time classroom challenges (Ingersoll & Collins, 2021). Some participants shared insights regarding teacher autonomy and trust. They expressed that:

"Ang aking pangunahing realization nang ipatupad ang multi-sensory learning sa aming diverse learners ay kung gaano kahalaga ang teacher autonomy sa pagpili ng mga estratehiya. Dahil ako ang nasa harapan ng klase at kilala ko ang aking mga estudyante, ako ang pinakamahusay na makakapagpasya kung anong multi-sensory approach ang pinakaepektibo para sa kanila. Napagtanto ko na kapag binibigyan kami ng tiwala at kalayaan na mag-eksperimento, mas nagiging malikhain at mas epektibo ang aming pagtuturo. Para mas suportahan ang diverse learners, dapat bigyan ng mas malaking autonomy ang mga guro sa pagdidisenyo ng kanilang mga aralin at pagpili ng mga learning materials." ("My primary realization when implementing multi-sensory learning for our diverse learners was how crucial teacher autonomy is in choosing strategies. Since I am in front of the class and know my students, I am best suited to decide which multi-sensory approach is most effective for them. I realized that when we are given trust and freedom to experiment, our teaching becomes more creative and more effective. To better support diverse learners, teachers should be given greater autonomy in designing their lessons and selecting learning materials.") (P1)

"Napagtanto ko na ang pagtitiwala sa kakayahan ng guro na mag-adjust at mag-innovate ang susi sa matagumpay na pagpapatupad ng multi-sensory learning. May mga pagkakataon na ang isang planadong multi-sensory activity ay hindi agad nagiging epektibo. Dahil sa trust na ibinibigay sa akin ng aming school leadership, nararamdaman kong malaya akong magbago ng direksyon, sumubok ng bagong taktika, o mag-improvise nang walang takot na husgahan. Ito ay nakakatulong para patuloy akong makahanap ng mga paraan para maabot ang bawat mag-aaral. Para mas suportahan ang diverse learners, mahalagang magkaroon ng kultura ng tiwala sa pagitan ng administrasyon at mga guro, kung saan ang guro ay itinuturing na eksperto sa kanyang sariling klase." ("I realized that trusting a teacher's ability to adjust and innovate is key to successful multi-sensory learning implementation. There are times when a planned multi-sensory activity isn't immediately effective. Because of the trust given to me by our school leadership, I feel free to change direction, try new tactics, or improvise without fear of judgment. This helps me constantly find ways to reach every student. To better support diverse learners, it's important to have a culture of trust between the administration and teachers, where the teacher is considered an expert in their own classroom.") (P2)

Teacher P1's primary insight was the crucial importance of teacher autonomy in selecting effective multisensory strategies, emphasizing that teachers, due to their direct knowledge of students, are best positioned to make these decisions when given trust and freedom to experiment.

Similarly, Teacher P2 highlighted that trust in a teacher's ability to adjust and innovate is key to successful multisensory implementation, allowing for improvisation without fear of judgment and fostering a culture where teachers are seen as classroom experts.

When educators feel respected and supported by school management, they are more motivated to explore differentiated strategies and engage in reflective teaching (Reeves & Song, 2022). Moreover, autonomy leads to increased job satisfaction and creativity, which are essential in classrooms that require adaptive instruction for students with varied learning profiles (Penuel et al., 2021). The two expressed:

"Ang aking realization sa pagpapatupad ng multi-sensory learning ay ang pangangailangan para sa autonomy sa resource allocation sa loob ng classroom. Kung minsan, mas kailangan ko ng certain type of manipulatives o specific sensory tools para sa isang partikular na grupo ng estudyante, ngunit limitado ang centralized na distribusyon. Kapag pinapayagan akong gumawa ng sarili kong desisyon kung paano ko gagamitin ang aming classroom budget, mas nakakabili ako ng mga materyales na direktang makakatulong sa aking diverse learners. Para mas suportahan ang diverse learners, dapat magbigay ang paaralan ng mas malaking flexibility sa mga guro pagdating sa paggamit ng mga pondo para sa instructional materials." ("My realization in implementing multi-sensory learning is the need for autonomy in resource allocation within the classroom. Sometimes, I need a certain type of manipulatives or specific sensory tools for a particular group of students, but the centralized distribution is limited. When I am allowed to make my own decisions on how to use our classroom budget, I can buy materials that directly help my diverse learners. To better support diverse learners, the school should give teachers greater flexibility in using funds for instructional materials.") (P6)

"Napagtanto ko na ang tiwala sa propesyonal na paghuhusga ng guro ay mahalaga para sa epektibong pagtuturo ng multi-sensory. Sa isang klase na may diverse learners, walang 'one-size-fits-all' na solusyon. May mga pagkakataon na kailangan kong baguhin ang aralin on the fly o magdagdag ng isang sensory activity na hindi plinano dahil sa real-time na pangangailangan ng isang bata. Kapag alam kong sinusupportahan ako ng aking school leadership sa ganitong mga desisyon, mas madali kong naisasagawa ang mga ito nang may kumpiyansa, na nagreresulta sa mas magandang learning experience para sa mga estudyante. Para mas suportahan ang diverse learners, dapat palakasin ang tiwala sa kakayahan ng guro na gumawa ng pedagogical decisions sa loob ng kanilang classroom." ("I realized that trust in a teacher's professional judgment is essential for effective multi-sensory teaching. In a classroom with diverse learners, there is no 'one-size-fits-all' solution. There are times when I need to modify the lesson on the fly or add a sensory activity that wasn't planned due to a child's real-time needs. When I know that my school leadership supports me in such decisions, I can easily execute them with confidence, resulting in a better learning experience for the students. To

better support diverse learners, trust in a teacher's ability to make pedagogical decisions within their classroom should be strengthened.")(P9)

P6 realized the importance of autonomy in classroom resource allocation to directly benefit diverse learners by purchasing specific materials when centralized distribution is limited. Similarly, Teacher P9 emphasized that trust in a teacher's professional judgment is crucial for effective multisensory teaching, allowing them to adapt lessons and add unplanned sensory activities based on real-time student needs, thus leading to better learning experiences.

Teacher autonomy also supports responsive classroom management, allowing educators to adjust schedules, materials, and grouping strategies without bureaucratic constraints (Thompson & Wubbels, 2020). This is also supported by a study by Prieto and Villamor (2023), allowing teachers to co-create curriculum modifications builds a stronger alignment between multisensory strategies and actual student needs. Additionally, professional trust enhances collaboration, as teachers are more willing to share insights and best practices when they feel their expertise is valued.

• *Providing Psychological Support for Teachers*

Educational management must also consider the emotional and psychological support for teachers, as implementing multisensory strategies can be demanding. Institutions that provide emotional resilience training, peer mentoring, and stress-reduction workshops tend to retain teachers better and maintain a higher quality of instruction.

The findings of the study on implementing multisensory learning strategies in Grade Two classrooms emphasize the critical role of psychological support systems in enhancing teacher resilience and performance. Teachers working with diverse learners often experience heightened stress due to the need to adapt materials, differentiate instruction, and manage multiple learning needs simultaneously (Day et al., 2021).

Without adequate psychological support from school management, these demands can lead to burnout and reduced instructional quality (Viac & Fraser, 2020). The participants revealed:

"Ang aking pangunahing realization nang ipatupad ang multi-sensory learning sa aming diverse learners ay ang bigat ng emosyonal na pagod na maaaring maranasan ng guro. Napagtanto ko na ang pagtugon sa iba't ibang pangangailangan ng mga estudyante gamit ang multi-sensory strategies ay masinsinang at nakakaubos ng enerhiya. Dahil dito, kinailangan ko ng psychological support para ma-manage ang stress. Ang pagkakaroon ng mentor na makakausap at makapagbibigay ng moral support ay malaking tulong. Para mas suportahan ang diverse learners, mahalagang alagaan din ang kapakanan ng mga guro sa pamamagitan ng pagbibigay ng access sa mental health resources at peer support groups." ("My primary realization when implementing multi-sensory learning for our diverse learners was the emotional toll a teacher can experience. I realized that responding to the varied needs of students using

multi-sensory strategies is intensive and energy consuming. Because of this, I needed psychological support to manage the stress. Having a mentor to talk to and provide moral support was a great help. To better support diverse learners, it's crucial to also care for the well-being of teachers by providing access to mental health resources and peer support groups.")(P3)

"Napagtanto ko na ang pagpapatupad ng multi-sensory learning ay nangangailangan ng patuloy na pag-aaral at adaptation, na kung minsan ay nagdudulot ng self-doubt. May mga pagkakataon na pakiramdam ko ay hindi sapat ang aking kaalaman o kakayahan. Ang ginawa ko ay ang paghahanap ng psychological reassurance mula sa aking mga kasamahan at superbisor. Ang simpleng pagkilala sa aking pagsisikap at ang pagbibigay ng konstruktibong feedback ay malaking tulong. Para mas suportahan ang diverse learners, mahalagang magkaroon ng sistema kung saan ang mga guro ay regular na nakakatanggap ng affirmation at guidance na nagpapalakas ng kanilang self-efficacy." ("I realized that implementing multi-sensory learning requires continuous learning and adaptation, which sometimes leads to self-doubt. There were times when I felt my knowledge or skills were insufficient. What I did was seek psychological reassurance from my colleagues and supervisors. Simple recognition of my efforts and constructive feedback were a great help. To better support diverse learners, it's important to have a system where teachers regularly receive affirmation and guidance that strengthens their self-efficacy.") (P7)

P3's primary realization was the emotional toll of implementing multisensory learning, emphasizing the need for psychological support and mentorship to manage stress and support diverse learners. Likewise, P7 highlighted the self-doubt that arises from continuous learning and adaptation in multisensory implementation, seeking psychological reassurance through affirmation and constructive feedback from colleagues and supervisors to strengthen self-efficacy. One shared:

"Ang aking realization ay ang pangangailangan para sa emosyonal na 'breathing room' sa pagitan ng mga magkakaibang uri ng multi-sensory activities. Kapag sunud-sunod ang mga intensive activities, maaaring ma-overwhelm ang parehong guro at estudyante. Natutunan kong maglaan ng maikling breaks o transitional activities para mabigyan kami ng pagkakataon na makapagpahinga. Ang pagkakaroon ng kakayahang i-manage ang aking sariling emosyonal na kalagayan ay direkta ring nakaaapekto sa kapaligiran ng klase. Para mas suportahan ang diverse learners, dapat magkaroon ng administrative flexibility para sa guro na magplano ng mga aralin na may kasamang space for emotional regulation." ("My realization is the need for emotional 'breathing room' between different types of multi-sensory activities. When intensive activities are back-to-back, both the teacher and students can become overwhelmed. I learned to provide short breaks or transitional activities to give us time to rest. Having the ability to manage my own emotional state also directly affects the classroom atmosphere. To better support diverse learners, there should

be administrative flexibility for teachers to plan lessons that include space for emotional regulation.")(P8)

P8 realized the importance of providing emotional "breathing room" between multisensory activities, recognizing that both teachers and students can become overwhelmed, and therefore advocates for administrative flexibility in lesson planning to include space for emotional regulation. Educational leaders must implement structured emotional support mechanisms, such as access to school-based counselors, peer support groups, and mental health awareness programs to safeguard teacher well-being (Skaalvik & Skaalvik, 2021). When teachers feel emotionally supported, they are more likely to remain motivated and engaged in implementing innovative and inclusive strategies like multisensory learning (Collie, 2022).

- *Fostering Collaborative School Culture*

Fostering a collaborative school culture where teachers share strategies and challenges supports the sustainability of inclusive practices and boosts overall school morale. The implementation of multisensory learning strategies to support diverse learners in Grade Two classrooms highlights the pivotal role of a collaborative school culture in sustaining innovative and inclusive educational practices.

A culture of collaboration fosters mutual support, shared accountability, and collective problem-solving among teachers, which is essential when dealing with the complex demands of differentiated instruction (Goddard et al., 2020). Multisensory learning, which involves the integration of visual, auditory, kinesthetic, and tactile modalities, requires teachers to regularly coordinate lesson plans, exchange strategies, and share resources to meet the varying needs of their learners (Lynch et al., 2021). The participants said:

"Napagtanto ko na ang pagharap sa iba't ibang learning needs ng mga bata ay mas madali kung mayroong open communication at shared responsibility sa pagitan ng mga guro at administrasyon. Sa multi-sensory learning, kailangan ang pag-a-adjust sa curriculum at resources. Dahil sa collaborative culture namin, malaya kaming nakapagpahayag ng aming mga pangangailangan at nakipag-usap sa aming leadership tungkol sa mga solusyon. Ito ay nakatulong sa amin na makakuha ng suporta at mas maging flexible sa aming pagtuturo. Para mas suportahan ang diverse learners, dapat magkaroon ng malinaw na channels ng komunikasyon kung saan ang mga boses ng guro ay naririnig at pinahahalagahan." ("I realized that addressing the diverse learning needs of children is easier when there is open communication and shared responsibility between teachers and the administration. In multi-sensory learning, curriculum and resource adjustments are needed. Because of our collaborative culture, we were able to freely express our needs and talk to our leadership about solutions. This helped us gain support and be more flexible in our teaching. To better support diverse learners, there should be clear communication channels where teachers' voices are heard and valued.")(P4)

"Ang aking realization ay ang pagkakaroon ng shared vision para sa pagsuporta sa diverse learners sa pamamagitan ng multi-sensory strategies. Hindi lang ako ang nagtuturo nito; lahat kami sa Grade Two level ay sumusuporta sa ganitong approach. Ito ay dahil sa aming collaborative school culture na nagpo-promote ng alignment sa mga pedagogical goals. Nagkakaroon kami ng regular na pagpupulong para magplano, mag-assess at magbahagi ng aming mga realizations. Ang pagkakaisa na ito ay nakakatulong para maging mas epektibo ang aming mga pagsisikap. Para mas suportahan ang diverse learners, mahalagang bumuo ng isang school-wide vision na nagbibigay-diin sa inclusive teaching practices." ("My realization is the existence of a shared vision for supporting diverse learners through multi-sensory strategies. It's not just me teaching this; all of us at the Grade Two level support this approach. This is due to our collaborative school culture that promotes alignment in pedagogical goals. We have regular meetings to plan, assess, and share our realizations. This unity helps make our efforts more effective. To better support diverse learners, it's important to build a school-wide vision that emphasizes inclusive teaching practices.")(P5)

P4 realized that addressing diverse learning needs is easier with open communication and shared responsibility between teachers and administration, allowing them to freely express needs and find solutions within a collaborative culture. On the same note, Teacher P5 highlighted the benefit of a shared vision for supporting diverse learners through multisensory strategies, fostered by a collaborative school culture that promotes alignment in pedagogical goals and regular meetings.

In such contexts, educational leaders are tasked with nurturing professional learning communities (PLCs) where teachers engage in reflective dialogue, peer mentoring, and collaborative planning (DeMatthews et al., 2022). Moreover, collaborative school environments promote teacher efficacy and innovation, as educators feel more confident experimenting with new techniques when supported by their colleagues (Runhaar et al., 2021). One said:

"Ang aking pangunahing realization nang ipatupad ang multi-sensory learning sa aming diverse learners ay ang kahalagahan ng collaborative school culture. Sa simula, marami akong katanungan at hamon sa pagbuo ng mga multi-sensory activities. Ngunit dahil mayroon kaming kultura ng pagtutulongan sa aming paaralan, madali akong nakapagtanong sa ibang guro, nakipag-palitan ng ideya, at nakakuha ng mga materyales. Napagtanto ko na mas epektibo ang pagpapatupad ng mga bagong estratehiya kung hindi ka nag-iisa. Para mas suportahan ang diverse learners, mahalagang palakasin ang pagtutulongan sa pagitan ng mga guro sa pamamagitan ng regular na professional learning communities at team teaching opportunities." ("My primary realization when implementing multi-sensory learning for our diverse learners was the importance of a collaborative school culture. Initially, I had many questions and challenges in developing multi-sensory activities. But because we have a culture of collaboration in our school, I was able to easily ask other teachers, exchange ideas, and obtain materials. I

realized that implementing new strategies is more effective when you're not alone. To better support diverse learners, it's important to strengthen collaboration among teachers through regular professional learning communities and team teaching opportunities."(P10)

The study could shed light on the importance of a collaborative school culture, finding that working with other teachers to exchange ideas and resources made implementing multisensory activities more effective and less isolating when supporting diverse learners.

Research shows that collaborative school cultures are associated with increased fidelity in the implementation of multisensory approaches and greater student engagement (Baker et al., 2023). Principals and administrators play a critical role in institutionalizing these cultures by allocating time for co-teaching, encouraging interdisciplinary teamwork, and recognizing collaborative efforts during evaluation and feedback sessions (Hargreaves & Fullan, 2020).

Based on the figure, three themes emerged from the participants' responses, which emphasized valuing teacher's autonomy and trust, providing psychological support for teachers, and fostering collaborative school culture.

The first theme, valuing teacher autonomy and trust, highlights the critical need for educational leaders to empower teachers in their pedagogical decisions. While technology can significantly enhance multisensory learning, as Brown (2021) notes, the demanding nature of traditional curricula often

restricts teachers' opportunities to integrate technology-based activities. This suggests that without the autonomy to adapt and trust in their professional judgment, teachers may struggle to fully embrace and implement multisensory strategies, even with the availability of tools.

Secondly, providing psychological support for teachers is paramount. Harris and Lee (2023) found that many Grade Two teachers felt unprepared to effectively use technology alongside multisensory techniques. This indicates a psychological barrier a lack of confidence or perceived readiness that goes beyond mere technical training. Educational management must address this through ongoing support, mentorship, and opportunities for teachers to gradually build their comfort and proficiency, thereby reducing stress and boosting their self-efficacy in adopting new methods.

Fostering a collaborative school culture is essential for successful implementation. Despite the recognized importance of technology in multisensory learning, MacDonald's (2023) study revealed that many Grade Two classrooms face significant limitations in technological access, such as tablets, computers, and reliable internet. A collaborative culture allows teachers to share limited resources, brainstorm workarounds, and collectively develop innovative, low-tech multisensory solutions when high-tech options are unavailable. This shared responsibility and mutual support can mitigate resource challenges and foster a more adaptable and resilient approach to implementing multisensory learning across the school.

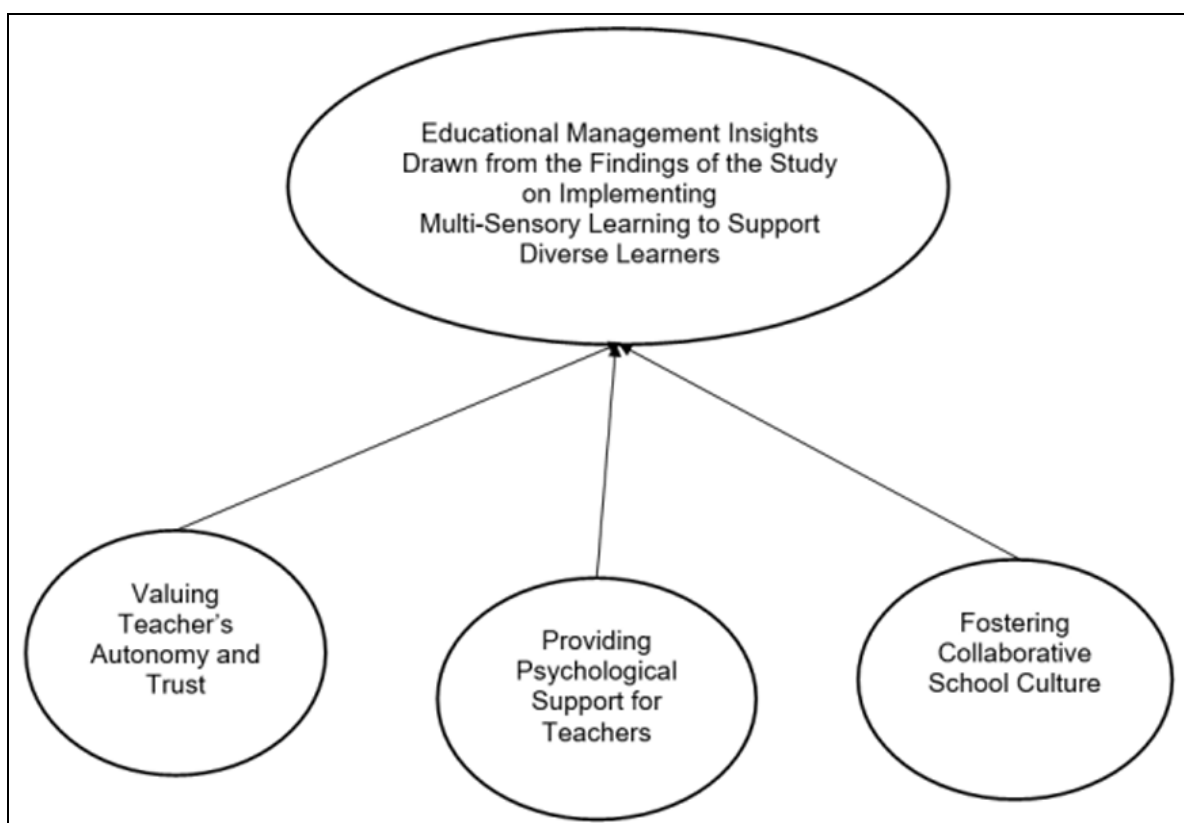


Fig 5 Emerging Themes on the Educational Management Insights Drawn from the Findings of the Study on Implementing Multi-Sensory Learning to Support Diverse Learners

IV. IMPLICATIONS AND FUTURE DIRECTIONS

➤ Implications

This study highlights the complementary roles of Multiple Intelligences (MI) Theory and Cognitive Load Theory (CLT) in implementing effective multisensory learning in Grade Two classrooms. While MI Theory emphasizes addressing learners' diverse intellectual strengths through varied sensory experiences, CLT underscores the importance of managing cognitive load to prevent learners from becoming overwhelmed. Together, these theories support differentiated instruction that is both engaging and cognitively appropriate. The findings further suggest that teacher professional development should integrate both theories to strengthen instructional design and classroom practice.

The findings revealed three major themes regarding teachers' experiences: applying teacher knowledge and skills, implementing effective classroom management and organization, and understanding diverse learning needs. Teachers' knowledge of multisensory strategies enabled them to deliver purposeful and differentiated instruction, while effective classroom management minimized distractions and supported meaningful learning. Understanding learners' individual strengths and needs allowed teachers to tailor multisensory activities that promoted equitable participation. To overcome implementation challenges, teachers relied on professional collaboration, classroom adaptability and resourcefulness, and emotional resilience, which enhanced their capacity to sustain multisensory instruction despite limited resources and demanding classroom conditions.

➤ Future Directions

Building on the findings of this study, the successful implementation of multisensory learning in Grade Two classrooms requires the collaborative efforts of learners, teachers, parents, school administrators, DepEd officials, and researchers. Sustaining inclusive and engaging instruction depends on continuous support, adequate resources, professional development, and evidence-based practices that address the diverse needs of learners.

For learners and teachers, schools should continue promoting student-centered multisensory instruction while providing teachers with ongoing training, mentoring, peer coaching, and opportunities to conduct action research. Parents should also be encouraged to reinforce multisensory learning at home through active participation and regular collaboration with teachers to support children's learning and development.

School administrators and DepEd officials should strengthen multisensory instruction by providing adequate resources, improving learning environments, supporting teacher well-being, and integrating multisensory approaches into the curriculum, teacher training, and Learning Action Cell (LAC) sessions. Future researchers are encouraged to examine the long-term effects of multisensory learning across different educational settings and explore the use of digital

and assistive technologies to further promote inclusive and effective teaching practices.

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