

Unveiling the Journey of School Heads' Experiences in Enhancing Teachers' Productivity in the Last Mile Schools

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Abstract—In the pursuit of inclusive education, Last-Mile Schools (LMS) represent the final frontier institutions located in the most remote, disadvantaged, and marginalized areas. While much research focuses on pedagogical challenges in these zones, the lived experiences of those steering the ship often remain in the shadows. This hermeneutic phenomenological study aims to unveil and interpret the lived experiences of school heads serving in LMS. Recognizing the unique challenges and critical role these educational leaders play in geographically isolated, disadvantaged, and conflict-affected areas, this research seeks to understand their journey, leadership practices, and meaning-making processes. Through in-depth interviews and phenomenological analysis, the study explored the school heads' daily realities, struggles, triumphs, and their perspectives on providing quality education amidst resource constraints and complex socio-cultural contexts. By delving into their subjective experiences, this study intends to illuminate the essence of their leadership, contribute to a deeper understanding of educational administration in marginalized settings, and offer insights for policy development and support systems tailored to the specific needs of LMS leaders.

Keywords— Experiences, School Heads, Last Mile Schools.

I. INTRODUCTION

Nestled within the rugged terrains and culturally diverse communities of Bukidnon are public schools referred to as last-mile schools—institutions that serve learners in geographically isolated, disadvantaged, and conflict-affected areas. These schools are often found at the farthest reaches of the education system, where access to basic services remains limited and the journey to school can involve crossing rivers, hiking mountains, or traveling long distances through unpaved roads. Despite these challenges, they embody the Department of Education's (DepEd) commitment to reaching every Filipino child with quality education. The Last-Mile Schools (LMS) program was designed to address the longstanding disparities experienced by these schools by prioritizing investments in infrastructure, learning resources, and teacher deployment.

As Nelson Mandela once said, "Education is the most powerful weapon which you can use to change the world." These words resonate deeply in the context of last-mile schools. Whether situated in upland indigenous communities, lowland agricultural zones, or conflict-affected barangays, these schools serve as lifelines of hope and transformation for

learners whose opportunities are shaped by the realities of their environments. In Bukidnon, many of these schools cater to indigenous groups such as the Talaandig, Higaonon, and Bukidnon peoples, where language and cultural practices must be thoughtfully integrated into the school system. These schools are not merely defined by remoteness, but by the persistent educational barriers they face barriers that include limited infrastructure, unreliable electricity and internet access, and difficulties in teacher retention.

To address these, the LMS Program is anchored in strong legal and policy frameworks, including Republic Act No. 9155 or the *Governance of Basic Education Act of 2001*, which mandates access to quality education for all and supports decentralized decision-making in schools. In addition, Department of Education Orders such as DO No. 27, s. 2019, outline the prioritization of last-mile schools in resource allocation and development efforts. These policies reflect national recognition of the critical need to support learners in hard-to-reach areas.

Still, despite these policy commitments, last-mile schools continue to face multi-layered challenges that hinder the delivery of equitable education. School administrators and teachers frequently operate in conditions with minimal support, often juggling multigrade teaching, managing incomplete school buildings, and addressing diverse learning needs with limited instructional materials. In Bukidnon, anecdotal reports reveal principals doubling as classroom teachers or trekking several kilometers to attend district meetings due to the absence of transportation or reliable communication. These ground-level realities highlight the vital yet underexplored role of school leadership in driving innovation, building community trust, and sustaining school operations under challenging circumstances.

Existing local research provides valuable insights into these schools. For instance, Dela Cruz (2021) documented the creative strategies used by school heads to engage parents and indigenous leaders in school-based management, demonstrating how culturally anchored approaches improve learner participation. However, many studies focus on learner performance or infrastructure needs, leaving a gap in understanding the lived experiences of school administrators who are at the forefront of implementing educational reforms in last-mile schools.

To address this gap, this study aims to explore the experiences, challenges, and leadership strategies of administrators in selected last-mile schools in Bukidnon. By employing a qualitative research design, it seeks to capture their voices, surface common patterns, and offer insights into context-responsive leadership practices that are often absent from policy discussions. Ultimately, the study endeavors to contribute to the broader discourse on educational equity and school leadership by illuminating how administrators in under-resourced settings navigate their roles and advocate for the needs of their learners and communities.

II. FRAMEWORK

This study is anchored on McGregor's theory X and theory Y (1960), which provides a foundational lens for examining leadership assumptions and administrative behaviors in last-mile schools. Theory X assumes that individuals inherently dislike work and require strict supervision, while theory Y posits that people are naturally motivated, responsible, and capable of self-direction and creativity. In the context of last mile schools—where administrators often face limited resources, multigrade teaching, and community-driven challenges—theory Y offers a more empowering leadership stance. This theory aligns with the study's focus on uncovering how school heads navigate constraints by trusting and involving their teachers, encouraging initiative, and fostering shared leadership. It serves as a critical starting point for understanding how administrative beliefs shape school culture, staff motivation, and overall school performance.

To deepen this understanding, Maslow's hierarchy of needs (1943) is incorporated to explain the intrinsic motivation of educators in marginalized school settings. Maslow's theory outlines five levels of human needs—ranging from basic physiological needs to self-actualization. In last-mile schools, administrators and teachers often struggle to meet even the most basic levels due to the absence of water systems, classrooms, learning materials, or even safety in conflict-affected areas. Addressing these foundational needs becomes a prerequisite for achieving professional satisfaction and growth. Thus, Maslow's framework is essential in examining how school leaders support their teachers' well-being and create an environment where personal and professional fulfillment becomes possible.

Further complementing this framework is Herzberg's two-factor theory (1959), which differentiates between hygiene factors (e.g., salary, working conditions, school facilities) and motivators (e.g., recognition, advancement, meaningful work). This theory supports the study's objective to examine both the problems (e.g., lack of resources, infrastructure gaps, workload issues) and opportunities (e.g., community support, recognition, innovation) encountered by administrators. Herzberg's theory also reinforces the notion that improving teacher performance and satisfaction requires more than just providing basic necessities—it calls for building a culture of recognition, growth, and professional development.

These established theories are complemented by the insights of Navarro and Silva (2021), who emphasized the value of context-responsive leadership in disadvantaged

school environments. Their perspective underlines that leadership practices in last-mile schools cannot rely solely on traditional models—they must be adaptive, culturally aware, and community-anchored. School heads in these settings are not just administrators but also frontline decision-makers, negotiators, and morale-keepers. The inclusion of Navarro and Silva's (2021) work situates this study within the realities of the Philippine education landscape, particularly in regions like Bukidnon, where diversity and remoteness demand both flexibility and innovation from school leaders.

Together, these theories form an integrated framework that guides the exploration of the leadership practices, challenges, and opportunities experienced by administrators in LMS. They help structure the study's inquiry into how these leaders respond to their unique contexts and how their motivations, strategies, and leadership assumptions shape school outcomes.

Ultimately, this framework lays the foundation for developing an intervention plan rooted in the findings of this research. The goal is to provide practical, context-sensitive recommendations that incorporate leadership development, community engagement, and strategic resource allocation. By understanding the motivational and operational landscape of administrators in LMS, the study aims to contribute meaningful solutions that foster a supportive and empowering school environment for educators—one that leads to improved learning conditions and better educational outcomes for all learners in these underserved communities.

III. OBJECTIVES OF THE STUDY

This study seeks to explore the multifaceted roles of school administrators in Last-Mile Schools for the school year 2024-2025. Specifically, it endeavored to solve the following research problems: (1) How do the school heads in the Last-Mile Schools enhance teacher productivity? (2) How are the challenges and opportunities faced by the school heads in the Last-Mile Schools impact their management ability?

IV. METHODOLOGY

This study employed a qualitative research approach, specifically adopting the hermeneutic phenomenological method guided by the work of van Manen (1990). Hermeneutic phenomenology is concerned with exploring and interpreting the lived experiences of individuals, aiming not just to describe phenomena, but to understand the deeper meanings embedded in those experiences. This approach is especially appropriate when the goal is to uncover the essence of human experiences within their natural, contextual realities.

V. RESULTS AND DISCUSSION

The Through rigorous coding and constant comparison of participant responses, six themes emerged. Three themes emerged for practices employed by school heads to enhance teacher productivity in Last-Mile Schools: (a) *enhancing teacher productivity through peer support and collaboration*, (b) *monitoring student learning outcomes*, and (c) *strategies that improved outcomes*. Three themes also emerged for the challenges and opportunities. These are: (d) *primary challenges in last mile school leadership*, (e) *impact of*

challenges on school management, and (f) opportunities for improvement in last mile schools. These themes were generated by clustering similar responses, validating them against the participants' narratives, and comparing them with existing literature and theories discussed in Chapter 2.

Practices Employed by School Heads to Enhance Teacher Productivity in Last Mile Schools

The three themes that emerged for enhancing teacher productivity are: (a) *enhancing teacher productivity through peer support and collaboration*, (b) *monitoring student learning outcomes*, and (c) *strategies that improved outcomes*. Each theme is thoroughly discussed in this section.

Theme 1: Enhancing Teacher Productivity through Peer Support and Collaboration

The participants highlighted the use of peer coaching, learning action cell (LAC) sessions, and collaborative lesson planning (CLP) as the main strategies to enhance teacher productivity. These strategies were implemented despite the lack of advanced technology, emphasizing the creativity and resilience of school leaders in remote contexts. One statement is from Participant 3: *"We conducted monthly LAC sessions even without internet because that's our only way to unite the teachers."* [RP3]

Based on observations, LAC sessions not only provide a platform for continuous professional development but also strengthen team cohesion. In remote schools where formal training opportunities are limited, these sessions serve as the primary mechanism for teachers to share insights, reflect on practices, and develop innovative solutions together. LAC outcomes go beyond mere attendance; it involves evaluating qualitative shifts in classroom dynamics and quantitative improvements in learners' achievement. When teachers engage themselves in these sessions they translating a policy into practical classroom strategies.

Supporting literature emphasizes the effectiveness of LAC sessions as a DepEd-sanctioned tool for collaborative teacher development. DepEd Order No. 35, s. 2016 describes LAC as a professional learning community designed to improve teaching quality through shared reflection and peer collaboration (DepEd, 2016). Leano and Tan (2020) further confirmed that LAC sessions enhance teacher competence, particularly in rural and underserved settings. Likewise, De Ocampo and Panganiban (2023) found that peer coaching improves teachers' reflective practices and fosters effective instructional planning.

Theme 2: Monitoring Student Learning Outcomes

In the ecosystem of Department of Education, quarterly assessments act as the primary mechanisms for ensuring instructional quality and learner progress. While often viewed by educators as a period of intense administrative pressure, these components are essential for maintaining a data-driven approach to teaching. School heads have implemented quarterly assessments, reading diagnostics, and teacher-generated reports to monitor student performance. These approaches ensure accountability and enable data-driven decision-making. Participant 6 made mention, *"We conduct*

quarterly assessments and require reports from teachers every grading period." [RP6]

Through field observations and based on personal experience, it is evident that these assessment practices help identify learning gaps early on and guide remediation strategies. Teachers determine which competencies were not mastered by the majority. These activities also help ensuring that the written, taught, and assessed curricula are sync. In LMS, where access to digital tools is often limited, manual tracking and consistent reporting remain reliable and practical methods to ensure learning progress. These assessments are designed to measure the attainment of the most essential learning competencies (MELC). When teachers compile grades and report requirements such as school form 1 (Register), school form 9 (Progress report) and school form 10 (Permanent record) they are essentially mapping a student's journey.

This practice is aligned with DepEd Order No. 31, s. 2020, which emphasizes the use of formative and summative assessments to ensure mastery of learning competencies (DepEd, 2020). It also reflects the standards outlined in the Philippine Professional Standards for Teachers (PPST), which highlights the importance of utilizing varied assessment strategies to inform instruction and improve student outcomes (DepEd, 2017). The interpretation of these reports is where the art of teaching meets the science of data.

Quarterly assessments and report requirements are more than just bureaucratic hurdles; they are the diagnostic tools of the teaching profession. When analyzed with precision, interpreted with empathy, and supported by robust administrative frameworks, they ensure that no learner is left behind and that every teacher has the roadmap necessary for instructional excellence.

Theme 3: Strategies That Improved Outcomes

Participants shared innovative strategies such as partnerships with NGOs, provision of solar-powered lighting, and teacher mentorship systems to improve teacher performance and student outcomes. Their statements are:

We partnered with an NGO for reading books. We truly saw an improvement in the children's comprehension. [RP4]

We bought solar lamps for the students. It really helped, especially those without electricity. [RP7]

These localized efforts highlight the adaptive leadership of school heads who actively seek solutions beyond traditional resources. Partnerships with NGOs, such as Basa Pilipinas, have been proven to significantly enhance literacy outcomes by providing quality reading materials and teacher training (Education Development Center). Similarly, the provision of solar-powered solutions has improved learning conditions in off-grid communities, as confirmed by Cabotaje et al. (2021), who reported better study habits and improved ICT use in schools with solar electrification. Moreover, mentoring systems have been shown to improve teacher confidence and instructional quality (Dingal, 2023).

True to the field, it has been observed that the partnership between the Department of Education and non-governmental organizations creates a robust synergy that significantly enhances teacher mentorship systems through shared

resources and expertise. To engage these collaborations, one must look at the specific gaps they fill, such as providing specialized training in literacy, psychosocial support that may exceed standard internal budgets or looking into the needs of the school or the community.

These partnerships reveal a shift from traditional top-down supervision to a community of practice model, where NGO-led mentorship provides teachers with a safe space for professional growth and innovative risk-taking outside of formal evaluations. When an NGO provides solar-powered lamps and ICT gadgets to LMS, the impact extends far beyond just turning on the lights. It creates a fundamental shift in the educational ecosystem of the community. It extends study hours. Solar lamps allow students to study safely at night without relying on hazardous kerosene lamps or candles. ICT gadgets introduce students to the digital world. This levels the playing field, ensuring that rural students develop the same technical competencies as their urban peers. To support the longevity of these initiatives, Department of Education formalizes these ties through memoranda of agreement (MOA) that align NGO goals with the National Educators Academy of the Philippines (NEAP) standards. This ensures that mentorship is not a fleeting project but a sustainable ecosystem that empowers veteran teachers to guide novices, ultimately improving learner outcomes through a more supported and competent teaching force.

Challenges and Opportunities Faced by School Heads in Managing Last-Mile Schools

The three themes that emerged on the challenges and opportunities are: (a) *primary challenges in last mile school leadership*, (b) *impact of challenges on school management*, and (c) *opportunities for improvement in last mile schools*. This section focuses on the presentation, analysis, and interpretation of these themes.

Theme 1: Primary Challenges in Last Mile School Leadership

Geographic isolation, limited infrastructure, and lack of resources are persistent challenges for school heads. The persistent challenge of unpaved roads leading to LMS forces school heads to act more as logistics managers and crisis responders than academic leaders. A statement from Participant 2 shows this challenge. He said, “*The road going to our school is very difficult. Sometimes, we walk for two hours. It’s also hard to deliver supplies.*” [RP2]

The narratives of the participants reflect the logistical difficulties that hinder the efficient delivery of educational materials and program implementation. Mphosi and Chauke (2024) asserted that inadequate infrastructure, such as lack of electricity and proper classrooms, creates a less conducive environment for teaching and learning. Likewise, Dongo and Mahlangu (2022) found that transportation issues in remote areas lead to teacher turnover and program delays, mirroring the realities in LMS.

As seen, for these school heads, a heavy rainstorm is not merely a weather event but a systemic disruption that physically severs the link between the school and its resources. It is also witnessed, that poor road infrastructure is a primary driver of teacher absenteeism and student dropout

rates. When the commute becomes a literal uphill battle through mud or unstable terrain, the physical cost of attendance often outweighs the perceived value of the lesson.

Consequently, school heads in LMS must navigate a complex trade off. They are forced to manage a high operational cost such as the inflated delivery cost of and prices of supply delivery while simultaneously attempting to foster an environment of academic excellence. This geographic isolation creates a hardship loop where the difficulty of access prevents the very intervention and oversight needed to improve school and teacher performance, effectively trapping remote institutions in a stage of perpetual logistical struggle.

Theme 2: Impact of Challenges on School Management

The harsh conditions in LMS impact teacher morale, workload, and communication systems. Statements from participants attest to this finding:

Some teachers lose motivation due to exhaustion and the harsh conditions. [RP5]

Sometimes we can’t proceed with programs because we wait for hard copy memos. There’s no signal. [RP8]

The current state of the Last-Mile Schools (LMS) which are geographically isolated and disadvantaged areas presents a stark reality, where harsh classroom conditions and lack of internet connectivity act as severe barriers to educational equity. An analysis of these environments reveals that students often study in makeshift or dilapidated structures that lack proper ventilation and lighting, which directly correlates with increased physical fatigue of the teachers and decreased cognitive retention of the students.

Teacher burnout is a critical issue exacerbated by poor infrastructure and excessive workload. Bravo et al. (2021) and Cammayo et al. (2022) found that burnout among teachers is prevalent when logistical support and resources are lacking. Communication delays due to limited connectivity also hinder administrative efficiency, as emphasized by Chin et al. (2022), who linked poor internet access to delayed coordination and professional development.

As witnessed, the digital divide in this LMS suggests that without internet access, the MATATAG curriculum goal of technological literacy remains a theoretical concept rather than a practical reality. Students are effectively locked out of the global knowledge economy, relying solely on printed modules that may not be updated. Evidences from various educational studies and from personal observation indicates that teachers in these under resourced settings consistently underperform compared to their urban counterparts, not due to lack of ability but due to resource poverty. Addressing these gaps is not merely logistical challenge but a moral necessity to ensure that the last mile schools does not become a permanent dead end for teachers and students’ potentials.

Theme 3: Opportunities for Improvement in Last Mile Schools

Despite challenges, school heads identified LGU support, community mobilization, and alternative energy solutions as key opportunities. Participants 1 and 2 attest to this finding, saying:

The LGU’s help is a big deal, especially in our feeding program and water supply. [RP1]

Parents and the barangay helping with classroom repairs is a huge help for us. [RP9]

Presenting a sustainable path forward for geographically isolated areas, the strategic combination of local government unit (LGU) support, community mobilization and alternative energy solutions provides unprecedented opportunities for upgrading last mile schools. This multi sectoral approach reveals that LGU supply the essential administrative framework and funding for structural improvements, while grassroots community mobilization ensures localized manpower, cultural alignment, and the long term of these investments.

Interpreting this synergy reveals that such partnerships shift paradigm or remote schools from being isolated, underfunded outposts into deeply integrated community hubs, where localized problem solving directly addresses the unique geographical and social challenges in the area. Supporting the effectiveness of this model are rural educational outcomes which consistently demonstrate that when local governments and residents co-manage school welfare often seen in localized initiatives like Brigada Eskwela.

It is observed that programs like Brigada Eskwela and LGU-assisted infrastructure projects demonstrate the power of community engagement. It is more than just a cleaning event. It is often the primary lifeline that keeps the school functional. According to DepEd (2020), partnerships with LGUs enhance feeding programs and infrastructure, while studies by Cabotaje et al. (2021) highlighted how solar-powered electrification improves learning environments and attracts teacher retention in rural schools. In these LMS government resources are stretched thin due to logistical costs, making community led intervention essential for survival and improvement.

In the last-mile schools, the cost of transporting goods and materials like cement, desks, books and feeding products can sometimes exceed the cost of the items themselves. Brigada Eskwela mobilizes human caravans. Community members often volunteer to carry supplies on foot, across rivers or up mountain trails, ensuring that resources actually reach the school without these volunteer labor, many last mile schools would remain dilapidated simply because commercial delivery is impossible. Participatory leadership approaches, as noted by Esteban and Fernandez (2019), allow school heads to turn community involvement into a strategic resource for school improvement.

Teachers assigned to last-mile schools often face extreme isolation and hardships. When the community shows up for Brigade Eskwela, it sends a powerful message of support and appreciation. Seeing parents and leaders working on school helps teachers feel less abandoned by the system. It also provides platforms for the teachers to integrate into the community, building the trust necessary to prevent student dropouts.

VI. CONCLUSION

The journey of school heads in Last Mile Schools is a profound testament to educational leadership exercised under the most grueling circumstances. This study sought to unveil the lived experiences of these school leaders as they navigate

the unique challenges of enhancing teacher productivity in geographically isolated, disadvantaged, and marginalized areas. The narratives gathered in this research paint a vivid picture of leadership that transcends administrative duties, transforming into a mission of survival, advocacy, and deep community integration. The findings reveal that the path to enhancing teacher productivity in Last Mile Schools is fraught with systemic roadblocks, including: Severe infrastructural deficits, geographical isolation and hazardous commutes and acute lack of professional development resources. Despite these barriers, school heads do not merely manage; they adapt. To compensate for institutional gaps, they employ highly contextualized leadership strategies, utilizing emotional capital, fostering close-knit fraternal support among staff, and leveraging local community partnerships. Ultimately, this study concludes that teacher productivity in Last Mile Schools is fundamentally tethered to the holistic support system orchestrated by the school head. When school leaders successfully bridge the gap between isolation and community, teachers are more motivated to perform. However, relying solely on the individual resilience and resourcefulness of school heads is an unsustainable model for educational equity. For Last Mile Schools to truly thrive, the invisible, heroic journeys of these school heads must be met with deliberate, systemic intervention—ensuring that the "last mile" in geography no longer translates to the "last priority" in educational development.

VII. RECOMMENDATIONS

1. The Department of Education (DepEd), along with regional and division offices, may provide continuous capacity-building programs that focus on context-responsive leadership, crisis management, and resource mobilization. These programs may include modules on leading in resource-constrained settings, promoting teacher collaboration, and fostering strong school-community partnerships. Also, to help mitigate teacher burnout and improve retention in geographically isolated schools, DepEd may consider establishing structured support systems. These may include regular mentoring, mental health and wellness programs, workload redistribution, and incentive mechanisms such as hardship allowances, housing assistance, or transportation support. DepEd may also develop mechanisms to support partnerships between schools and non-government organizations (NGOs) that can provide essential resources such as instructional materials, teacher training, and digital learning tools. School leaders may be encouraged to build and sustain networks with civil society and private sector partners aligned with their school's specific needs. Moreover, given the limitations in technology and connectivity, the Department of Education may introduce low-tech but effective systems for tracking learning progress. These may include learner portfolios, teacher logs, and flexible assessment formats adapted to remote or multigrade teaching environments.
2. To improve administrative and instructional effectiveness, the government and education stakeholders may invest in

ICT infrastructure suitable for Last-Mile Schools. This may involve the provision of satellite internet, solar-powered devices, and communication hubs that will enable access to online learning materials, training, and timely communication.

3. School heads may continue to engage local government units (LGUs), barangay leaders, and community stakeholders in planning and implementing localized solutions. LGUs, in turn, may extend support through infrastructure improvements such as roads, electricity, and water systems, as well as in health and nutrition programs that directly impact school operations.
 4. National and local governments may prioritize the allocation of funds for critical infrastructure in remote schools. Investments in road access, classroom construction, electricity, and clean water facilities may significantly improve the overall learning environment and reduce barriers to education delivery.
 5. Higher education institutions, research bodies, and educational policy centers may be encouraged to conduct further research on the conditions of Last-Mile Schools. Findings from these studies may inform responsive policies and interventions aimed at achieving inclusive and equitable education, particularly for learners in hard-to-reach areas.
- REFERENCES
- [1]. Aquino, J., & Santos, D. (2020). Culturally responsive leadership in Last Mile Schools: A Philippine study. *International Journal of Leadership in Education*, 23(4), 1–15.
 - [2]. Babula, M., & Muschert, G. (2023). Does Maslow’s hierarchy of needs explain volunteer time allocations? An exploration of motivational time allowances using the American Time Use Survey. *Journal of Public and Nonprofit Affairs*, 9(3), 1–20. <https://doi.org/10.20899/jpna.9.3.1-20>
 - [3]. Baumgartel, H., & McGregor, D. (1960). The human side of enterprise. *Administrative Science Quarterly*, 5(3), 464–478. <https://doi.org/10.2307/2390668>
 - [4]. Bush, T., & Glover, D. (2014). School leadership models: What do we know? *School Leadership & Management*, 34(5), 553–571.
 - [5]. Cabotaje, A., Alampay, E., & Berse, K. (2021). Assessing the impacts of solar electrification program in rural schools. *Philippine Journal of Public Administration*, 65(1), 111–130. https://ncpag.upd.edu.ph/wp-content/uploads/2021-Cabotaje-et-al_13Sep2022.pdf
 - [6]. Cassar, C. (2022). Addressing transformative education and governance through the sustainable development goal 4: A case study. *Opportunities and Challenges in Sustainability*, 1(2), 105–115. <https://doi.org/10.56578/ocs010203>
 - [7]. Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy evidence. *Education Policy Analysis Archives*, 8(1), 1–44.
 - [8]. Dartey-Baah, K. (2009). Douglas McGregor’s theoretical models: Their application in assessing leadership styles. *Academic Leadership*, 7(4), 1–12. <https://doi.org/10.58809/zprt7568>
 - [9]. De Ocampo, M. V., & Panganiban, E. J. (2023). Effectiveness of peer coaching and academic performance in teaching internship. *International Journal of Multidisciplinary: Applied Business and Education Research*, 4(3), 920–928. <https://doi.org/10.11594/ijmaber.04.03.13>
 - [10]. Dela Cruz, F., & Lopez, G. (2020). Adaptive leadership in Philippine Last Mile Schools: Strategies for educational improvement. *Journal of Educational Administration and History*, 52(2), 145–160.
 - [11]. Department of Education. (2016, June 7). *Learning Action Cell as a K to 12 Basic Education Program school-based continuing professional development strategy for the improvement of teaching and learning (DepEd Order No. 35, s. 2016)*. <https://www.deped.gov.ph/2016/06/07/do-35-s-2016/>
 - [12]. Dingal, E. C. (2023). Effect of mentoring skills of master teachers on instructional practices of teachers and pupils’ academic performance. *International Journal of Advanced Multidisciplinary Studies*, 3(2), 420–443. * <https://www.ijams-bbp.net/wp-content/uploads/2023/03/1-IJAMS-FEBRUARY-2023-420-443.pdf>
 - [13]. Dongo, E., & Mahlangu, V. P. (2022). Challenges encountered by school principals and teachers that impede the optimal use of instruction time in South African schools. *International e-Journal of Educational Studies*, 6(12), 164–173. <https://doi.org/10.31458/iejes.1147296>
 - [14]. Ebekoziem, A., Aigbavboa, C. O., Samsurijan, M. S., Radin Firdaus, R. B., & Rohayati, M. I. (2023). Expanded corporate social responsibility framework: Companies’ role in improving higher education institutions infrastructure to Sustainable Development Goal 4. *Journal of Facilities Management*. <https://doi.org/10.1108/jfm-11-2022-0120>
 - [15]. Elfert, M. (2019). Lifelong learning in Sustainable Development Goal 4: What does it mean for UNESCO’s rights-based approach to adult learning and education? *International Review of Education*, 65(4), 537–556. <https://doi.org/10.1007/s11159-019-09788-z>
 - [16]. Epstein, J. (2018). *School, family, and community partnerships: Your handbook for action* (4th ed.). Corwin Press.
 - [17]. Esteban, R., & Fernandez, A. (2019). Participatory leadership and its impact on school improvement. *Educational Management Administration & Leadership*, 47(5), 719–735.
 - [18]. Esteban, R., & Fernandez, P. (2019). Participatory leadership and school improvement in Philippine rural schools. *Leadership and Policy in Schools*, 18(3), 250–265.
 - [19]. Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
 - [20]. Hadjeris, F. (2021). Revisiting sustainable development goal 4 in the context of COVID-19 pandemic: A case study of online teaching in Algerian higher education institutions. *Human Behavior and Emerging Technologies*, 3(1), 160–168. <https://doi.org/10.1002/hbe2.245>
 - [21]. Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press.
 - [22]. Hernandez, M. (2017). Leadership in remote schools: The impact on community engagement. *Journal of Educational Leadership, Policy and Practice*, 32(1), 22–34.
 - [23]. House, R. J., & Wigdor, L. A. (1967). Herzberg’s dual-factor theory of job satisfaction and motivation: A review of the evidence and a criticism. *Personnel Psychology*, 20(4), 369–390. <https://doi.org/10.1111/j.1744-6570.1967.tb02440.x>
 - [24]. Johnson, B., & Down, B. (2013). Critically re-conceptualizing the role of leadership in rural schools. *Leadership and Policy in Schools*, 12(4), 380–399.
 - [25]. Koltko-Rivera, M. E. (2006). Rediscovering the later version of Maslow’s hierarchy of needs: Self-transcendence and opportunities for theory, research, and unification. *Review of General Psychology*, 10(4), 302–317. <https://doi.org/10.1037/1089-2680.10.4.302>
 - [26]. Leano, R. G., & Tan, M. A. (2020). Enhancing teaching competencies through learning action cells in remote public schools. In *Proceedings of the 25th Asian Technology Conference in Mathematics* (pp. 1–12). <https://atcm.mathandtech.org/EP2020/regular/21782.pdf>
 - [27]. Magtibay, J., & Fernando, M. (2021). Challenges and opportunities for school administrators in Philippine Last Mile Schools. *Asia Pacific Journal of Education*, 41(3), 567–582.
 - [28]. McGreal, R. (2017). Special report on the role of open educational resources in supporting the sustainable development goal 4: Quality education challenges and opportunities. *The International Review of Research in Open and Distributed Learning*, 18(7), 1–15. <https://doi.org/10.19173/irrodl.v18i7.3541>
 - [29]. Mphosi, D. N., & Chauke, T. A. (2024). Challenges faced by school management teams in managing rural schools in three selected schools in South Africa. *Education and Practice International Journal*, 12(1), 45–60. https://www.edupij.com/index/makale_indir/598
 - [30]. Murata, A., Lewis, C., & Perry, R. (2020). Designing and facilitating lesson study in U.S. contexts: What we learned from adapting Japanese practices. *Professional Development in Education*, 46(4), 679–694. <https://doi.org/10.1080/19415257.2020.1856177>
 - [31]. Navarro, M., & Silva, L. (2021a). Transformational leadership in Philippine Last Mile Schools: Strategies for success. *Journal of Educational Administration and History*, 53(2), 145–160.

- [32]. Navarro, M., & Silva, P. (2021b). Transformational leadership practices in Last Mile Schools. *Educational Management Administration & Leadership*, 49(2), 305–322.
- [33]. Nunthapirat, D., Lockwood, A., Stangl, B., & Al-Sabbahy, H. (2013). Examining online brand image dimensions from hotel managers and customers perspectives in relation to Herzberg’s two-factor theory. In Z. Xiang & I. Tussyadiah (Eds.), *Information and communication technologies in tourism 2014* (pp. 693–706). Springer. https://doi.org/10.1007/978-3-319-03973-2_50
- [34]. Odden, A., & Picus, L. O. (2008). *School finance: A policy perspective* (4th ed.). McGraw-Hill.
- [35]. Pettijohn, T. F., II, & Pettijohn, T. F. (1996). Perceived happiness of college students measured by Maslow’s hierarchy of needs. *Psychological Reports*, 79(3), 759–762. <https://doi.org/10.2466/pr0.1996.79.3.759>
- [36]. Republic Act No. 9155. (2001). *Governance of Basic Education Act of 2001*. Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph/2001/08/11/republic-act-no-9155/>
- [37]. Republic Act No. 10533. (2013). *Enhanced Basic Education Act of 2013*. Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/>
- [38]. Sanjeev, M. A., & Surya, A. V. (2016). Two factor theory of motivation and satisfaction: An empirical verification. *Annals of Data Science*, 3(2), 155–173. <https://doi.org/10.1007/s40745-016-0077-9>
- [39]. Santos, A., & Reyes, P. (2019). Overcoming barriers to education in Last Mile Schools: A Philippine case study. *International Journal of Educational Development*, 70, 102–110.