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Teachers' Perception on the Utilization of Strategic Intervention Material (SIM)

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Abstract:

Strategic Intervention Materials (SIM) are targeted, supplementary educational resources designed to address specific learning difficulties and enhance student understanding of particular competencies. Given this context, this study explored teachers' perceptions of using Strategic Intervention Materials (SIM) to improve educational practices across five key areas: alignment of objectives, usability and accessibility, engagement and interaction, feedback and assessment, and continuous improvement. A mixed-methods approach, employing purposive sampling, was utilized, with participants selected from three secondary schools in the southern part of Negros Occidental. Survey questionnaires were distributed to gather responses from the teacher-participants. The research aimed to assess how SIM supports learner-centered instruction. Findings indicated strong teacher agreement that SIM effectively aligned learning objectives with curriculum standards, ensuring purposeful and targeted instruction. Additionally, SIM was regarded as highly usable and accessible, facilitating seamless integration into diverse teaching environments. Regarding student engagement, SIM was credited with enhancing motivation and promoting active participation, leading to more meaningful learning experiences. Teachers also highlighted the value of SIM's feedback and assessment mechanisms, which provided structured, timely evaluations of student performance. Furthermore, SIM was perceived to foster continuous improvement by encouraging reflective teaching practices and the iterative refinement of instructional strategies. The study concluded that SIMs are potent tools for advancing pedagogical innovation. Based on these findings, SIM was recommended as an intervention tool for underperforming learners in science to enhance their academic performance and overall learning experience.

Keywords: Instructional Utilization, Strategic Intervention Material (SIM), Teachers' Perception,

Introduction:

Nature of the Problem

Teaching science plays a vital role in helping students understand the environment, the diversity of life, and the natural processes that sustain our planet. It also lays the groundwork for grasping essential concepts related to energy, matter, and the forces that influence the Earth and beyond. Science education fosters critical thinking, nurtures curiosity, and builds a deeper understanding of the world, making it essential for national development. As emphasized by Picardal and Sanchez (2022), science teachers are responsible for making complex concepts relatable to promote scientific literacy. This aligns with the goals of the Philippine Constitution and the Department of Education, which aim to equip Filipino learners with scientific reasoning, technological competence, and strong problem-solving skills to become productive members of society.

In support of these goals, the use of instructional tools like Strategic Intervention Materials (SIMs) has become a cornerstone in addressing learning gaps, especially in science. During times of educational disruption or shifting needs, such as natural disasters, the Department of Education has implemented flexible teaching methods—ranging from modular activities to digital platforms—to ensure learning continuity. DepEd Memorandum No. 117, s. 2005, encourages the integration of SIMs in remedial teaching to help students better understand difficult topics. SIMs are tailored learning aids that include simplified content, interactive activities, and formative assessments, making them particularly helpful for students who struggle or have inconsistent school attendance. Action research by Castro (2018) supports the effectiveness of SIMs, showing improved student outcomes when they are used as part of targeted interventions.

In the district where the present researcher is employed, quarterly Mean Percentage Scores (MPS) in science indicate a concerning underperformance, with results falling below the standard proficiency benchmark of 75%. This local situation reflects bigger nationwide problems, as shown in the 2022 PISA results, where Filipino 15-year-olds scored very low compared to 64 other countries. Worryingly, they also scored poorly in creative thinking and showed weaknesses in science, math, and reading (Chi, 2024).

Knowing this, the researcher wants to understand how teachers feel about using these learning materials (SIMs) to create better science lessons. What is learned from this study will help make a plan matching teaching methods and materials to what students need and like. Plus, the findings might offer helpful ideas for other subjects facing similar learning difficulties.

Current State of Knowledge

Strategic Intervention Materials (SIMs), much like educational tools in other countries, are designed to support struggling learners by making lessons more student-centered, engaging, and tailored to individual needs. Weimer (2012) emphasized that student-centered teaching fosters independent learning, and SIMs serve this by bridging complex concepts with relatable instruction. Globally, interventions such as digital platforms (UNICEF, 2021), participatory strategies (Zarazua, 2016), and contextualized tools (Doocy et al., 2023) highlight the universal aim of improving educational outcomes. In the Philippines, SIMs have gained importance as practical tools for remediation, especially in Science and Mathematics, simplifying abstract ideas and supporting differentiated instruction. DepEd Order No. 39 (2012) institutionalized SIM use, aiming to close learning gaps through curriculum-aligned, engaging materials. Dacumos (2016) pointed out that teacher creativity and initiative are key in developing effective SIMs, and local studies underscore the importance of training and collaboration in maximizing their impact.

Teachers' perceptions of SIMs are shaped by demographic, experiential, and contextual factors. Sanguenza and Gamao (2021) noted that younger and better-trained teachers are more open to using SIMs, especially in resource-limited or rural settings where these tools offer adaptability and low-cost instructional support. Teachers in Science and Math fields, where SIMs are commonly used, often view them positively due to their effectiveness in targeting difficult topics (Bacatan et al., 2022). Additionally, perceptions are influenced by school support, available resources, and exposure to instructional design training. For many educators, SIMs act as structured guides or complementary aids, depending on their experience level. Understanding these varied perspectives is essential in designing professional development that ensures effective SIM implementation across schools in Bacolod and beyond, reinforcing their role in inclusive and quality education.

Teachers in resource-constrained areas often value Strategic Intervention Materials (SIMs) for their accessibility and readiness to support diverse learners, a concept reflected in various international practices aimed at bridging learning gaps. In the U.S., Response to Intervention (RTI) provides tiered, data-driven support to address academic and behavioral issues (Fuchs & Fuchs, 2006), while Individualized Education Programs (IEPs) offer customized plans for students with disabilities to ensure equitable learning (Yell, Katsiyannis, & Shriner, 2006). Similarly, Learning Activity Packages (LAPs), inspired by Bloom's (1976) mastery learning, and Tomlinson's (2001) Differentiated Instruction model emphasize flexible, student-centered approaches tailored to individual progress and readiness. Additionally, technology-based tools like e-SIMs are becoming more common globally, offering interactive and adaptive learning experiences. These international models, like SIMs in the Philippines, aim to provide inclusive, focused, and adaptive instruction that addresses learners' unique needs, underscoring the universal importance of personalized teaching strategies in achieving educational equity.

Local research consistently highlights the effectiveness of Strategic Intervention Materials (SIMs) in improving student outcomes, especially in subjects like Math and Science, and in supporting differentiated, learner-centered instruction. Studies such as Dumigsi and Cabrella (2019) demonstrated SIMs' positive impact on solving quadratic functions, while Sanguenza and Gamao (2021) noted their essential role in Science despite development challenges like limited time and materials. Bacatan et al. (2022) emphasized how SIMs simplify complex topics through structured, visual, and interactive formats, easing student anxiety and improving classroom flow. Reyes and Falle (2020, 2021) found that SIMs enhance student engagement, motivation, and academic performance. Collaborative SIM creation, as stressed by Sanguenza and Gamao (2021) and Rivera et al. (2021), improves their quality and consistency, especially with school support. Dacumos (2016) also found that teachers viewed SIMs as valuable for both remedial and enrichment purposes, promoting critical thinking and independent learning. Overall, despite resource-related hurdles, Filipino teachers widely regard SIMs as practical tools that help close learning gaps and foster more inclusive, effective education.

Theoretical Underpinnings

Perception is a complex concept that spans several disciplines, including psychology, neuroscience, and philosophy, and refers to how individuals make sense of their environment using sensory input (VanRullen, 2017). James Gibson's theory of Direct Perception argues that perception is immediate and based on environmental information, requiring no mental interpretation. His concepts—affordances, optic flow, invariant properties, and ecological psychology—highlight how perception is grounded in interaction with the environment. In contrast, the Constructivist Theory, rooted in the work of Helmholtz, views perception as an active cognitive process influenced by prior knowledge, expectations, and context. In education, particularly in resource-limited contexts, these theories help explain how

teachers interpret and apply tools like Strategic Intervention Materials (SIM), which are designed to address student learning gaps (Sanguenza & Gamao, 2021; Bacatan et al., 2022).

Teachers' perceptions of SIM are shaped by their experiences, psychological processes, and the support available to them. Many educators view SIM as a valuable resource that simplifies complex topics and enhances student engagement and retention (Dacumos, 2016; Bacatan et al., 2022). However, challenges like limited time, materials, and training can negatively affect its implementation and perceived usefulness (Sanguenza & Gamao, 2021). Constructivist views suggest that teachers who have experienced SIM's success are more likely to embrace its use, while those facing constraints may find it burdensome. Therefore, understanding and addressing teacher perceptions—rooted in both theoretical and practical experiences—is vital to improving the design, adoption, and effectiveness of SIM in meeting diverse student needs.

Objectives

This study aimed to determine the level of teachers' perception on the utilization of Strategic Intervention Material (SIM) in the districts under the Schools Division of Negros Occidental in Central Negros, Philippines, for the school year 2024–2025, as a basis for an action plan. More specifically, it sought to answer the following research questions: 1) the level of teachers' perception of the utilization of Strategic Intervention Material (SIM) in the key areas of alignment with learning objectives, usability and accessibility, engagement and interaction, feedback and assessment, continuous improvement; and 2) the significant difference in the level of teachers' perception on the utilization of Strategic Intervention Material (SIM) when grouped and compared according to the aforementioned variables.

Methodology

This section presents the discussion of the research methodology used, the subjects and respondents of the study, the research instruments used, the validity and reliability of the instruments, the procedure for data gathering, and the statistical tools and procedure for data analysis.

Research Design

The study employed a descriptive research design, which is utilized to systematically describe, document, and interpret the characteristics of a specific group, phenomenon, or situation as they naturally occur, without any form of manipulation or intervention in the study environment (Hassan, 2024). This research aimed to understand science teachers' views on using Strategic Intervention Materials (SIM). It also sought to identify if different teacher backgrounds (demographics) were linked to different perceptions. As Bueno (2016) emphasized, descriptive research allows for the accurate and factual presentation of the characteristics of a given population or area of interest. This aligns closely with the present study's objective: to collect and analyze detailed factual information that captures the existing perceptions and contextual realities surrounding using SIM in the classroom.

Study Respondents

This study involved 30 high school teachers from three schools—19 from School A, seven from School B, and four from School C—selected through purposive random sampling to ensure participants had relevant qualifications and experience while maintaining a degree of randomness for credibility. According to Patton (2002), this method enables researchers to gather insights from knowledgeable individuals, while Creswell (2014) highlights that combining purposive and random elements enhances the study's reliability by ensuring diverse yet systematic participant selection. Including teachers from different schools allowed for a broader understanding of how Strategic Intervention Materials (SIMs) are perceived and applied in secondary education.

Instruments

The study used a self-constructed questionnaire consisting of two parts: Part I collected respondents' personal and demographic information, while Part II assessed teachers' perceptions of Strategic Intervention Materials (SIM) across five key areas—alignment with learning objectives, usability and accessibility, engagement and interaction, feedback and assessment, and continuous improvement—each with eight indicators totaling 40 items. Responses were measured using a 5-point Likert scale (1 = never to 5 = always), allowing teachers to rate their agreement or experience with each statement. This approach enabled a structured and quantifiable analysis of teachers' views, offering a clear and comprehensive understanding of their perceptions regarding SIM. The research instrument was subjected to validity (4.96-excellent) and reliability (0.922-excellent). All of them were interpreted as worthy and good; respectively.

Data Gathering Procedure

A letter of authorization to conduct the study was first submitted to the office of the Schools Division Superintendent for approval prior to the commencement of the research. Upon receiving the necessary approval, the endorsed letter was attached to a formal request addressed to the respondents involved in the reliability testing and the principals of the identified schools. Following approval of this second request, the researcher administered the questionnaires to the intended participants, ensuring that the data collection process adhered to the appropriate ethical and procedural standards. The data obtained from the respondents' answers were compiled and analyzed using appropriate statistical methods. Guided by a coding manual, the raw data were transformed into numerical codes, allowing for tabular presentation, statistical computations, and computer-based analysis. The encoded data were then processed using the Statistical Package for the Social Sciences (SPSS).

Data Analysis and Statistical Treatment

Objective No. 2 also employed a descriptive analytical scheme and mean to assess the level of teachers' perceptions regarding utilizing Strategic Intervention Material (SIM) across the following key areas: alignment with learning objectives, usability and accessibility, engagement and interaction, feedback and assessment, and continuous improvement.

Objective No. 2 employed a comparative analytical scheme and Mann-Whitney U test to examine significant differences in teachers' perceptions of SIM utilization when grouped according to their profiles.

Ethical Consideration

The personal demographic data collected from the participants were treated with strict confidentiality. Participation in the study was entirely voluntary, and participants were informed of their right to withdraw at any time without consequence. Furthermore, respondents were assured that there would be no risk of harm before, during, or after participating in the study. The confidentiality of all data and information gathered was strictly upheld, and no participant's identity was disclosed unnecessarily. In compliance with the Data Privacy Act, the researcher ensured that all ethical standards were maintained throughout the study. Debriefing was not conducted after data collection, as it was deemed unnecessary in the context of this research.

Results and Discussion

This section deals with the presentation, analysis and interpretation of data gathered to carry out the objectives of this study. All these were made possible by following certain appropriate procedures so as to give the exact data and solution to each specific problem.

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Alignment with Learning Objectives, Usability and Accessibility, Engagement and Interaction, Feedback and Assessment, and Continuous Improvement

Table 1

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) Alignment with Learning Objectives

Items	Mean	Interpretation
1. The SIM aligns strongly with the identified learning objectives of the lesson.	4.80	Very High Level
2. The learning objectives in the SIM are clear, precise, and easily understood by students.	4.73	Very High Level
3. The learning outcomes in the SIM are consistent with established curriculum standards.	4.67	Very High Level
4. The content in the SIM effectively supports specific subject matter objectives.	4.63	Very High Level
5. The learning activities in the SIM are designed to facilitate academic goal achievement.	4.53	Very High Level
6. The SIM ensures a coherent progression of knowledge across lessons.	4.83	Very High Level
7. The SIM enhances students' understanding of key concepts and essential skills.	4.73	Very High Level
8. The learning objectives in the SIM are measurable and achievable within the given timeframe.	4.83	Very High Level
Overall Mean	**4.72**	**Very High Level**

Among the evaluated criteria, item 8, which states that "The learning objectives in the SIM are measurable and achievable within the given timeframe," received the highest mean rating of 4.83, classified under the "very high level" category. In contrast, item 5, which assesses whether "The learning activities in the SIM are designed to facilitate academic goal achievement," recorded the lowest mean score of 4.53. However, it still falls within the same classification. Overall, the teachers' perceptions regarding aligning Strategic Intervention Materials (SIM) with learning objectives yielded an average mean of 4.72, likewise interpreted as a "very high level."

These results suggest that while educators recognize the clarity and attainability of the objectives embedded in SIMs, there is a slight concern regarding the design of learning activities and their capacity to support academic goal attainment fully. This highlights the need for critical appraisal of instructional strategies to ensure that learning activities are aligned with stated objectives and structured to scaffold learners' cognitive development effectively.

Research underscores that students perform more successfully in experiential and inquiry-based learning approaches (Khasawneh, Hodge-Zickerman, York, Smith, & Mayall, 2023). As such, SIM activities should be enriched with collaborative problem-solving, case-based learning, and gamified tasks to sustain motivation and enhance cognitive engagement. Furthermore, differentiated instruction strategies must be embedded within SIMs to address students' diverse learning needs and styles. These may include scaffolded questioning, student-choice projects, and tiered activities to promote accessibility and intellectual challenge (Tomlinson, n.d.). Instructional tasks should also be contextualized in practical and authentic scenarios to foster deeper conceptual understanding and relevance. With the increasing demand for technological integration in education, SIMs should incorporate digital tools such as interactive simulations, multimedia storytelling, and online collaborative platforms to enhance student participation and learning outcomes (Hattie, n.d.). These tools promote multisensory engagement and support the development of 21st-century skills.

To optimize the instructional efficacy of SIMs, learning activities must be purposefully designed with precise alignment to objectives, engaging content, adaptive strategies, real-world applications, and technological integration. This aligns with the findings of Casanillo and Suarez (2020), who reported significant improvements in students' academic performance, particularly in science, attributed to implementing SIMs tailored to address least-mastered skills. Their study concluded that the effectiveness of these materials stemmed from their alignment with clear, measurable, and time-bound learning objectives, which ensured consistency with curriculum standards and positively influenced student learning outcomes.

Table 2

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Usability and Accessibility

Items	Mean	Interpretation
1. The SIM is user-friendly, ensuring easy navigation for teachers and students.	4.83	Very High Level
2. The SIM provides clear, concise instructions that promote ease of understanding and application.	4.67	Very High Level
3. The SIM features an intuitive user interface, offering a seamless experience with minimal training.	4.67	Very High Level
4. The SIM is accessible across various devices (smartphones, tablets, computers), supporting flexible usage.	4.60	Very High Level
5. The SIM accommodates diverse learning styles and needs, including students with special educational requirements.	4.73	Very High Level
6. The SIM is highly customizable, allowing content adaptation to suit individual student needs and pacing.	4.63	Very High Level
7. The SIM integrates smoothly with other educational tools and platforms, enhancing the learning experience.	4.77	Very High Level
8. The SIM includes support features like help guides, FAQs, and troubleshooting resources to ensure continuous learning.	4.77	Very High Level
Overall Mean	**4.71**	**Very High Level**

Among the items evaluated, item 1, "The SIM is user-friendly, ensuring easy navigation for both teachers and students," received the highest mean rating of 4.83, interpreted as a "very high level." In comparison, item 4, "The SIM is accessible across various devices (smartphones, tablets, computers) supporting flexible usage," received a slightly lower mean rating of 4.60, which was still categorized as a "very high level."

Teachers may demonstrate a relatively lower perception of Strategic Intervention Materials (SIM) regarding accessibility across various devices due to several critical factors, most notably the challenge of adapting to technological advancements. Educators' restricted technological skill frequently leads to challenges in managing device compatibility, affecting their general view of Supplementary Instructional Materials' (SIMs) ease of use

(Ahmed, n.d.). This issue gains further importance when considering incorporating assistive technology within educational environments.

For example, Chukwuemeka and Samaila (no date) emphasized that inadequate availability of dependable digital devices and consistent internet access considerably limit teachers' capacity to fully utilize SIMs' advantages. These infrastructural restrictions impede instructional delivery and diminish belief in the effectiveness of technology-enhanced learning resources. Consequently, a critical need exists for focused professional growth programs that center on the efficient application of digital tools. Such training endeavors would provide educators with the essential abilities to navigate and implement SIMs across diverse platforms, ultimately improving their accessibility and educational influence.

Supporting these results, the study by Acedillo, Lagahit, Bacatan, and Macusang (2022) examined teachers' and students' perceptions of the SIM's effectiveness in science education. The study concluded that the effectiveness of SIMs is heightened when paired with a user-centered design approach and equitable access to technology. These findings were further reinforced by the Universal Design for Learning (UDL) framework, which emphasized the importance of accessible, inclusive, and flexible instructional materials (Basham et al., 2021).

Table 3

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Engagement and Interaction

Items	Mean	Interpretation
1. The SIM actively engages students in learning, fostering sustained participation and a deeper connection to the material.	4.80	Very High Level
2. The SIM stimulates curiosity, motivating students to engage in inquiry-based learning and explore topics further.	4.73	Very High Level
3. The SIM encourages student autonomy, allowing self-directed learning at their own pace while fostering ownership.	4.80	Very High Level
4. The SIM promotes student collaboration, encouraging interaction with content and peers to enhance the learning experience.	4.63	Very High Level
5. The SIM facilitates meaningful student-teacher interactions, providing dialogue, clarification, and feedback opportunities.	4.83	Very High Level
6. The SIM's content and tasks promote critical thinking and problem-solving, encouraging students to apply analytical skills.	4.77	Very High Level
7. The SIM incorporates interactive elements (quizzes, simulations, games) to reinforce engagement and make learning enjoyable.	4.67	Very High Level
8. The SIM includes opportunities for peer feedback and collaborative projects, enhancing interpersonal and collaborative skills.	4.87	Very High Level
Overall Mean	**4.76**	**Very High Level**

Among the evaluated items, item 8, "The SIM includes opportunities for peer feedback and collaborative projects, enhancing interpersonal and collaborative skills," received the highest mean rating of 4.87, categorized as a "very high level." While item 4 states, "The SIM promotes student collaboration, encouraging interaction with content and peers to enhance the learning experience," it received the lowest mean score of 4.63, also interpreted as a "very high level."

Overall, the average mean score for this category was 4.76, indicating a consistently "very high level" of teacher perception regarding SIM's effectiveness in promoting engagement and interaction.

Despite being interpreted at a "very high level," the comparatively lower mean score of 4.63 for the item stating that "The SIM promotes student collaboration, encouraging interaction with content and peers to enhance the learning experience" indicates potential areas for enhancement in fostering collaborative learning environments through Strategic Intervention Materials (SIM). This result might be because teachers have not had much training in using collaborative learning activities. Even teachers with much experience who are used to teaching traditionally often find it hard to manage group work, especially in classrooms with many students.

According to Sanguenza and Gamao (2021), teachers must carefully plan and guide the activities for students to learn well together. If they do not have this kind of guidance, students might have trouble engaging with what they are learning and each other. The same study also mentioned that teachers often focus more on having students work alone than with classmates, making them think SIMs are not very good at encouraging interaction. Also, not having enough access to digital tools makes it harder to use SIMs for interactive, tech-based group learning. As Dittirich, Aagaard, and Hijukse (in 2022) pointed out, when teachers do not have enough resources, it can be difficult for them to encourage students to discuss ideas and work together, which can make them think SIMs are not very effective.

Given these worries, it is important to have professional development programs focusing on using SIMs. These programs can help teachers better understand the teaching advantages of SIMs, especially how they can get students more involved by working together. Highlighting the ideas of Vygotsky, who believed that students build knowledge together through interaction, can also help teachers use collaborative activities in SIMs more effectively. Continuously looking at how SIMs are being used can help improve them over time and show how they help students work together. As Hattie (n.d.) points out, using assessment evidence is important for changing teachers' thinking and encouraging them to try new teaching methods.

Table 4

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Feedback and Assessment

Items	Mean	Interpretation
1. The SIM provides timely and relevant feedback based on student responses, supporting immediate learning adjustments.	4.63	Very High Level
2. The SIM's assessment tools align with learning objectives, effectively measuring student understanding.	4.70	Very High Level
3. The SIM combines qualitative and quantitative feedback, offering a comprehensive view of student progress.	4.67	Very High Level
4. The SIM encourages reflection, helping students analyze their performance and set goals for improvement.	4.63	Very High Level
5. The SIM offers constructive feedback that helps students understand and correct mistakes through self-assessment.	4.63	Very High Level
6. The SIM enables students to improve performance based on formative assessment results, fostering continuous growth.	4.67	Very High Level
7. The SIM's formative assessments inform real-time instructional decisions, allowing adjustments to meet student needs.	4.77	Very High Level
8. The SIM's assessment results guide targeted interventions, addressing learning gaps and supporting academic progress.	4.83	Very High Level
Overall Mean	**4.69**	**Very High Level**

Among the indicators assessed, item 8, "The SIM's assessment results guide targeted interventions, addressing learning gaps and supporting academic progress", obtained the highest mean rating of 4.83, interpreted as a "very high level." Meanwhile, items 1, 4, and 5 all received the lowest mean score of 4.63, though still categorized as a "very high level."

The findings suggest that teachers perceive SIM as a valuable tool for enhancing assessment practices and informing instruction.

Teachers' perceptions of the Strategic Intervention Material (SIM) in providing timely and relevant feedback, encouraging reflection, and supporting self-assessment may be lower due to several implementation challenges. One major challenge is making it easy to give students feedback right away in the classroom.

Also, many teachers, especially those just starting, have not had much training to teach students to think about their learning. Reflection is a key part of learning independently and helps students grow. However, teachers might find it hard to include organized reflection activities in SIM without the proper training. On top of that, many teachers still prefer using traditional ways of testing students, making it even harder to use feedback and reflection in SIM effectively.

Because the ways SIMs provide feedback are so important for good teaching – by giving timely help, encouraging students to think about their learning, and supporting them in improving on their own – these feedback features must match how we understand learning happens best (constructivist theories). These theories say that students do much better in school when they are actively involved in learning and get helpful feedback. Christensen and colleagues (in 2021) pointed out that teachers trained in thinking about their teaching are more likely to use good ways for students to assess themselves. On the other hand, teachers without this training might not see SIMs as very helpful for getting students to reflect on their learning.

Also, teachers might not value feedback as much if they feel they have too much work already. However, making feedback processes more efficient, like using digital tools or having students review each other's work, can make managing it easier. Teachers can also include activities where students assess their learning, such as keeping journals or having organized discussions about what they have learned (Brookfield, 2017).

Rubrics or guided reflection questions can also enhance student motivation and improve performance. Technology-driven feedback mechanisms, such as automated quizzes or learning management systems, can facilitate continuous assessment without overwhelming educators, enabling quicker and more personalized feedback.

Another study by Reyes and Falle in 2021 also shows how well SIMs can help students learn. They looked at how SIMs affected the performance of 7th-grade students. Their research showed that students performed well because SIM provides clear, step-by-step guidance. This structured support was key in helping students understand the material, learn how to do things, and apply what they learned. The study highlights how SIM is designed to improve how well students do in school by giving them clear and organized help for their learning.

Table 5

Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Continuous Improvement

Items	Mean	Interpretation
1. The SIM incorporates feedback from students and teachers through a structured process, ensuring continuous refinement.	4.60	Very High Level
2. The SIM is regularly reviewed and updated to maintain accuracy, relevance, and alignment with educational needs.	4.70	Very High Level
3. The SIM is consistently updated to reflect emerging best practices in pedagogy and technology.	4.57	Very High Level
4. The SIM utilizes data-driven insights from student performance to inform future updates and refinements.	4.77	Very High Level
5. The SIM adapts to diverse classroom environments and student needs, ensuring broad applicability.	4.63	Very High Level
6. The SIM provides opportunities for teachers to engage in professional development programs, ensuring effective implementation.	4.67	Very High Level
7. The SIM encourages collaboration among educators to share feedback and refine instructional strategies.	4.73	Very High Level
8. The SIM's continuous improvement fosters a culture of innovation, supporting ongoing growth for educators and students.	4.73	Very High Level
Overall Mean	**4.68**	**Very High Level**

Item 3, which states, "The SIM is consistently updated to reflect emerging best practices in pedagogy and technology," received the lowest mean rating of 4.57. However, it was still interpreted as a very high level. In contrast, item 4, "The SIM utilizes data-driven insights from student performance to inform future updates and refinements," obtained the highest mean rating of 4.77, also categorized as a "very high level."

Overall, the SIM received an average mean rating of 4.68, reflecting a "very high level" of teacher perception regarding its effectiveness in promoting continuous improvement.

Even though Strategic Intervention Materials (SIM) are regularly updated to include the latest good teaching methods and technology, teachers might still not think they are very effective. This could be for a few reasons, like not being used to new teaching approaches, not wanting to change how they teach, and worrying about whether SIMs will work well in their classrooms.

Regular updates to SIM are designed to integrate modern instructional strategies such as active learning, differentiated instruction, and inquiry-based approaches, which have been shown to enhance student comprehension and retention (Singh & Goyal, 2024). These updates make learning more interactive and student-centered, enabling teachers to provide timely feedback and adjust instruction based on student performance (Dayal, 2021).

A few important things to do to get the most out of SIM. First, it is key to constantly check and update how SIM lines up with the curriculum. Using curriculum mapping, SIM can stay useful as education changes and keep aiming for the right learning results (Graham & Sitner, 2021). Also, it is important to include modern teaching methods in SIM, like getting students actively involved, teaching in ways that suit different learners, and using questions to guide learning, so that it meets the needs of all students (Jamil & Isiaq, 2019). On top of that, teachers need to keep getting training on how to use SIM effectively so they know how to use all its features.

Supporting this idea, a study by Suarez and Casinillo in 2020 showed that when SIMs are updated regularly, it helps students learn better and makes science teaching more flexible. This emphasizes how important it is to keep SIMs current and train teachers so that SIMs can help students learn as much as possible.

Comparative Analysis in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Alignment with Learning Objectives, Usability and Accessibility, Engagement and Interaction, Feedback and Assessment, and Continuous Improvement when grouped and compared according to Age, Length of Service, and Number of Trainings Attended

Table 6

Difference in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Alignment with Learning Objectives when grouped and compared according to Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	17	14.03	85.500	0.286	0.05	Not Significant
	Older	13	17.42				
Length of Service	Shorter	18	14.81	95.500	0.589		Not Significant
	Longer	12	16.54				
Number of Trainings Attended	Few	15	15.83	107.500	0.832		Not Significant
	Many	15	15.17				
	Higher	17	16.85				

Based on Table 6, the p-values for age (0.286), length of service (0.589), and number of trainings attended (0.832) all exceeded the 0.05 level of significance. These results suggested that none of these factors had a statistically significant influence on teachers' perceptions regarding the alignment of SIM with educational objectives. This indicated that perceptions were generally consistent across demographic and professional variables, with no substantial differences observed among the groups.

The absence of significant differences across all variables suggested a high degree of consensus among teachers regarding the effectiveness of SIMs in aligning with learning objectives, regardless of their professional experience and training exposure.

This finding was significant as it highlighted several key implications. First, the design and implementation of SIMs appeared consistent and equitable, effectively meeting teachers' expectations across diverse demographic and professional backgrounds. Second, the core strengths of SIMs, such as ensuring the clarity, measurability, and relevance of learning objectives, were universally acknowledged by teachers. Third, variables such as training and length of service did not significantly influence teachers' perceptions in this domain, reflecting a high degree of pedagogical coherence within the materials. Lastly, this level of uniformity supported the scalability of SIMs across varied educational contexts, indicating that well-designed intervention materials could achieve broad relevance and acceptance.

Gregorio (2024) argued that the absence of significant perception gaps across demographic variables indicates that an instructional program or intervention, such as SIM, has achieved a universal baseline of usability and instructional alignment, a critical factor for successful systemic adoption.

Table 7

Difference in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Usability and Accessibility when grouped and compared according to Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	17	13.65	79.000	0.178	0.05	Not Significant
	Older	13	17.92				
Length of Service	Shorter	18	14.61	92.000	0.489		Not Significant
	Longer	12	16.83				
Number of Trainings Attended	Few	15	17.90	76.500	0.127		Not Significant
	Many	15	13.10				

With p-values above the 0.05 significance level (age = 0.178, length of service = 0.489, and number of trainings attended = 0.127, these factors were not found to significantly influence teachers' perceptions of SIM's usability and accessibility.

This finding suggested that the demographic and professional profiles of the respondents did not significantly influence their perceptions of SIM's effectiveness in terms of usability and accessibility. Supporting literature underscored several factors that contributed to these uniform perceptions.

Cheng-Lee et al. (2021) emphasized that adequate training and professional development were essential, as teachers who received sufficient instruction in the design and implementation of SIM were more likely to perceive them as practical and user-friendly.

Basargekar and Singhavi (2017) also noted that the availability of necessary resources, such as appropriate equipment and software, was critical to using SIM effectively. Furthermore, institutional support from school leadership played a vital role in shaping positive attitudes toward SIM adoption and integration.

Table 8

Difference in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Engagement and Interaction when grouped and compared according to Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	17	14.41	92.000	0.413	0.05	Not Significant
	Older	13	16.92				
Length of Service	Shorter	18	15.50	108.000	1.000		Not Significant
	Longer	12	15.50				
Number of Trainings Attended	Few	15	17.50	82.500	0.188		Not Significant
	Many	15	13.50				

The p-values for these variables were above the 0.05 significance level, indicating that these factors did not significantly influence teachers' perceptions of learner engagement and interaction with SIM. Mean rank comparisons revealed slight variations; for instance, older teachers and those with fewer training sessions tended to report marginally higher levels of engagement and interaction. However, these differences were not substantial enough to reach statistical significance.

The absence of statistically significant differences implied a broad consensus among educators regarding the value of SIMs in promoting student engagement and interactive learning, regardless of age, experience, or training background. This uniformity suggested that: SIMs were consistently effective in engaging students and facilitating meaningful interactions across varied teaching contexts, features such as collaborative tasks, peer feedback, and interactive elements embedded in SIMs resonated similarly among teachers from different demographic and professional backgrounds, and the materials provided a reliable framework for active learning, adaptable to a wide range of teacher profiles.

Sison (2021) demonstrated that SIMs incorporating interactive and collaborative components significantly enhance classroom participation and learner motivation, likely contributing to the consistently high engagement ratings observed.

Table 9

Difference in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Feedback and Assessment when grouped and compared according to Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	17	14.24	89.000	0.350	0.05	Not Significant
	Older	13	17.15				
	Shorter	18	15.33	105.000	0.895		Not Significant

Length of Service	Longer	12	15.75				
Number of Trainings Attended	Few	15	16.93				
	Many	15	14.07	91.000	0.354		Not Significant
	Higher	17	16.06				

Based on the table, the computed p-values exceeded the 0.05 threshold, indicating no statistically significant differences in perception based on the demographic variables.

Specifically, the Mann-Whitney U test showed that age did not significantly influence perceptions, with younger teachers (mean rank = 14.24) and older teachers (mean rank = 17.15) yielding a p-value of 0.350. Likewise, length of service showed no significant difference between those with shorter (mean rank = 15.33) and longer service (mean rank = 15.75), as reflected in a p-value of 0.895. The number of trainings attended also did not lead to significant differences in perception, with a p-value of 0.354 between those who had attended fewer (mean rank = 16.93) and more trainings (mean rank = 14.07).

These findings suggested that teachers' views on the effectiveness of SIM in providing feedback and assessment were consistent across different profiles. This consistency underscored SIM's broad applicability and perceived utility in educational practice, highlighting that regardless of age, length of service, and number of trainings attended, teachers similarly valued SIM as a tool for supporting student learning through meaningful feedback and assessment practices.

Reyes and Falle (2021) highlighted that effective feedback mechanisms, such as those embedded in SIMs, contributed substantially to learner performance when accessible and aligned with instructional objectives, irrespective of the educator's experience. Cominghud (2020) added that SIMs enabling personalized remediation and progress tracking could function effectively across grade levels and teacher profiles, provided they were implemented consistently and clearly, an outcome reflected in the non-significant differences reported in this study.

Table 10

Difference in the Level of Teacher's Perception in the Utilization of Strategic Intervention Material (SIM) in Continuous Improvement when grouped and compared according to Variables

Variable	Category	N	Mean Rank	Mann-Whitney U	p-value	*Sig. level*	Interpretation
Age	Younger	17	13.62	78.500	0.168	0.05	Not Significant
	Older	13	17.96				
Length of Service	Shorter	18	14.36	87.500	0.372		Not Significant
	Longer	12	17.21				
Number of Trainings Attended	Few	15	17.83	77.500	0.135		Not Significant
	Many	15	13.17				

Based on various demographic and professional variables, the data analysis comparing teachers' perceptions of utilizing Strategic Intervention Materials (SIM) in continuous improvement revealed no statistically significant differences among the groups. Mentioned variables recorded p-values above the 0.05 significance threshold. This indicates that none of these factors significantly influenced teachers' perceptions of SIM about promoting continuous academic improvement.

These findings suggested that while demographic and professional characteristics did not yield statistically significant differences in teachers' perceptions of SIM utilization, qualitative distinctions rooted in experience, training exposure, and teaching context may have influenced how educators interpreted and applied these materials in practice. In particular, such characteristics may have shaped how teachers engaged with SIMs to foster continuous student improvement through feedback, instructional refinement, and collaborative reflection.

This finding was supported by Arevalo et al. (2023), who asserted that for SIMs to be perceived as practical tools for continuous improvement, they needed to exhibit visible cycles of revision and promote collaborative input, attributes that appeared to be widely recognized and valued by teachers across various demographic profiles in this study.

Conclusion

The study found that most teacher-respondents were younger, with fewer years of service and moderate training, yet they consistently rated their perceptions of Strategic Intervention Materials (SIM) utilization at a very high level across five key areas—alignment with learning objectives, usability, engagement, feedback, and continuous improvement—regardless of age, experience, or training. Although age, length of service, and training did not significantly affect perceptions, the research identified challenges in SIM design, technology access, interactivity, and feedback integration, highlighting the need for ongoing refinement. An enhancement plan was developed based on these findings, recommending that curriculum leaders strengthen guidelines and professional development, learning resource coordinators ensure regular updates and teacher training on SIMs, and supervisors and school heads support structured lesson guides, clear action plans, and resource management. Teachers are encouraged to adopt adaptable materials, inquiry-based and differentiated instruction, and formative assessments, while learners should engage actively with SIM-supported activities. Further, present and future researchers are advised to expand SIM effectiveness studies, innovate material development, and promote continuous improvement. These combined efforts aim to improve science education by making instructional materials more practical, inclusive, and responsive to diverse learner needs.

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