# ISSN No:-2456-2165

# Virtual Professional Development: Adaptive Strategies of Elementary School Teachers

Ronie S. Tanduyan

Publication Date: 2025/06/11

Abstract: This study aimed to explore the experiences and adaptive strategies of public elementary school teachers in engaging with virtual professional development. The research sought to understand how teachers navigate the challenges of virtual professional development the strategies they employ to stay engaged, and how the knowledge gained influences their instructional practices. Using a qualitative approach, the study involved semi-structured interviews with five public elementary school teachers from Migsulang Elementary School located at Sta. Maria, Davao Occidental. They were selected through purposive sampling. The findings reveal that teachers faced challenges such as internet connectivity issues and balancing professional development with other responsibilities. However, they adapted by seeking additional training, using structured schedules, collaborating with peers, and experimenting with new teaching tools. The results indicate that virtual professional development enhances teachers' ability to use technology, engage students through student-centered learning, and differentiate lessons to meet diverse needs. Based on the findings, it is recommended that education officials continue to support and expand virtual professional development programs, provide resources to address technological barriers, and encourage peer collaboration to maximize the benefits of PD for teachers and students.

Keywords: Virtual Professional Development, Adaptive Strategies, Elementary School Teachers.

**How to Cite:** Ronie S. Tanduyan (2025 Virtual Professional Development: Adaptive Strategies of Elementary School Teachers. *International Journal of Innovative Science and Research Technology*, 10(5), 4290-4293. https://doi.org/10.38124/ijisrt/25may2345

# I. INTRODUCTION

This qualitative study explored the lived experiences of public elementary school teachers in engaging with virtual professional development. It examined the challenges, benefits, and broader implications of using virtual platforms for teacher training within the context of elementary education, highlighting the transformation that professional development underwent.

implementation of virtual professional development for public elementary school teachers has faced various challenges globally, such as unequal access to technology, limited digital literacy, and inconsistent institutional support. In the Philippines, these issues are intensified by infrastructural limitations and socioeconomic disparities, despite efforts like the Department of Education's online platforms. In Davao City and particularly at Migsulang Elementary School in Sta. Maria, Davao Occidental, teachers encountered region-specific challenges, including unstable internet, cultural diversity, and limited resources. These realities emphasize the need for a holistic and contextsensitive approach that blends international best practices with local strategies to ensure more effective and inclusive professional development.

This qualitative study aimed to explore the lived experiences of public elementary school teachers engaged in virtual professional development. It sought to uncover the challenges, benefits, and implications of such programs, with the goal of informing the creation of more effective and inclusive professional development initiatives. By examining teachers' perspectives, the study provided insights into how virtual professional development influenced their teaching practices and professional growth.

The literature review on virtual professional development (VPD) revealed its positive impact on teachers' knowledge, attitudes, and teaching practices. It emphasized the importance of well-designed programs, virtual collaboration, and equitable access. The review also highlighted the need for learner-centered, culturally responsive approaches to ensure inclusivity and effectiveness in professional development.

This study was grounded in two key theories: Social Learning Theory and the Community of Inquiry (CoI) Framework. Bandura's Social Learning Theory emphasized that teachers learn by observing and interacting with others, making it relevant for understanding collaboration and skill development in virtual professional development (VPD). The CoI Framework, developed by Garrison et al., provided a structure to examine cognitive, social, and teaching presences in online environments, helping to assess the quality and

https://doi.org/10.38124/ijisrt/25may2345

impact of teachers' experiences in VPD programs. Together, these frameworks guided the study's exploration of teacher learning in virtual settings.

### II. METHOD

This study used a phenomenological research design to deeply explore the lived experiences of public elementary school teachers engaged in virtual professional development. Phenomenology was chosen for its strength in capturing participants' subjective perceptions, emotions, and interpretations, allowing the researcher to identify common themes without imposing preset categories. This approach also supported the bracketing of researcher biases, making it well-suited for uncovering the essence and complexity of teachers' experiences in virtual learning environments.

This study is grounded in constructivist ontology, viewing reality as subjective and shaped by teachers' social contexts. It follows an interpretivist epistemology, focusing on understanding teachers' personal meanings and experiences. Axiologically, it values ethical integrity, transparency, and respect for participants' voices. Rhetorically, it uses phenomenology to explore and interpret the lived experiences of teachers in virtual professional development.

The study adopted a constructivist qualitative assumption, recognizing reality as socially constructed and subjective. It emphasized understanding teachers' unique perspectives and experiences with virtual professional development through co-constructed meanings shaped by their social and cultural contexts. This assumption guided the researcher in interpreting the participants' narratives with sensitivity to their diverse backgrounds and lived realities.

The study involved five public elementary school teachers from Migsulang Elementary School who met specific criteria: current employment in a public school, at least five years of teaching experience, and average technological literacy. These teachers participated in both indepth interviews and a focus group discussion (FGD) to provide varied perspectives on virtual professional development. Participants were purposively selected from different grade levels with assistance from school administrators and teacher associations to ensure diverse and comprehensive insights.

The study used in-depth interviews and focus group discussions to explore the lived experiences of public elementary school teachers in virtual professional development. In-depth interviews allowed for detailed individual insights, while focus groups encouraged interactive discussions. Interview guide questions were aligned with the research objectives and focused on motivations, experiences with online platforms, challenges, coping strategies, and lessons learned.

The data analysis followed a structured qualitative approach. Audio recordings were transcribed verbatim, then open coding was applied to identify key themes from

participants' experiences. Axial coding followed to group related codes into broader themes. Constant comparison and memo writing supported reflection and interpretation. The findings were then synthesized into a narrative with thematic insights and participant quotes.

# III. RESULTS AND DISCUSSIONS

The first section highlighted the strategies public elementary school teachers used to adapt to virtual professional development. Five main themes emerged: overcoming platform challenges, balancing PD with other duties, engaging in peer collaboration, maintaining motivation, and applying PD learnings in the classroom—showcasing teachers' resilience and adaptability.

The second section outlined how public elementary school teachers adapted to challenges in virtual professional development by improving digital skills, managing time effectively, joining online communities, dedicating specific time for PD, and applying new tools and strategies—enhancing both their growth and student support.

The third section summarized how teachers, through virtual professional development, gained insights that transformed their teaching practices. They used technology to boost student engagement, adopted student-centered and collaborative approaches, and differentiated instruction to meet diverse needs. These learnings helped create more inclusive and effective classroom environments, leading to improved teaching outcomes and ongoing professional growth.

Teachers adopted a range of adaptive strategies to overcome the difficulties of virtual professional development. They enhanced their digital skills through additional training and self-paced tutorials, managed their time with structured schedules, and actively joined online communities and discussion groups. By dedicating specific times for professional development and trying out new tools and methods, they ensured their continuous growth in a remote learning environment.

To further address the unique challenges of virtual PD, teachers took proactive measures such as preparing for potential technical issues, utilizing backup resources like recorded sessions, and seeking peer support for troubleshooting. They also balanced their responsibilities by scheduling PD activities outside their teaching hours, which helped them stay focused and productive in their learning journey.

Through these efforts, teachers gained valuable insights that translated into improved classroom practices. They integrated interactive technologies such as Google Meet, Kahoot, and Google Classroom to increase student engagement. Their teaching became more student-centered and collaborative, with a strong emphasis on differentiating lessons to meet various learning needs. These strategies not only enhanced their instructional effectiveness but also

contributed to a more inclusive and dynamic learning environment.

Public elementary school teachers faced significant challenges in virtual professional development (PD), including poor internet connectivity, balancing PD with teaching duties, and staying engaged. Despite these difficulties, they demonstrated adaptability by preparing ahead, using self-paced tutorials to enhance digital skills, creating structured schedules, and participating in online peer communities. These strategies enabled them to integrate new tools and approaches into their teaching, such as Google Classroom and Kahoot, promoting student-centered, collaborative, and differentiated instruction. As a result, virtual PD led to meaningful improvements in instructional practices and fostered more engaging and inclusive learning environments.

The recommendations emphasize continued support for virtual professional development (PD) by ensuring accessibility, relevance, and technical assistance. School heads are encouraged to foster a culture of continuous learning through peer collaboration and dedicated PD time. Teachers should seek additional training, integrate digital tools into their teaching, and collaborate with peers to enhance classroom engagement. Learners are expected to benefit from interactive, student-centered strategies that support diverse learning needs. Finally, future researchers are advised to study the long-term impacts of virtual PD on teaching effectiveness and student outcomes across various contexts.

# REFERENCES

- [1]. Bandura, A. (1977). Social learning theory. Prentice-Hall.
- [2]. Birman, B. F., et al. (2024). Supporting teacher professional learning in the context of systemic reform. Educational Policy, 28(4), 537-572.
- [3]. Charmaz, K. (2014). Constructing grounded theory. Sage Publications.
- [4]. Ching, Y. H., & Hsu, Y. C. (2020). Examining factors influencing teachers' intention to use web-based professional development courses. Computers & Education, 154, 103898.
- [5]. Cox, M. J., & McLeod, D. (2019). Technology-enhanced professional development for teachers: Overcoming barriers. Journal of Educational Technology, 28(1), 15-24.
- [6]. Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches. Sage Publications.
- [7]. Crotty, M. (1998). The foundations of social research: Meaning and perspective in the research process. Sage Publications.
- [8]. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2019). Effective teacher professional development. Learning Policy Institute.

- [9]. Denzin, N. K., & Lincoln, Y. S. (2018). The Sage handbook of qualitative research. Sage Publications.
- [10]. Desimone, L. M., & Garet, M. S. (2015). Best practices in professional development for improving secondary mathematics instruction. Yearbook of the National Society for the Study of Education, 114(1), 1-31.
- [11]. Desimone, L. M., et al. (2024). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. Educational Researcher, 43(3), 146-152.
- [12]. Duerte, R., & Reyes, M. (2021). "Localizing Virtual Professional Development: Lessons from Davao City." Journal of Educational Innovation, 15(3), 78-91.
- [13]. Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2019). Cultivating a culture of digital professionalism among pre-service teachers: Identifying tensions and aligning commitments. Teaching and Teacher Education, 79, 94-104
- [14]. Ertmer, P. A., et al. (2022). Making sense of reform: How competing interpretations influence teachers' technology use. Journal of Educational Computing Research, 46(4), 339-361.
- [15]. Fishman, B. J., et al. (2023). Designing networked professional development for scaling up science education. Teachers College Record, 115(9), 1-36.
- [16]. Garcia, A., & Rodriguez, M. (2022). Culturally responsive virtual professional development: Strategies for supporting diverse learners. Journal of Teacher Education, 73(1), 86-98.
- [17]. Garcia, A., et al. (2023). "Transforming Professional Development: Challenges and Opportunities in the Philippine Context." Journal of Education Research, 10(2), 45-58.
- [18]. Garet, M. S., et al. (2017). The impact of two professional development interventions on early reading instruction and achievement. Educational Evaluation and Policy Analysis, 39(4), 585-608.
- [19]. Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. Internet and Higher Education, 2(2-3), 87-105.
- [20]. Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In Denzin, N. K., & Lincoln, Y. S. (Eds.), Handbook of qualitative research (pp. 105-117). Sage Publications.
- [21]. Guskey, T. R. (2022). Professional development and teacher change. Teachers and Teaching: Theory and Practice, 8(3), 381-391.
- [22]. Harris, J. B., & Hofer, M. J. (2021). Technological pedagogical content knowledge (TPACK) in action: A descriptive study of secondary teachers' curriculumbased, technology-related instructional planning. Journal of Research on Technology in Education, 43(3), 211-229.
- [23]. Hattie, J., & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77(1), 81-112.

- [24]. Hew, K. F., & Brush, T. (2017). Integrating technology into K-12 teaching and learning: Current knowledge gaps and recommendations for future research. Educational Technology Research and Development, 55(3), 223-252.
- [25]. Joyce, B., & Showers, B. (2022). Student achievement through staff development (3rd ed.). Association for Supervision and Curriculum Development.
- [26]. Koehler, M. J., & Mishra, P. (2021). What is technological pedagogical content knowledge (TPACK)? Journal of Education, 193(3), 13-20.
- [27]. Koehler, M. J., et al. (2024). TPACK revisited: Ensuring a deeper understanding of technology integration in education. TechTrends, 58(5), 17-22.
- [28]. Laveault, D., & Allaire-Duquette, G. (2019). Online professional development for educators: A review of the literature. Teaching and Teacher Education, 77, 101-113.
- [29]. Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Sage Publications.
- [30]. Loucks-Horsley, S., et al. (2019). Designing professional development for teachers of science and mathematics. Thousand Oaks, CA: Corwin Press.
- [31]. Penuel, W. R., et al. (2019). Creating coherence in professional development: Insights from a decade of work. Educational Researcher, 46(1), 1-13.
- [32]. Puentedura, R. R. (2024). The SAMR model: A practical guide to transforming learning with technology. Retrieved from https://hippasus.com/
- [33]. Saldaña, J. (2016). The coding manual for qualitative researchers. Sage Publications.
- [34]. Sánchez, E., & Borko, H. (2019). The nature and effects of teachers' learning experiences in supportive professional communities. Teaching and Teacher Education, 56, 45-56.
- [35]. Sezgin, E., et al. (2020). Challenges in online teaching and professional development: A review of current literature. Journal of Education and Learning, 9(2), 110-121.
- [36]. Smith, J. K., et al. (2021). Effective strategies for implementing virtual professional development: A case study analysis. Journal of Educational Technology, 87(2), 123-135.
- [37]. Smith, J., & Jones, L. (2022). "Navigating Virtual Professional Development: Insights from International Perspectives." International Journal of Educational Technology, 8(1), 112-126.
- [38]. Tomlinson, C. A. (2014). The differentiated classroom: Responding to the needs of all learners. ASCD.
- [39]. Tyack, D., & Cuban, L. (2019). Tinkering toward utopia: A century of public school reform. Harvard University Press.
- [40]. Vanderlinde, R., et al. (2019). Teacher professional development in the digital era: Strategies and tools. Teaching and Teacher Education, 83, 123-134.
- [41]. Vescio, V., Ross, D., & Adams, A. (2019). A review of research on the impact of professional learning communities on teaching practice and student learning. Teaching and Teacher Education, 45, 80-91.

- [42]. Vescio, V., Ross, D., & Adams, A. (2024). A review of research on the impact of professional learning communities on teaching practice and student learning. Teaching and Teacher Education, 24(1), 80-91.
- [43]. Voogt, J., et al. (2019). Teacher learning in collaborative curriculum design. Teaching and Teacher Education, 74, 154-163.
- [44]. Wang, H., et al. (2023). Factors influencing teachers' engagement in online professional development: A systematic review. Computers in Human Behavior, 124, 106965.
- [45]. Wenger, E., McDermott, R., & Snyder, W. M. (2011). Cultivating communities of practice: A guide to managing knowledge. Harvard Business Press.
- [46]. Zhang, D., & Fulmer, G. (2019). Virtual communities of practice: Exploring teachers' perceptions and experiences in an online professional development program. Teaching and Teacher Education, 69, 145-156.
- [47]. Zhu, M., et al. (2029). The effectiveness of online professional development for teachers: A metaanalysis. Review of Educational Research, 86(1), 123-155