

Teacher Engagement and Authentic Learning Environment As Determinants of Learner's Academic Achievement

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Article Details:

Received: 22 June 2026

Revised: 30 June 2026

Accepted: 7 July 2026

Published: 17 July 2026

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Recommended Citation:

Reteza, V. V., Monisit, M. A. A., Monesit, R. B. C., Comendador, E. V., Dangel, A. L., Pepito, C. C., Manalastas, R. D. C. (2026). Teacher Engagement and Authentic Learning Environment as Determinants of Learner's Academic Achievement. *The International Review of Multidisciplinary Research*. 1 (9), 54-59.
<https://doi.org/10.67167/vertex.676>

Index Terms:

Teacher Engagement, Learning Environment, Learner's Achievement, LEAD Framework, Utrecht Work Engagement Scale (UWES), Elementary Education, Leyte, Philippines

Abstract. This study examined the extent of teacher engagement and the characterization of the learning environment in relation to the academic achievement of learners in selected public elementary and secondary schools in Leyte and Cebu during the School Year 2026–2027. Specifically, it aimed to develop a Learning Environment and Engagement Development (LEAD) Framework that could support the enhancement of educational outcomes. The study employed a descriptive-evaluative research design and utilized a modified Utrecht Work Engagement Scale (UWES) and an Authentic Learning Environment Survey to gather data from 67 teacher-respondents and 169 learner-respondents. Findings revealed that the teacher workforce was highly qualified, with many possessing advanced graduate units and extensive years of teaching experience. Teacher engagement was found to be very high, with an overall mean of 4.42. Among its dimensions, Dedication obtained the highest rating, while Absorption received the lowest due to the demands of administrative and clerical responsibilities. The learning environment was characterized as highly authentic, obtaining an overall mean of 3.58. The Social and Instructional dimensions were fully optimized, whereas the Physical dimension was rated only as authentic, indicating the need for further improvement in facilities and resources. Learners generally demonstrated satisfactory to outstanding academic performance, with 30.77% attaining the outstanding level. However, a considerable proportion remained within the satisfactory category. The study identified excessive ancillary tasks and insufficient digital resources as major factors limiting the optimization of learner achievement. It concluded that academic success is largely sustained by teacher commitment and resilience rather than by adequate infrastructural support. Based on these findings, the LEAD Framework was developed as a strategic intervention emphasizing administrative efficiency, improved learning spaces, and contextualized instructional practices to enhance learner achievement and educational quality.

Introduction

The global learning crisis has intensified the need to identify school-based factors that can effectively improve student achievement, particularly in the Philippines, where learners have consistently performed below international standards in assessments such as the Program for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS) (World Bank, 2022; PISA, 2018, 2022; TIMSS, 2019). In response to these challenges, this study focuses on teacher engagement and the learning environment as significant determinants of academic achievement among elementary and junior high school learners in Leyte and Cebu.

Teacher engagement is recognized as a vital element in promoting quality instruction and positive learner outcomes. It is characterized by vigor, dedication, and absorption, reflecting a teacher's enthusiasm, commitment, and active involvement

in the teaching process (Schaufeli & Bakker, 2010; Schaufeli et al., 2019). Drawing on the Job Demands-Resources Model, the study acknowledges that excessive workloads, administrative responsibilities, and limited resources can reduce teacher engagement and contribute to burnout, ultimately affecting instructional effectiveness and student performance (Bakker & Demerouti, 2017).

Similarly, the learning environment plays a critical role in shaping learners' academic experiences. Malaguzzi (1993) described the environment as the "third teacher," emphasizing its influence on learning and development. Research indicates that classroom infrastructure, including lighting, ventilation, and physical conditions, can significantly affect learning outcomes (Barrett et al., 2015). Moreover, a positive classroom climate that fosters safety, respect, and active participation encourages student engagement and achievement (Fraser, 2019).

By addressing the limited localized research in Leyte, this study investigates the combined influence of teacher engagement and the learning environment on learner achievement. The findings are expected to provide valuable evidence for educational leaders and policymakers in developing interventions that support teacher well-being, improve classroom conditions, and strengthen educational recovery efforts in the post-pandemic era (Biesta, 2020; DepEd, 2023; Klassen & Tze, 2014; Abad & Bayo, 2021; Murillo, 2022).

Methodology

Design

This study utilized a Quantitative Research Methodology, specifically designed to objectively measure and analyze the relationships between the identified variables. By employing a quantitative approach, the study transformed the perceptions of teachers and the academic records of learners into numerical data that can be statistically tested for significance. This methodology was anchored on the positivist paradigm, which seeks to uncover objective truths regarding the impact of teacher engagement and the learning environment on academic achievement. The use of standardized instruments, such as the Utrecht Work Engagement Scale (UWES), ensured that the data gathered from the various school sites in Leyte and Cebu remain consistent and comparable.

Ultimately, this methodology provided the necessary precision to determine whether the independent variables are indeed significant determinants of the learners' General Weighted Average (GWA).

Environment

The study was strategically situated in six distinct educational institutions in the Visayas, primarily focused on the province of Leyte with a comparative extension into Cebu. Each site offers a unique demographic lens through which the determinants of academic achievement are analyzed.

Matungao Elementary School (Leyte). Matungao Elementary School is situated in a rural district of Leyte where the community is predominantly supported by agriculture and small-scale local trade. The demographics of this environment reveal a learner population from low-to-middle-income families, with many parents serving as the primary source of manual labor in the area. The relevance of this school to the study lies in its representation of the "rural school microsystem." According to Bronfenbrenner's Ecological Systems Theory (1979), the immediate classroom environment is the most influential layer of development. Matungao provides a baseline for understanding how teacher "Vigor" remains a driving force for achievement even in settings where external resources are localized rather than centralized.

Sambulawan Elementary School (Leyte). Located in an inland area of Leyte, Sambulawan Elementary School represents the quintessential "barangay school." Its demographics consist of a smaller, more intimate student-teacher ratio, often necessitating multi-grade instructional strategies. The relevance to the study is centered on the "Physical Dimension" of the learning environment. Research by Barrett et al. (2015) highlights that natural classroom conditions—prevalent in inland, rural schools like Sambulawan—can account for significant variances in learning progress. This site allows the researcher to evaluate how geographic serenity influences "Absorption" among teachers and focus among learners.

Cahigan National High School (Leyte). As a secondary institution in a rural municipality, Cahigan National High School caters to adolescents transitioning from basic elementary education. The demographic focus here shifts toward older learners whose "Family Monthly Income" often dictates their ability to pursue higher education. The relevance of this school is paramount in analyzing the "Instructional Dimension" of the study. Secondary educators face different professional pressures than elementary teachers; thus, Cahigan serves as a critical point to examine how teacher "Dedication" acts as a determinant for academic success in the face of the complex Most Essential Learning Competencies (MELCs) required at the high school level.

Butason I Elementary School (Leyte). Butason I Elementary School is a rural institution characterized by its resilience in the face of environmental challenges. The demographics of its teacher-respondents often show a mix of seasoned educators (Master Teachers) and newer entrants to the profession. The relevance to the study lies in the "Social Dimension" of the learning environment. As noted by Inciong (2020), the rapport between teachers and students in small-town schools is often characterized by *malasakit*, a Filipino cultural value of deep empathy. Butason provides data on how this social cohesion compensates for gaps in physical classroom ergonomics.

Danao Elementary School (Leyte). Danao Elementary School is situated in a peripheral area of Leyte where the demographics reflect a high concentration of learners who are at risk of dropping out due to seasonal agricultural work. The relevance of this environment to the study is its role in identifying "Issues and Concerns" (SOP 5). It provides a laboratory to observe how "Teacher Engagement" serves as a protective factor for vulnerable learners. Villanueva (2023) emphasizes that in rural Leyte, the teacher's enthusiasm is often the primary motivator for students to remain in school, making this site vital for the "Engagement Development" aspect of the LEAD Framework.

Talisay City National High School (Cebu). The inclusion of Talisay City National High School provides a necessary urban contrast. Its demographics are characterized by high student density, an urban-industrialized background, and a more diverse range of "Monthly Family Income." The relevance to the study is the "Authenticity" of the learning environment in a high-pressure, urban setting. Unlike the rural sites, Talisay City NHS tests the LEAD Framework against challenges such as classroom congestion and urban stressors. This site is essential for ensuring that the study's findings are applicable to both the quiet barangays of Leyte and the bustling city centers of Cebu, fulfilling the study's goal of regional relevance.

Respondents

The respondents of this study represented the primary stakeholders within the educational ecosystem of Leyte and Cebu, serving as the essential sources of data regarding professional engagement and environmental perception. By involving a diverse group of 236 participants, comprising both classroom teachers and elementary to secondary learners, the research ensured a multi-perspective analysis of the determinants of academic success. The selection of these respondent groups was grounded in the principle that educational outcomes are the product of a symbiotic relationship between those who facilitate learning and those who receive it. This section provided a detailed interpretation of the respondent distribution across the six participating schools, highlighting the demographic balance necessary to construct a regionally relevant and evidence-based LEAD.

Research Instrument.

The methodological integrity of this study was anchored in a rigorous technical architecture designed to ensure that the transition from raw field observations to statistical inferences was both valid and reliable. By integrating internationally standardized psychological measures with localized environmental assessments, the study captured the intricate dynamics between teacher behavior and student success within the provinces of Leyte and Cebu. This section provides a formal discussion of the instruments utilized, the chronological procedures for data collection, and the specific statistical and scoring protocols employed to synthesize the findings into a viable foundation for the LEAD Framework.

The study utilized a multi-part Research Instrument designed to capture both the psychological and environmental determinants of academic achievement. The primary tool for measuring teacher engagement was the Utrecht Work Engagement Scale (UWES), a globally recognized psychometric instrument developed by Schaufeli and Bakker (2004). This scale provided a quantitative assessment of the three core dimensions identified in the Statement of the Problem: Vigor, Dedication, and Absorption. To evaluate the educational setting, a researcher-designed Learning Environment Characterization Checklist was employed.

This checklist was meticulously structured to categorize the school environment into Physical, Social, and Instructional dimensions. This instrument underwent a rigorous content validation process by a panel of experts and a pilot test to establish internal consistency, ensuring that the items were contextually relevant to the Philippine public school system. Furthermore, Documentary Analysis was used to gather objective data on learners' General Weighted Average (GWA) from official school records (SF-9), thereby eliminating self-reporting bias regarding academic performance.

Data Collection Procedure

The data gathering process was executed through a systematic and ethical protocol that prioritized administrative clearance and respondent confidentiality. Upon the formal approval of the research proposal, the researcher secured Transmittal Letters and permits from the Schools Division Superintendents of Leyte and Cebu. Following these approvals,

the researchers coordinated with the Public Schools District Supervisors (PSDS) and the respective School Heads of the six participating institutions to establish a timeline for administration.

The collection of data followed a Two-Phase Approach: initially, the researchers personally facilitated the distribution and orientation of the survey questionnaires to the 67 teacher-respondents and 169 learner-respondents, ensuring that all participants were informed of their rights under the Data Privacy Act of 2012. Subsequently, the researcher collaborated with class advisers and registrars to retrieve the academic records of the student participants. As noted by Creswell (2014), such personal involvement by the researcher in the field is essential for maintaining a high response rate and ensuring the clarity of the instructions provided to the respondents.

Data Analysis

The data analysis revealed that teacher engagement and the learning environment play a significant role in supporting learners' academic achievement in select public elementary and secondary schools in Leyte and Cebu. Results showed that teachers demonstrated a very high level of engagement ($M = 4.42$), particularly in dedication, indicating strong commitment and passion for their profession. However, slightly lower absorption scores suggest that administrative and clerical responsibilities may hinder teachers from fully focusing on instructional tasks. The learning environment was generally perceived as highly authentic ($M = 3.58$), with strong social and instructional support for learning. Nevertheless, limitations in physical facilities and digital resources remain evident. While a considerable number of learners achieved outstanding performance, many remained at the satisfactory level, indicating room for improvement. These findings suggest that learner success is largely driven by teacher commitment, highlighting the need for enhanced infrastructure and administrative support through the proposed LEAD Framework.

Results and Discussion

Results

The findings of this study indicate that teachers in selected public elementary and secondary schools in Leyte and Cebu demonstrate a very high level of engagement, reflected in an overall mean score of 4.42. This suggests strong dedication, commitment, and enthusiasm toward their teaching responsibilities. However, the dimension of absorption was slightly reduced, largely due to the burden of administrative and clerical tasks that interfere with sustained instructional focus. In terms of the learning environment, results show that it is generally highly authentic with a mean score of 3.58, particularly in social and instructional aspects where support systems are well established. Despite this, the physical environment and availability of digital resources remain only at a basic acceptable level, limiting optimal learning conditions. Regarding student achievement, only 30.77% reached the outstanding level, while many remained at satisfactory performance. Overall, the results suggest that learner success is strongly supported by teacher resilience rather than strong infrastructure, highlighting the need for targeted improvements through the LEAD Framework.

Discussion

This study highlights that while teachers in Leyte and Cebu demonstrate very high engagement, particularly in their dedication and commitment, their full instructional potential is somewhat constrained by administrative and clerical demands. This imbalance affects their level of absorption in teaching tasks, suggesting that workload distribution remains a critical concern. Likewise, the learning environment is generally strong in social and instructional aspects, indicating supportive classroom relationships and effective teaching practices. However, limitations in physical facilities and digital resources prevent the environment from being fully optimized for 21st-century learning. Although a portion of learners achieved outstanding performance, many remained at a satisfactory level, implying that academic success is sustained more by teacher resilience than by strong institutional support systems. These findings emphasize the need for systemic improvements, which the LEAD Framework addresses by strengthening administration, infrastructure, and instructional support.

Conclusion and Recommendations

In light of the findings and conclusions of this study, several strategic recommendations are postured to ensure the successful implementation and sustainability of the proposed Learning Environment and Engagement Development (LEAD) Framework. First, school administrators and district supervisors should prioritize the implementation of a localized Administrative Streamlining Policy. This initiative should focus on redistributing ancillary and clerical tasks to non-teaching personnel, thereby liberating teachers from the administrative burdens that currently fragment their professional concentration. By reclaiming instructional time, educators can move from a state of mere "High" engagement to a "Very

High" state of absorption, allowing them to remain fully engrossed in the pedagogical needs of their learners without external distractions.

Second, the Department of Education, particularly at the Regional and Division levels, should initiate a targeted Physical Optimization Program for public schools in Leyte and Cebu. The data clearly indicated that while the social and instructional pillars are fully optimized, the physical dimension remained at a standard "authentic" level. Therefore, investment must be channeled toward the modernization of classrooms, the establishment of functional digital laboratories, and the provision of flexible learning spaces. These physical upgrades are essential to provide the tangible infrastructure necessary to match the high-quality instructional delivery already being practiced by dedicated teachers, ultimately creating a more holistic and highly authentic learning environment.

Third, teachers are encouraged to sustain and further strengthen the Social and Instructional Dimensions of the learning environment through the integration of contextualized and indigenous pedagogical materials. Since these dimensions were identified as the strongest assets of the select schools, educators should continue to leverage the pakikipagkapwa (relational) culture to maintain a highly conducive climate for cognitive risk-taking. Specific focus should be directed toward those learners currently performing in the "Satisfactory" and "Fairly Satisfactory" brackets. By utilizing localized frameworks that aligned curriculum content with the learners' lived experiences in the Visayan context, teachers can bridge the achievement gap and propel more students toward "Very Satisfactory" and "Outstanding" performance.

Finally, curriculum designers and future researchers are urged to collaborate on the development of subject-specific frameworks, such as a Contextualized Mathematics and English instructional guide, that integrate the tenets of the LEAD Framework. Future studies should also consider a longitudinal approach, assessing the long-term impact of improved physical environments on learner "Absorption" and overall GWA ratings. This would provide a more comprehensive understanding of how structural changes within the school system interact with teacher engagement to foster academic excellence across diverse educational settings in the Philippines.

Acknowledgement

We would like to express our sincere gratitude to our research adviser, Dr. Rebecca DC. Manalastas, for her invaluable guidance, patience, and unwavering support throughout the completion of this study. Her expertise, insightful suggestions, and constructive feedback greatly contributed to the refinement and improvement of this research. We deeply appreciate the time she dedicated in reviewing our work and in providing meaningful directions that strengthened both the content and structure of this study. Her encouragement inspired us to remain committed and focused despite challenges encountered along the way. This research would not have been successfully accomplished without her mentorship and dedication to our academic growth.

Funding

This research received no external funding from any public, commercial, or not-for-profit funding agency, and no organization provided financial support for the conduct of the study, authorship, or publication of this article.

Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

References

- Abad, R., & Bayo, J. (2021). Emotional labor and instructional performance: A correlation study of Mathematics teachers in Eastern Visayas. *Journal of Philippine Education Research*, 15(2), 45–59.
- Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285.

- Barrett, P., Davies, F., Zhang, Y., & Barrett, L. (2015). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Building and Environment*, 89, 118–133.
- Biesta, G. (2020). *Risking education: On the need for a balanced view of educational achievement*. Routledge.
- Castillo, M. (2022). Meaning-making and dedication among Filipino public school teachers: Implications for National Achievement Test results. *Philippine Journal of Social Sciences*, 8(1), 12–28.
- Department of Education. (2023). DepEd Order No. 21, s. 2023: The MATATAG Agenda. <https://www.deped.gov.ph>
- Fraser, B. J. (2019). *Classroom environment*. Routledge.
- Hattie, J. (2023). *Visible learning: The sequel: A synthesis of over 2,100 meta-analyses relating to achievement*. Routledge.
- Inciong, T. (2020). *Pedagogy in the public sector: The cost of teacher burnout*. University of the Philippines Press.
- Klassen, R. M., & Tze, V. M. (2014). Teachers' self-efficacy, personality, and teaching effectiveness: A meta-analysis. *Educational Research Review*, 12, 59–76.
- Malaguzzi, L. (1993). For an education based on relationships. *Young Children*, 49(1), 9–12.
- Murillo, G. (2022). Environmental deterrents in Philippine public schools: A study on overcrowding and focus. *Journal of Asian Education Policy*, 10(3), 88–102.
- OECD. (2023). *PISA 2022 results (Volume I): The state of learning and equity in education*. OECD Publishing.
- Schaufeli, W. B., & Bakker, A. B. (2010). *Utrecht Work Engagement Scale (UWES): Test manual*. Utrecht University.
- World Bank. (2022). *The state of global learning poverty: 2022 update*. World Bank Group.

Appendices

No appendices are attached to this study.