
Signature-Based Accountability and Chronic Absenteeism Among Secondary School Students: A Behavioral Approach to Attendance

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ABSTRACT: This study evaluated the effectiveness of the Learners Official Signature Sheet (LOSS) in reducing chronic absenteeism among at-risk secondary school students in a Philippine rural context. Employing a quantitative action research design grounded in Pavlov's classical conditioning theory, the study involved 10 purposively selected Grade 10 students identified as Students at Risk of Dropping Out (SARDO). Absenteeism data were collected from School Form 2 records before and after the intervention, analyzed using mean percentages, standard deviations, and the Wilcoxon signed-rank test. A validated scale categorized absenteeism levels, showing a decline from moderate ($M = 46.25\%$) to low ($M = 39.33\%$) post-intervention, with a significant difference ($Z = -2.8031$, $p = 0.05$). The intervention fostered accountability through structured monitoring. Findings advocate for scalable behavioral strategies to combat absenteeism globally, offering actionable recommendations to enhance student retention in resource-constrained settings.

KEYWORDS: Chronic Absenteeism; Truancy; At-Risk Students; Behavioral Intervention; Pavlov's Classical Conditioning; Secondary Education; School Retention

I. INTRODUCTION

Chronic absenteeism, defined as missing 10% or more of school days, significantly undermines educational attainment in secondary schools worldwide, particularly in developing nations where it contributes to high dropout rates and socioeconomic challenges (Chang et al., 2014). In the Philippines, over 15% of high school students exhibit chronic absenteeism, often missing a month of instruction annually, exacerbating educational disparities in rural areas (Philippine Statistics Authority [PSA], 2023). This not only hampers individual academic progress but also disrupts classroom cohesion, reducing peer motivation and performance (Claes et al., 2009). Globally, chronic absenteeism is linked to increased delinquency, diminished workforce participation, and perpetuated poverty cycles, underscoring the urgency for effective interventions (Heeyoung et al., 2010).

The causes of chronic absenteeism in Philippine secondary schools are complex, encompassing economic, familial, personal, and institutional factors (Albert et al., 2023). Poverty drives 53% of out-of-school youth to prioritize employment over education, particularly in low-income rural households (Childhope Philippines, 2024). Familial issues, including household instability and responsibilities like supporting siblings, further aggravate absenteeism (Sajst, 2020). Personal factors such as health issues, inadequate sleep, peer influences, and disengagement from unengaging curricula or poor teacher relationships also contribute significantly (ResearchGate, 2020). Institutional shortcomings, including administrative indifference, inadequate facilities, transportation barriers, and overloaded schedules, are frequently cited by students as reasons for truancy, particularly in rural contexts (Gabbey, 2013).

Addressing chronic absenteeism requires transitioning from punitive measures to supportive, evidence-based strategies engaging schools, families, and communities (California Department of Education [CDE], n.d.). Multi-tiered systems involving early identification, personalized outreach, and consistent monitoring have proven effective in fostering accountability and motivation (Connecticut State Department of Education [CSDE], 2017). In the Philippines, initiatives emphasizing parental involvement and behavioral reinforcement align with national dropout prevention efforts (Esguerra, 2018). Community partnerships, such as youth service bureaus and diversion programs offering counseling, further enhance outcomes by addressing underlying needs (Maynard et al., 2013).

This study introduces the Learners Official Signature Sheet (LOSS), a behavioral intervention rooted in Pavlov's classical conditioning theory, where daily signatures serve as a neutral stimulus to reinforce consistent attendance (Pavlov, 1927; Positive Psychology, 2021). Implemented among 10 Grade 10 SARDO students in a rural Philippine secondary school, LOSS builds on the researcher's prior work on contextualized mathematics assessments, which highlighted engagement strategies (Beniosa, 2025).

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By assessing LOSS's efficacy, this research bridges gaps in localized behavioral interventions, offering insights for global educators tackling absenteeism (Schoeneberger, 2011).

Part I. Research Questions (Quantitative)

1. What is the level of absenteeism of students at risk of dropping out before the LOSS intervention?
2. What is the level of absenteeism of students at risk of dropping out after the LOSS intervention?
3. Is there a significant difference in the level of absenteeism of students at risk of dropping out before and after the LOSS intervention?

Part II. Research Questions (Actionable post-intervention)

4. What actions should be taken after determining the effect of LOSS on the absenteeism of students at risk of dropping out?

II. METHODS

A. Study Design

This study utilized a quantitative action research design to evaluate the LOSS intervention's effectiveness in a practical educational setting, facilitating practitioner-driven solutions and iterative improvements (Pedroso, 2021). Grounded in Pavlov's classical conditioning, the design compared pre- and post-intervention absenteeism data across the second and third grading periods of the 2019-2020 school year, assessing behavioral shifts (Pavlov, 1927). This approach aligns with multi-tiered truancy frameworks emphasizing early intervention and data-driven adjustments (Attendance Works, n.d.). Ethical protocols, including informed consent and anonymity, ensured participant protection, while the absence of a control group prioritized feasibility in resource-limited rural schools (Jones, 2020). Research question four, which seeks actionable post-intervention steps, fits within the quantitative action research framework by translating statistical findings into practical recommendations, maintaining the study's empirical focus (Kurt, 2018).

The quantitative focus enabled objective measurement of absenteeism reductions, complementing qualitative truancy literature with empirical evidence (Hsieh & Shannon, 2005). Potential external influences, such as socioeconomic factors, were mitigated through rigorous monitoring, ensuring the design's adaptability for global replication (Schoeneberger, 2011).

B. Informants

Purposive sampling selected 10 Grade 10 students identified as SARDO based on second-quarter attendance records and coordinator assessments, targeting those with absenteeism rates exceeding 15% (Brown, 2019). Participants reflected national at-risk profiles, influenced by poverty and familial obligations prevalent in rural Philippine education (PSA, 2024). Socioeconomic diversity enriched the sample, with voluntary consent ensuring ethical participation (Holloway, 2013). This approach targeted truancy's core demographics, enabling precise intervention application (Domingo, 2018).

The sample's composition mirrored global at-risk patterns, supporting contextual generalizability despite size constraints, with collaborative teacher oversight fostering a supportive environment (Ohio School Boards Association [OSBA], n.d.).

C. Data Collection

Data were sourced from School Form 2 attendance logs for pre- (second quarter) and post-intervention (third quarter) periods, employing document analysis for reliability (Pedroso et al., 2021). Permissions were secured via formal letters to the principal (Appendix A), and consent forms (Appendix B) ensured confidentiality through pseudonyms. The LOSS protocol required daily signatures across subjects, monitored by teachers and collected weekly to verify attendance and prevent evasion, aligning with tiered intervention models (CDE, n.d.). Data collection spanned six months, incorporating reflections on challenges like initial student resistance (CSDE, 2017).

This method integrated seamlessly with school routines, yielding accurate data while excluding extraneous institutional issues (SchoolHouse Connection, n.d.).

D. Data Analysis

Absenteeism was quantified using mean percentages: $(\text{absences} / \text{school days}) \times 100$, categorized on a validated scale: Very High (80.01–100%), High (60.01–80%), Moderate (40.01–60%), Low (20.01–40%), Very Low (0–20%). Standard deviations assessed data homogeneity, and the Wilcoxon signed-rank test evaluated pre-post differences at $p < 0.05$ (Hsieh & Shannon, 2005). SPSS software ensured precision, facilitating comparisons with truancy interventions (Heeyoung et al., 2010). RQ4's action-oriented analysis was addressed by synthesizing statistical outcomes with literature to propose evidence-based recommendations, maintaining the quantitative framework (Attendance Works, n.d.).

Scale	Description
80.01%-100.00%	Very High

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60.01%-80.00%	High
40.01%-60.00%	Moderate
20.01-40.00%	Low
0.00-20.00%	Very Low

III. RESULTS AND DISCUSSION

A. Part I. Absenteeism Levels and Differences

Pre-intervention, the mean absenteeism rate was 46.25% (SD = 2.04), classified as moderate, reflecting economic and familial stressors prevalent in rural Philippine secondary schools, which elevate dropout risks (Albert et al., 2023; Childhope Philippines, 2024). Post-intervention, the rate decreased to 39.33% (SD = 2.05), shifting to low, demonstrating that the signature-based mechanism conditioned consistent attendance through repeated reinforcement (Pavlov, 1927). The Wilcoxon signed-rank test confirmed a statistically significant difference ($Z = -2.8031$, $p = 0.005 < 0.05$), validating LOSS's effectiveness in fostering behavioral change (Heeyoung et al., 2010).

Table 1. Mean Percentage and Standard Deviation Result of the Level of Absenteeism Before and After the Intervention

	Category	Mean Percentage	Standard Deviation	Description
Before		46.25%	2.04	Moderate
After		39.33%	2.05	Low

Table 2. Wilcoxon Signed Rank Test Result for the Significant Difference in the Level of Absenteeism Before and After the Intervention

Category	Mean Difference	Z	p-value	Remarks
Before-After	6.92	-2.8031	0.05	Significant

These results align with multi-tiered truancy strategies emphasizing consistent monitoring to enhance accountability and engagement (Attendance Works, n.d.; OSBA, n.d.). The low standard deviations indicate uniform effectiveness across participants, suggesting LOSS's applicability to diverse at-risk students (Schoeneberger, 2011). However, external factors like poverty may moderate long-term outcomes, necessitating complementary interventions (PSA, 2024).

B. Part II. Actions post-intervention

The significant reduction in absenteeism post-LOSS implementation (6.92% mean difference) prompts a detailed response to research question four, outlining actionable strategies to sustain and amplify these gains through systemic, multi-stakeholder approaches. The shift from moderate to low absenteeism indicates that LOSS effectively conditioned attendance by fostering accountability, as students internalized the daily signature ritual as a responsibility marker (Pavlov, 1927; PositivePsychology, 2021). However, analysis reveals that sustaining this progress requires addressing root causes like poverty, family responsibilities, and school disengagement, which likely contributed to the initial 46.25% rate (Albert et al., 2023; Childhope Philippines, 2024). Scaling LOSS school-wide is a primary action, integrating it into a multi-tiered framework with universal (e.g., attendance awareness campaigns), targeted (e.g., small-group counseling), and intensive (e.g., individualized plans) interventions to prevent relapse (Attendance Works, n.d.).

Strengthening family and community partnerships is critical, as truancy often stems from home-based challenges. Post-intervention schools should initiate regular parent workshops to educate families on attendance's importance and provide resources like transportation subsidies or mental health support, addressing barriers identified in the moderate pre-intervention rates (CDE, n.d.; OSBA, n.d.). Analysis of the results suggests that engaging parents could reinforce the accountability instilled by LOSS, as the 39.33% post-intervention rate reflects student responsiveness to structured monitoring (CSDE, 2017). Collaborations with local organizations, such as youth service bureaus or non-profits, should establish truancy diversion programs offering tutoring, mentoring, and incentives like classroom rewards, which have reduced recidivism in similar behavioral interventions (Maynard et al., 2013; SchoolHouse Connection, n.d.). These partnerships could mitigate external pressures, ensuring sustained attendance improvements.

Teacher professional development is another essential action, equipping educators to identify early warning signs, implement tools like LOSS, and adopt restorative practices over punitive measures (Wisconsin Department of Public Instruction [WDPI], 2021). The study's homogeneous results ($SD \approx 2.05$) indicate LOSS's uniform efficacy, but customized training could address diverse student needs, such as those experiencing homelessness or learning difficulties, enhancing long-term impact (SchoolHouse Connection, n.d.). Establishing multidisciplinary teams to review attendance data quarterly and adjust interventions—

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incorporating peer mentoring or personalized learning plans—would build on LOSS's foundation, aligning with primary, secondary, and tertiary prevention models (National Student Engagement and Attendance Initiative [NSEAI], 2024). Dissemination through Learning Action Cell (LAC) sessions, school newspapers, and policy advocacy ensures broader adoption, while sharing digital LOSS formats empowers educators to replicate the intervention (Prosecutors' Center for Excellence [PCE], 2019).

Reflections highlight that while LOSS fostered responsibility, its success depended on teacher commitment and student compliance, suggesting that incentives like recognition programs could sustain motivation (Northeast Ohio ESC, n.d.). Integrating LOSS with national initiatives like the Pantawid Pamilyang Pilipino Program could address socioeconomic barriers, ensuring the intervention's scalability (Philippine Institute for Development Studies [PIDS], 2019). These actions transform LOSS into a holistic strategy, addressing the study's limitations (e.g., no control group) by advocating for longitudinal evaluations and community-driven support to maintain reduced absenteeism and enhance educational outcomes (County Health Rankings & Roadmaps, 2024).

IV. CONCLUSION

The Learners Official Signature Sheet (LOSS) intervention significantly reduced chronic absenteeism among at-risk secondary students, validating the efficacy of signature-based accountability grounded in Pavlov's classical conditioning (Pavlov, 1927). The shift from moderate (46.25%) to low (39.33%) absenteeism, supported by a significant Wilcoxon test result ($p = 0.005$), underscores the potential of behavioral interventions to foster accountability in resource-constrained settings (Heeyoung et al., 2010). By requiring daily signatures, LOSS conditioned students to prioritize attendance, addressing immediate truancy triggers like disengagement while laying a foundation for systemic change (PositivePsychology, 2021). However, the absence of a control group limits causal claims, necessitating future research with comparative designs to confirm the intervention's direct impact.

The study's implications extend beyond the Philippine context, offering a replicable model for international educators combating chronic absenteeism. The success of LOSS highlights the value of low-cost, scalable tools that integrate seamlessly into school routines, making it adaptable for diverse educational systems facing similar challenges (Schoeneberger, 2011). Post-intervention actions, such as family partnerships, teacher training, and community collaborations, address root causes like poverty and institutional barriers, ensuring sustained reductions in absenteeism (Attendance Works, n.d.; CSDE, 2017). These strategies align with global calls for equitable education, emphasizing multi-stakeholder engagement to support at-risk students and reduce dropout risks (UNESCO, 2015).

Future research should incorporate control groups and longitudinal tracking to validate causality and assess long-term impacts, particularly in integrating LOSS with broader socioeconomic interventions like conditional cash transfers (PIDS, 2019). Schools should adopt multi-tiered frameworks, combining LOSS with counseling, incentives, and policy advocacy to create resilient attendance cultures (CDE, n.d.). By building on this study's findings and the researcher's prior work on engagement strategies (Beniosa, 2025), educators can develop holistic approaches to truancy, fostering inclusive environments that enhance retention and academic success worldwide (County Health Rankings & Roadmaps, 2024).

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