INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

****

TEACHERS' EXPERIENCES IN THE IMPLEMENTATION OF SPECIAL SCIENCE ELEMENTARY SCHOOL (SSES): BASES FOR PROGRAM INTERVENTION

LANNIE C. TAN
Teacher I
San Miguel Central Elementary School
lannie.tan@deped.gov.ph

ABSTRACT

This qualitative study explored the experiences of teachers in implementing the SSES program in the Schools District of San Miguel, San Miguel, Iloilo for the school year 2025-2026. Data were gathered through in-depth interviews and analyzed using thematic analysis. Findings revealed three major aspects of teachers' experiences: challenging yet rewarding, engaging for learners, and fun and enjoyable. Meanwhile, four themes emerged regarding the challenges encountered in teaching SSES: inadequate facilities and learning, increased workload, lack of training for teachers, and limited parental involvement. To cope with challenges, teachers employed seeking institutional Support, building a support system at school, prioritizing and organizing tasks, and attending seminars and workshops. The results of the study may serve as a basis for improving the implementation of the SSES program and supporting teachers in delivering quality science education. Thus, these findings highlight the critical need for collaborative efforts among stakeholders to sustain educational excellence.

Keywords: *Special Science Elementary School, teachers' experiences, qualitative research, science education, program intervention*

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

INTRODUCTION

Science education is essential in cultivating learners' critical thinking, problem-solving abilities, and scientific literacy, all of which are crucial for preparing them to meet the demands of the 21st century. The Department of Education (DepEd) has established the Special Science in Elementary School (SSES) to nurture scientifically excel learners and to provide them with enhance science and mathematics instruction. The SSES program aims to develop learners' high-order thinking skills, creativity, and research abilities through advanced and inquiry-based learning experience.

DepEd Order No. 57, s. 2011 serves as the primary guideline for the SSES Program, which seeks to enhance elementary learners' competencies in Science and Mathematics through enriched curricula, experiential learning, and an improved learning environment. This is reinforced by the Governance of Basic Education Act of 2001, or Republic Act No. 9155, which grants schools the flexibility to implement contextually relevant educational initiatives under a school-based management approach. The law empowers school leaders to introduce innovations, mobilize resources, and modify curricula—key elements in effectively implementing specialized programs such as the SSES (Castino et al., 2025).

The ultimate aim of science education is to cultivate scientific literacy among learners, equipping them to meet the demands of a rapidly evolving global landscape. However, the Philippines faces substantial challenges in achieving this goal, as reflected in the country's performance in international assessments. Filipino students' achievements in science have consistently lagged behind their global peers, with the Trends International Mathematics and Science Study (TIMSS) 2007 and the Programmed for International Student Assessment

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

(PISA) 2018 indicating significant difficulties in basic scientific skills. Notably, the PISA 2018 report revealed that 81% of Filipino students struggled with fundamental math skills, reading comprehension, and scientific reasoning. This trend continued in the PISA 2022 results, where the Philippines ranked 77th out of 81 countries, showing minimal improvement. (Cagas and Villocido 2024)

The implementation of SSES is often faced with various challenges. These challenges my include inadequacy of instructional materials, lack of specialized training for teachers, limited facilities, heavy academic demands on learners, and insufficient administrative and community support. Such challenges may affect the effectiveness and sustainability of the SSES program, thereby limiting its potential to achieve its goals.

Teachers, school heads, and other stakeholders employ different coping strategies to overcome these challenges. These may involve instructional innovations, resource management, collaboration among teachers, professional development initiatives, and support from parents and the community. Understanding both challenges encountered and the coping strategies utilized essential in identifying areas for improvement and in strengthening the SSES program.

Ultimately, the implementation of the SSES curriculum is closely linked to school performance, with effective teacher implementation directly influencing positive outcomes in student achievement and engagement; however, the sustainability of these programs often depends on addressing the persistent gaps in facilities and specialized training (Prado, 2023).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

MATERIALS AND METHODS

Research Methodology

This chapter presents the research method, research design, participants of the study, data-gathering procedures, research instrument, and data analysis. The study aimed to determine the challenges and coping strategies of teachers teaching special science classes in the Schools District of San Miguel, San Miguel, Iloilo as bases for program intervention in the Municipality of San Miguel during the School Year 2025-2026.

Research Method

The study utilized a qualitative approach centered on in-depth interviews. This descriptive methodology was designed to systematically document a phenomenon within its natural context without the manipulation of variables.

As Elliott (2025) suggests, this method provides a precise portrayal of existing conditions and professional practices, enabling the identification of significant patterns and practical implications.

By capturing real-world perceptions without altering the environment, the researcher offered an authentic representation of the social and educational dynamics that were in play.

During the sessions, the researcher and the participants engaged in a reflective dialogue regarding specific professional issues. The primary objective was to extract the core perspectives of the educators, allowing their subjective responses to illuminate the essential realities of their social and professional experiences.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Research Design

The study adopted a phenomenological research design, which is the study of how phenomena are consciously perceived by individuals. Rather than seeking causal explanations typical of the natural sciences, phenomenology focused on providing a detailed and unbiased description of experiences as they appeared to the subject. It served as a philosophical framework that prioritized the "first-person" point of view, exploring the structures of consciousness without the interference of unexamined assumptions (Biemel & Spiegelberg, 2024).

By focusing on subjective interpretations, this design helped the researcher understand how individuals viewed their world and how those views diverged from mainstream expectations. Consequently, phenomenological interviews served as a vital tool to gain profound insights into human perception and lived experience.

Participants of the Study

The participants included seven (7) purposely selected special science teachers from an elementary school in the Schools District of San Miguel, Iloilo. To qualify for the study, these educators were required to be managing special science classes across various grade levels and possess at least one year of teaching experience at their station.

Most importantly, participants had direct, hands-on experience with the SSES program and demonstrated a willingness to openly discuss their professional challenges and coping mechanisms. All participants were fully briefed and provided their formal consent before the data collection began.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Sampling Design

A purposive sampling design was employed to ensure the data collected were relevant and rich. According to Hasaan (2024), this non-probability technique involved the deliberate selection of participants based on their specific expertise or relevance to the research topic.

Unlike random sampling, this method relied on the researcher's professional judgment to identify individuals who were most capable of providing meaningful data that aligned with the study's predefined criteria and objectives.

Research Instrument

The primary tool for data collection was a researcher-developed interview guide. As noted by Canonizado (2024), such instruments are tailored to encompass all specific details required to address research questions. The interview process was designed to foster a comfortable environment where teachers could express their deep-seated feelings and perspectives through one-on-one dialogue. This guide included an introduction to the study, a briefing on the process, and a confidentiality agreement to ensure that all shared information remained private.

The study specifically employed semi-structured interviews, which offered a balance between consistency and flexibility. While a set of core questions was prepared for all participants to ensure comparability (Morris, 2025), the researcher remained free to ask follow-up questions to explore new insights or clarify responses. The interview schedule consisted of four focused questions, supported by audio and video recording devices—subject to participant approval—to ensure accurate documentation (Taherdoost, 2021).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Validity of the Research Instrument

To ensure the instrument's credibility, the interview schedule underwent a rigorous validation process. A panel of experts in research, linguistics, and assessment—including the research adviser and the Dean of the Graduate School—reviewed the questions for clarity and relevance. As emphasized by Creswell and Creswell (2023), validity ensures that the instrument accurately measures the intended concepts and reflects reality.

In line with the criteria established by Good and Scates, as cited in the validation protocols, the researcher integrated all expert feedback and corrections into the final version of the instrument. This alignment between the instrument items and the study's variables ensured that the gathered data were both meaningful and appropriate for the research goals.

Data Gathering Procedures

Before commencing the study, formal permissions were secured from the Office of the Schools Division Superintendent, District Supervisors, school heads, and the Graduate School leadership. The researcher personally coordinated with the participants to schedule interviews at locations that were convenient and comfortable for them. Prior to the actual interview, each participant signed a formal consent waiver. Using a combination of in-depth interviewing and digital recording, the researcher systematically compiled the responses for subsequent analysis.

Data Analysis

The collected narrative data were processed using thematic analysis, a systematic qualitative method used to identify and interpret recurring patterns (Braun & Clarke, 2023).

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

This approach allowed the researcher to uncover both explicit and implicit meanings regarding the teachers' motivations, communication styles, and support systems. By following the framework established by Nowell et al. (2021), the study maintained transparency and rigor through consistent coding and interpretation.

The analysis followed the six-phase framework developed by Braun and Clarke (2023):

Familiarization: Immersing in the transcripts to develop a deep understanding of the content.

Initial Coding: Assigning shorthand labels to significant features across the data set.

Searching for Themes: Grouping related codes into broader clusters of meaning.

Reviewing Themes: Refining the themes to ensure they accurately represented the data.

Defining and Naming: Clarifying the essence of each theme and assigning concise titles.

Reporting: Selecting vivid data extracts to support the findings and linking them back to the research questions and existing literature.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

****

RESULTS AND DISCUSSIONS

The study aimed to understand the teachers' experiences in the implementation of Special Science Elementary Education in the Schools District of San Miguel during the 2025–2026 school year. A qualitative method, using in-depth interviews, was employed. The participants included seven (7) Special Science teachers from San Miguel Central Elementary School, which was the only school in the Schools District of San Miguel that implemented Special Science Classes.

Data collection was facilitated through a researcher-developed interview schedule, with audio and video recordings utilized to ensure accurate documentation. To guarantee the instrument's credibility, it underwent a rigorous content validation process conducted by a panel of subject matter experts. Following the acquisition of formal clearances and permits from the relevant authorities and stakeholders, the gathered information was systematically processed, analyzed, and interpreted using a thematic framework.

The following were the findings of the study:

Based on the results of the in-depth interviews with the participants, it was found that the experiences of SSES teachers were characterized as challenging yet rewarding, engaging for learners, and fun and enjoyable.

The challenges encountered by teachers on the implementation of SSES were inadequate facilities in learning, increased workload, lack of training for teachers, and limited parental involvement.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

The results of the in-depth interview found that coping strategies were seeking institutional support, building a support system at school, prioritizing and organizing tasks, and attending seminars and workshops.

CONCLUSION

Based on the findings, the following insights were drawn:

The implementation of SSES program presents significant instructional and resources-related challenges for teachers. Teachers demonstrate resilience, adaptability, and commitment in addressing these challenges. The SSES program contributes positively to teachers' professional development and sense of accomplishment. Adequate institutional support plays a crucial role in the effective implementation of the program. There is a need for structured interventions to support teachers in sustaining quality science instruction.

The challenges faced by the SSES teachers are complicated. The implementation of SSES is not merely an academic responsibility but a transformative professional journey. Teachers experience both pressure and pride as they navigate the demands of advanced science instruction. While limited resources and high expectations create stress, these challenges also push teachers to become more innovative and resourceful.

Teacher resilience plays a central role in sustaining the program. Despite institutional limitations, teachers remain committed to deliver quality instruction. Teachers' adaptability demonstrates that program success depends not only on structural provisions but also on teacher dedication and professional identity.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

****

Professional growth emerges as a significant outcome of SSES implementation. Teachers reported enhance content mastery, improved pedagogical strategies, and deeper understanding of inquiry-based; earning approaches. This insight supports the idea that challenging environments, when supported appropriately, can promote meaningful professional development.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

References

Adelman, H., & Taylor, L. (2024). *Implementation science and school improvement*. University of California, Los Angeles. https://files.eric.ed.gov/fulltext/ED646572.pdf

Agtang, D.J.B., & Patriarca, Y.N. (2025). Engagement of learners in active learning strategies and their learning efficacy. *Psychology and Education: A Multidisciplinary Journal*, *39*(3), 354–365. https://www.google.com/search?q=https://doi.org/10.48047/pajpu.v39i3.036

Agus, J.G., et al. (2026). Exploring the teaching experiences of secondary educators assigned to special science classes in public schools. *PhilArchive*.

American Psychological Association. (2023). Base. In *APA dictionary of psychology*. https://www.google.com/search?q=https://dictionary.apa.org/base

Anto, I.J., Buagas, I.R., Ong, P.M.V., Naparan, G., & Villavier, A. (2023). *Challenges and coping strategies of science teachers*. ResearchGate. https://www.researchgate.net/publication/372826777

Bedi, A., & Sass, M.D. (2023). But I have no time to read this article! A meta-analytic review of the consequences of employee time management behaviors. *The Journal of Social Psychology*, *163*(5), 676–697. https://doi.org/10.1080/00224545.2022.2159302

Biemel, W., & Spiegelberg, H. (2024). Phenomenology. *Encyclopaedia Britannica*.

Blasabas, R.J. (2021). Philippine K to 12 implementation: Difficulties and coping strategies of public elementary school administrators. *Slongan*.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

https://www.google.com/search?q=http://po.cjc.edu.ph/index.php/slongan/article/view/25

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide*. SAGE Publications.

Buagas, J., & Cabrera, M.L. (2025). Navigating the abyss: Challenges, coping mechanisms and insights of science teachers in teaching science to non-decoder junior high school students. *E-Journals*. https://www.google.com/search?q=https://ejournals.ph/article.php?id=28151

Cagas, C., & Villocido, V. (2024). *Special Science School System (SSSS): Implementation and challenges*. ResearchGate. https://www.researchgate.net/publication/372826777

Calautit, J. (2022). *Lack of learning material*. Scribd. https://www.scribd.com/user/488619863/Jenifer-Languido-Calautit

Cambridge Dictionary. (n.d.). Elementary school. In *Cambridge dictionary*. https://dictionary.cambridge.org/us/dictionary/english/elementary-school

Canonizado, I. (2024). *Effectiveness of technical assistance to enhance work performance of teachers towards a policy framework*. SSRN. https://ssrn.com/abstract=4729031

Cantero, R., et al. (2025). Engagement and achievement in early STEM education.

Castino, J.M., Cordua, J., & Rebaula, J. (2025). Establishing a Special Science Elementary School (SSES) Program at Tacurong Pilot Elementary School: A feasibility study.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

International Journal of Research and Innovation in Social Science. https://dx.doi.org/10.47772/IJRISS.2025.906000141

Child Hope Learning. (n.d.). *Reimagining education: Innovative teaching strategies to inspire—and empower— learners*. https://childhope.org.ph/innovative- teaching-strategies

Chinooneka, T. (2025). Challenges in teaching science in resource-limited schools.

Creswell, J.W., & Creswell, J.D. (2023). *Research design: Qualitative, quantitative, and mixed method approaches* (6th ed.). SAGE Publications.

Darling-Hammond, L., et al. (2021). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, *25*(2), 97–140.

Darling-Hammond, L., Hyler, M.E., & Gardner, M. (2020). *Effective teacher professional development*. Learning Policy Institute.

Day, C., & Gu, Q. (2022). *Teacher resilience: Building and sustaining quality in testing times*. Routledge.

Dedumo, S.B. (2025). The implementation of Special Science Elementary School project through the lens of implementers of the three divisions of CARAGA Region. *Pantao: The International Journal of Humanities and Social Sciences*, *4*(3), 5013–5024. http://doi.org/10.69651/PIJHSS040345

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Del Barrio-Yarte, K., & Alvarez, J.S. (2024). Implementation of Special Science Elementary School (SSES) curriculum in the Division of Camarines Norte. *International Journal of Research Publications*.

Department of Education. (2010). *Policy guidelines in the implementation of the Special Science Elementary Schools (SSES) project* (DepEd Order No. 51, s. 2010). https://www.google.com/search?q=https://www.deped.gov.ph/2011/07/20/do-57-s-2011

Dian, W., et al. (2021). Teachers' difficulties in developing learning resources. *The 2nd International on Meaningful Education (2nd ICMEd), KnE Social Sciences*, 665–679. https://www.google.com/search?q=https://doi.org/10.18502/kss.v6i2.10024

Edulan, D.J., & Fajardo, M.T. (2024). Challenges, coping mechanisms, motivation, and support needs for out-of-field science teachers in western Mindanao. *American Journal of Educational Research*, *12*(7), 241–251. https://www.google.com/search?q=https://doi.org/10.12691/education-12-7-8

Elliott, J. (2025). Everyday voices as big data: A call for the secondary analysis of large-scale qualitative interview data. *Sociology*. https://www.google.com/search?q=https://doi.org/10.1177/00380385251344472

Encyclopedia Britannica. (2025, November 6). Elementary education. https://www.britannica.com/topic/elementary- education

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

****

Espero, A. (2024). *Special Science Elementary School handout*. Scribd. https://www.scribd.com/document/765979683/SPECIAL- SCIENCE-ELEMENTARY-SCHOOL-HANDOUT-1-1

Faustino, J. (2021). Special Science Elementary School: Project and education in the Philippines prospects for gifted. *ResearchGate*. https://www.google.com/search?q=https://www.researchgate.net/publication/352118969

Freeman, S., et al. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, *111*(23), 8410–8415. https://doi.org/10.1073/pnas.1319030111

Hamilton, K. (2023). *Rewriting the storyline of island schools*. Island Institute. https://www.islandinstitute.org/working- waterfront/rewriting-the-storyline-of-island-schools/

Hasaan, M. (2024). *Purposive sampling—Methods, types and examples*. Research Method. https://researchmethod.net/purposive-sampling/

Hattie, J. (2023). *Visible learning: The sequel*. Routledge.

Javier, A.B. (2024). Teachers' experiences in implementing the Special Science Elementary School curriculum: A phenomenological study. *Journal of Education and Science Innovation*, *5*(2), 45–61.

Javier, C. (2024). *The growth gap: Why teacher training matters in modern education*. FranklinCovey Education Philippines. LinkedIn.

****

****

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Kritt, D. (2022). The future of constructivist education. *Human Development*, *66*(4-5), 295–309. https://doi.org/10.1159/000526275

Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. *School Leadership & Management*, *40*(1), 5–22. https://doi.org/10.1080/13632434.2019.1596077

Lumactod, O.P. (2024). Challenges and coping mechanisms of SPED teachers: A basis for intervention program. *International Journal of Research and Innovation in Social Science*, *8*(5), 980–1010. https://doi.org/10.47772/IJRISS.2024.805069

Lutkevich, B. (2022). *What is implementation?* TechTarget. https://www.techtarget.com/searchcustomerexperience/definition/implementation

Magtulis, G., & Brunio, S. (2025). *Challenges and coping strategies of science teachers handling non-specialized subjects*. Scribd. https://www.scribd.com/document/895333269/Challenges-and-Coping-Strategies-of-Science-Teachers-Handling-Non-Specialized-Subjects

Makamure, C., & Tsakeni, M. (2020). Inquiry-based practical work in primary science classrooms. *Research in Science Education*.

Medez, S. (2024). Additional workloads of teachers in public secondary schools and their performance. *E-Journals*. https://www.google.com/search?q=https://ejournals.ph/article.php?id=23922

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Morris, A. (2025). *Developing the interview guide: A practical introduction to in-depth interviewing*. SAGE Publications. https://www.google.com/search?q=https://doi.org/10.413 5/9781473921344.n3

Naparan, G., Vilaver, A., & Anto, I. (2023). *Canadian Journal of Educational and Social Studies*, *3*(4), 148–166. https://www.google.com/search?q=https://doi.org/10.531 03/cjess.v3i4.168

Oguta, P.A. (2022). Teacher experience factor impetus on student academic performance. *Journal of Research Innovation and Implications in Education*, *6*(1), 141–148. https://jriiejournal.com/wp- content/uploads/2022/02/JRIIE-6-1-014.pdf

Organisation for Economic Co-operation and Development. (2021). *Teachers and school leaders as valued professionals: OECD indicators*. OECD Publishing. https://doi.org/10.1787/c069e11a-en

Pasique, M., & Maguate, J. (2023). *Professional development challenges among teachers*.

Pawilen, G. T. (2021). Special Science Elementary School: Project and education in the Philippines—Prospects for gifted children. *Journal of the Japan Society for Science Education*, *45*(2), 114–125.

Prado, G., & Sabas, H. (2023). Early engagement in science education and its impact on academic achievement. *Psychology and Education: A Multidisciplinary Journal*. https://www.google.com/search?q=https://ejournals.ph/a rticle

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Quizana, M., & Espiritu, M. (n.d.). *Challenges encountered and coping strategies used by teachers in implementing SPED inclusive education program in public elementary schools of third congressional district, division of Quezon*. Scimatic. https://www.google.com/search?q=https://www.scimatic.org/storage/journals/11/pdfs/1454.pdf

ResearchGate. (2021, June 4). *Special Science Elementary School: Project and education in the Philippines prospects for gifted*.

Rosas, T.J.A. (2019). Lived experiences of junior high school specialized science teachers teaching science using the spiral progression approach. *Journal of Education and Society*, *3*(1), 43–53. https://journals.lnu.edu.ph/index.php/jes/article/view/26

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Sanchez, G.G., Riva, R.S., & Angligen, R.C. (2024). Theoretical and practical lesson planning guide: Its effect on the lesson planning performance of pre-service teachers. *Proceedings of the 4th International Conference on Education and Technology (ICETECH 2023)*, 227–244. Atlantis Press.

Sharma, R., & Pattanayak, S. (2022). Classroom resources and student engagement in STEM education.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue III
February 2026
Available online at https://www.instabrightgazette.com

Taherdoost, H. (2022). *How to conduct an effective interview: A guide to interview design in research study*. ResearchGate. https://www.google.com/search?q=https://www.researchgate.net/publication/359596183

Tomlinson, C.A. (2021). *How to differentiate instruction in academically diverse classrooms* (3rd ed.). ASCD.

Van den Akker, J. (2021). Curriculum challenges and teacher workload in science education. *Journal of Curriculum Studies*, *53*(4), 567–582.

Yangambi, M. (2023). Impact of school infrastructures on students learning and performance: Case of three public schools in a developing country. *Creative Education*, *14*, 788–809. https://doi.org/10.4236/ce.2023.144052

Zafar, F., Alston, C., & Nichol, C. (2025). Exploring science teachers' motivations for professional development. *Frontiers in Education*.