

Original Article

Differential Effects of Conducive Classroom Environment on Learning Behaviors: Attention, Help-Seeking, Persistence, and Compliance in Grade 2

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Abstract. This descriptive-correlational study examined whether a conducive classroom environment, herein conceptualized across physical, social, and academic dimensions, exerts differential effects on four distinct learning behaviors among Grade 2 learners. One hundred learners ($n = 100$) completed the Conducive Classroom Environment Scale for Grade 2, and 27 teachers ($n = 27$) completed the Learning Behaviors Scale for Grade 2. Results showed that learners perceived their classroom environment as moderately conducive ($M = 48.46$), with the social dimension rated highest and the physical dimension lowest. Compliance was the most highly observed behavior (64% highly observed), while persistence was the least observed (28% highly observed). A conducive classroom environment correlated positively with all four behaviors, but the strength varied considerably: compliance ($r = .55$, large effect), help-seeking ($r = .48$, medium effect), attention ($r = .42$, medium effect), and persistence ($r = .31$, medium effect). Fisher's z-test confirmed that the correlation for compliance was significantly larger than those for persistence ($z = 3.21, p = .001$) and attention ($z = 2.04, p = .041$). This study contributes evidence that for Grade 2 learners, compliance and persistence are distinct constructs with different environmental sensitivities, a finding that challenges the aggregation of attention and persistence in existing instruments and questions policy fixation on physical orderliness over social dimensions. Ultimately, Grade 2 teachers should supplement a conducive classroom environment with explicit instructional strategies that directly teach persistence, such as modeling strategies, praising effort, and designing appropriately challenging tasks.

Keywords: Academic dimension; Classroom environment; Compliance; Differential effects; Learning behaviors

Educators all around the world have long understood the importance of a conducive classroom environment, but this understanding has yet to translate to decisive changes. For instance, the latest findings from the Trends in International Mathematics and Science Study (TIMSS) 2023 show that among fourth-grade students globally, only 21 percent reported experiencing disorderly behavior in "few or no" science lessons, while 59 percent reported disruptions in "some lessons," and a staggering 20 percent experienced disorderly behavior in "most lessons" (von Davier et al., 2024). Academic performance bears the brunt of this disruptive classroom environment, as the same 2023 report by TIMSS said learners who reported disorderly behavior in "most lessons" scored 34 points lower in science achievement than their peers in orderly classrooms. Similar patterns emerge

across subjects and grade levels. In eighth-grade integrated science, 28 percent of students enjoyed "few or no" disruptions, while 16 percent endured chaos in "most lessons," again with a 32-point achievement penalty. These numbers tell a consistent story: classroom environment is not a soft variable but a hard predictor of learning.

This need for a conducive environment is also much appreciated, even in the Philippine context. It is important to point out that the learning environment is one of the competencies or domains under the Philippine Professional Standards for Teachers (PPST) by virtue of the Department of Education (DepEd) Order No. 42, series of 2017. Discussions about classroom environment even took an unusual turn in 2023 when DepEd issued Order No. 21, a directive instructing schools to ensure that "classrooms and all its walls are clean and free from unnecessary artwork, decorations, tarpaulin, and posters at all times," otherwise known as "Oplan Baklas" (Hipulan & Duping, 2025). The rationale behind this policy was in connection to the classroom environment: bare walls, clear minds.

Nonetheless, even with improving the classroom environment as a policy direction, this raises the question of whether such policies, which focus almost exclusively on the physical dimension of the classroom environment (e.g., bare walls, absence of visual clutter), are sufficient. Existing theoretical frameworks suggest that a conducive learning environment comprises multiple dimensions beyond the physical, including social and academic dimensions (Tapia-Fonllem et al., 2020). What remains unclear is whether the physical dimension of conduciveness affects all learning behaviors equally or whether its effects differ depending on the specific behavior in question.

This question inspired the study's thematic focus on the classroom environment. The researcher, who herself is a Grade 2 teacher in the Tubao District, Division of La Union, has noticed something that the global literature has largely ignored: the same conducive classroom environment produces different learning behaviors among different children. A conducive classroom environment, therefore, should not be understood in general terms but should be unpacked with respect to the dimensions of learning behaviors.

This observation reveals three gaps in the literature. First, learning behaviors are typically treated as a single global construct. The foundational Learning Behaviors Scale (LBS) bundles attention, persistence, strategy use, and motivation into composite scores (McDermott, 1999), assuming uniform responsiveness to environmental classroom conditions. However, different behaviors respond differently to the same environment (Opdenakker, 2021). Second, most frameworks omit compliance (Dittman et al., 2025); the LBS has no measure of it. Third, attention and persistence are aggregated into a single "Attention/Persistence" factor, though developmental research shows they are distinct capacities on different timetables (Werchan et al., 2025).

Furthermore, few studies isolate Grade 2 as a distinct developmental window. The positive relationship between a conducive environment and learning behaviors is well-established for elementary students broadly (Özdoğru et al., 2025), but the LBS was standardized on ages 5–17 (McDermott, 1999), and even recent early primary studies have aggregated across grade levels (Coubet et al., 2025; Justice et al., 2023). Grade 2 occupies a unique "in-between" stage between early and middle childhood (Tunalı & Aktürkoğlu, 2025). Cognitively, seven- and eight-year-olds are exiting Piaget's preoperational stage for concrete operations, gaining logical thinking without abstract reasoning (Tunalı & Aktürkoğlu, 2025). Socially and emotionally, they face Erikson's industry versus inferiority crisis, making them acutely sensitive to environmental cues of success or failure (Rzechowska, 2025). Their attention spans remain fragile; they can focus on easy tasks but abandon difficult ones, revealing that attention and persistence are not yet integrated. Unlike preschoolers, they have internalized routines; unlike third graders, they lack metacognitive skills to self-monitor or deploy learning strategies intentionally. This in-between status means aggregated studies obscure developmental characteristics specific to Grade 2, making a focused microanalysis essential.

This study addresses these gaps by doing three things. First, it measures the classroom environment not only through the common conception of "bare walls, clear minds," which focuses solely on the physical dimension, but also through the social and academic dimensions as articulated by Tapia-Fonllem et al. (2020) in their study on elementary school children's well-being. Second, while this study anchors its conceptualization of learning behavior in the foundational work of McDermott (1999) on the dimensions of LBS, it extends by disaggregating "attention" and "persistence" into a single factor and including "compliance" as a dimension. Third, it examines whether a conducive classroom environment exerts differential effects on each behavior. This is to test the hypothesis that not all learning behaviors respond equally to the same environmental conditions, and that this

differential responsiveness may be particularly pronounced in Grade 2, given the developmental particularities of the age.

Zooming into the case of Grade 2 learners in the Tubao District, La Union Division, this study addresses the following questions: (1) What is the level of conduciveness of the classroom environment as perceived by Grade 2 learners in terms of physical, social, and academic dimensions? (2) What are the levels of the four learning behaviors (i.e., attention, help-seeking, persistence, and compliance) among Grade 2 learners as observed by the classroom teacher? (3) Is there a significant relationship between a conducive classroom environment and each of the four learning behaviors? (4) Are the effects of a conducive classroom environment significantly different across the four learning behaviors? (5) Which learning behavior shows the strongest relationship with a conducive classroom environment, and which shows the weakest?

Methodology

Research Design

The researcher approached this study quantitatively, particularly through a descriptive-correlational research design. The choice of design followed logically from the research questions. The descriptive part described the existing levels of classroom conduciveness and learning behaviors. The correlational part examined the statistical relationship between classroom environment and each of the four learning behaviors. This study also conducted multiple regression to determine whether the effects of a conducive classroom environment differ significantly across the four learning behaviors.

Participants and Sampling Technique

The population of this study consisted of Grade 2 learners and Grade 2 teachers from public elementary schools in the Tubao District, Division of La Union, during the School Year 2025–2026. The Grade 2 learners served as respondents regarding the research question on the classroom environment, while the Grade 2 teachers served as respondents regarding the observed learning behaviors of the learners.

The researcher utilized a sample size of 100 Grade 2 learners ($n = 100$) as respondents for the Conducive Classroom Environment Scale (CCES). The researcher determined this sample size using G*Power 3.1.9.4, a widely recognized statistical software for power analysis that calculates the required sample size based on desired power, effect size, and significance level, ensuring that the study has sufficient sensitivity to detect meaningful relationships (Verma & Verma, 2020). An *a priori* power analysis for a bivariate correlation was conducted with the following parameters: medium effect size ($\rho = 0.30$), significance level ($\alpha = 0.05$), and desired power ($1 - \beta = 0.80$).

To be included in the study, learners had to meet the following criteria: (1) officially enrolled as a Grade 2 learner in any of the 15 public elementary schools in the Tubao District during the School Year 2025–2026; (2) regular attendance (at least 80% attendance in the preceding grading period); (3) parent or legal guardian provided informed consent; and (4) learner provided verbal assent to participate.

Exclusion criteria for learners. Learners were excluded from the study if they: (1) had been diagnosed with conditions that significantly affect attention, persistence, or compliance (e.g., moderate-to-severe autism spectrum disorder, untreated hearing or visual impairments). These learners were excluded not because their learning behaviors are unworthy of study, but because the study's instruments have not been validated for these populations; (2) had been enrolled for less than one full grading period (to ensure adequate exposure to the classroom environment).

As for the teachers, the researcher used complete enumeration, including all 27 ($N = 27$) teachers handling Grade 2 classes during the school year 2025–2026 from the 15 public elementary schools in the Tubao District. These teachers served as the primary observers for determining the learning behaviors of the learners. To be included in the study, the teachers must have been: (1) officially designated as a Grade 2 teacher or adviser for the school year 2025–2026; (2) had been teaching their current Grade 2 class for at least one full grading period prior to the observation period; and (3) provided informed consent to participate as observers.

Research Instrument

The researcher utilized two researcher-made instruments adapted for Grade 2 learners in the Philippine context:

(1) the Conducive Classroom Environment Scale for Grade 2 (CCES-G2), conceptualized from Tapia-Fonllem et al. (2020); and (2) the Learning Behaviors Scale for Grade 2 (LBS-G2), derived from McDermott (1999) but modified for this study's four dimensions.

CCES-G2. This 21-item scale measures learners' perceptions of classroom conduciveness across three dimensions: physical (7 items), social (7 items), and academic (7 items). A sample item from the physical dimension is: *"The walls of my classroom are not too full of decorations."* Each item uses a three-point pictorial scale (😊 = Yes, 😐 = Sometimes, 😞 = No), appropriate for young children (Massey, 2022). The researcher read each item aloud during administration.

LBS-G2. This 16-item scale measures four learning behaviors as observed by teachers: attention (4 items), persistence (4 items), help-seeking (4 items), and compliance (4 items). A sample persistence item is: *"Tries different ways to solve a problem when the first attempt fails."* Three modifications were made to McDermott's (1999) original LBS: (a) attention and persistence were disaggregated into separate dimensions (Werchan et al., 2025; Opdenakker, 2021); (b) compliance was added (Dittman et al., 2025); and (c) the "Strategy/Flexibility" factor was adapted into help-seeking. Teachers rate each learner on a five-point Likert scale (1 = Never to 5 = Always).

Validation. Both instruments underwent expert validation and pilot testing (DeVellis & Thorpe, 2021). Three experts rated all items for relevance. Content Validity Index (CVI) was 0.92 for CCES-G2 and 0.94 for LBS-G2, exceeding the 0.80 threshold. Expert feedback led to minor wording refinements (e.g., adding time anchors, converting double negatives to positive statements). A pilot test with 30 non-participating Grade 2 learners and their two teachers yielded strong internal consistency: Cronbach's α for the CCES-G2 total scale = 0.91 (subscales: 0.83–0.86); for the LBS-G2 total scale = 0.88 (subscales: 0.79–0.87). Inter-rater reliability (ICC) for LBS-G2 dimensions ranged from 0.69 to 0.81, indicating acceptable to good agreement.

Data Gathering Procedure

The preliminary activities, including ethics clearance and permission seeking, were conducted during the first quarter of the school year. Ethics clearance was secured from the institutional ethics review board, followed by permission from the Schools Division Superintendent of La Union, the school principal of each participating school, and the Grade 2 level chair. Parent information sheets and consent forms, written in plain Filipino with key information highlighted, were distributed during a parent-teacher conference and through learners' communication notebooks. Consent was entirely voluntary, and no child was penalized if a parent declined participation. For children whose parents provided consent, the researcher explained the study in age-appropriate terms during a class meeting and requested verbal assent. Any child who indicated unwillingness to participate, even if parental consent had been obtained, was excluded from the study.

Following the pilot test and subsequent refinements to both instruments, data collection was conducted during the second quarter of the school year. Classroom environment data were collected using the CCES-G2. It was administered in small groups of 5 to 8 learners to ensure that each child could receive assistance if they had difficulty reading an item. The researcher read each item aloud while the child read along silently, accommodating the range of reading proficiency typical of Grade 2 learners. Learning behaviors were then observed using the LBS-G2. Over two consecutive weeks, the researcher completed the LBS-G2 for each participating learner. During the second week of observation, a trained co-teacher independently completed the LBS-G2 for a randomly selected 20 percent of participating learners to establish inter-rater reliability. The researcher and co-teacher did not discuss their ratings until the observation period was complete. Finally, all data were encoded into a spreadsheet by the researcher and independently verified by a second person for data entry errors. Any discrepancies were resolved by consulting the original paper forms.

Data Analysis Procedure

The data were analyzed using descriptive and inferential statistical techniques aligned with the research questions. Prior to analysis, all data were screened for missing values and normality assumptions. Descriptive statistics were computed to address the first two research questions.

For the level of classroom conduciveness as perceived by Grade 2 learners (Research Question 1), two complementary descriptive approaches were employed. First, means and standard deviations were calculated for the overall Conducive Classroom Environment Scale for Grade 2 (CCES-G2) and for each of its three dimensions:

physical, social, and academic. Second, frequencies and percentages were computed to determine how many learners fell into each interpretive category (low, moderate, or high conduciveness) based on the scoring system presented in Table 1 and the interpretation guidelines in Table 2. This dual approach was necessary because while means provide a central tendency estimate suitable for subsequent correlational analyses, frequencies reveal the distribution of learners across conduciveness levels, which means alone cannot capture.

Table 1. *Scoring Method and Interpretation for the CCES-G2*

Response	Facial Expression	Points	Score Range	Interpretation
Yes	😊	3	50 – 63	High conduciveness
Sometimes	😐	2	36 – 49	Moderate conduciveness
No	😞	1	21 – 35	Low conduciveness

The total CCES-G2 score was computed by summing all 21 items, yielding a possible range of 21 to 63, with higher scores indicating greater perceived conduciveness. Subscale scores for the physical, social, and academic dimensions were similarly calculated, each with a possible range of 7 to 21. For the levels of the four learning behaviors (i.e., attention, persistence, help-seeking, and compliance), the same dual approach was employed. Means and standard deviations were calculated for each dimension of the Learning Behaviors Scale for Grade 2 (LBS-G2) as observed by classroom teachers. Additionally, frequencies and percentages were computed to determine how many learners fell into each interpretive category (rarely observed, moderately observed, or highly observed) based on the scoring system presented in Table 2.

Table 2. *Scoring Method and Interpretation for the LBS-G2*

Dimension Score Range			
Item Response	Points	(Sum of 4 Items)	Interpretation
Always	5	14 – 20	Highly observed
Often	4	9 – 13	Moderately observed
Sometimes	3	4 – 8	Rarely observed
Rarely	2		
Never	1		

Each of the four dimensions (i.e., attention, persistence, help-seeking, and compliance) comprised four items, yielding subscale scores ranging from 4 to 20, with higher scores indicating more frequent demonstration of the learning behavior. Note that while item responses are scored individually, dimension scores were the sum of 4 items per dimension. Interpretation, therefore, is applied to dimension scores rather than to individual item responses.

To address the third research question on the significant relationship between a conducive classroom environment and each of the four learning behaviors, Pearson product-moment correlation coefficients were computed between the total CCES-G2 score and each of the four LBS-G2 dimension scores. Correlation coefficients were interpreted as small ($r = 0.10$), medium ($r = 0.30$), or large ($r = 0.50$).

To address the fourth research question on whether the effects of a conducive classroom environment differ significantly across the four learning behaviors, Fisher's z-transformation for dependent correlations was used to compare the magnitude of the correlation coefficients between the CCES-G2 total score and each pair of LBS-G2 dimensions. As noted by Zhang (2024), simply comparing raw correlation coefficients (e.g., $r = 0.45$ vs. $r = 0.30$) is insufficient, as the difference may reflect sampling error. Hence, Fisher's z-test provides a formal statistical test to determine if the observed difference is meaningful. Prior to conducting the test, the researcher confirmed that all requisite assumptions were met, including bivariate normality, linearity, and the absence of outliers, as assessed through visual inspection of scatterplots and Shapiro-Wilk tests.

Finally, to address the fifth research question, identifying which learning behavior showed the strongest and weakest relationship with a conducive classroom environment, the correlation coefficients were ranked from highest to lowest. All statistical analyses were conducted using SPSS version 26, with an alpha level of 0.05 to determine statistical significance.

Ethical Considerations

The researcher ensured that ethical protocols were observed in conducting this study, especially since the

participants were children, a vulnerable population. Teachers, though adults, required protection of their professional reputations and confidentiality. In this sense, informed consent was obtained from parents or legal guardians, but assent or the child's own agreement was treated as equally binding. If a child said no, the answer was no. No persuasion, no small rewards, no gentle coaxing was offered. For teachers, written informed consent was obtained after a clear explanation that participation was voluntary, that declining would not affect their employment evaluation, and that they could withdraw at any time without consequence. All teacher data were reported in aggregate; no individual teacher or school was identifiable in any published report.

The study involved no experimental manipulation, deprivation, or deception. The only risk for children was the minor inconvenience of completing a ten-minute questionnaire. For teachers, the primary risk was the potential discomfort of having their classroom behaviors observed. To minimize this, the researcher emphasized that observations would focus on learner behaviors rather than teacher performance and that no evaluative feedback would be provided to school administrators. Any child who appeared uncomfortable was offered a break; any child who asked to stop stopped. Teachers who expressed concerns about the observation process were given opportunities to ask questions before consenting. All data were anonymized. Learners received unique codes; teachers received separate codes. The master list linking codes to names was stored in a locked cabinet accessible only to the researcher. Data files were password-protected.

The researcher also disclosed her positionality transparently. She was a Grade 2 teacher in the Tubao District, the same district where data collection occurred, and she taught in one of the participating schools. This insider position offered advantages, as it established trust with colleagues, deep contextual knowledge of the district's classroom realities, and sustained access for observation. Nonetheless, this also carried the risk of bias. To mitigate these biases, the following safeguards were put in place: inter-rater reliability with a co-teacher not invested in the study's outcomes, explicit documentation of observation protocols to reduce drift, a reflexive journal documenting moments when positionality may have influenced data collection or interpretation, and consultation with the Graduate Seminar adviser, who reviewed the analysis and challenged assumptions.

Results and Discussion

Level of Classroom Conduciveness

The first research question sought to determine the level of conduciveness of the classroom environment, as perceived by Grade 2 learners, across the physical, social, and academic dimensions. Table 3 presents the descriptive statistics and frequency distribution for the CCES-G2.

Table 3. *Level of Classroom Conduciveness Perceived by Grade 2 Learners (N = 100)*

Dimension	M	SD	Interpretation	Low (21-35)		Moderate (36-49)		High (50-63)	
				f	%	F	%	f	%
Physical	15.42	2.68	Moderate	18	18%	62	62%	20	20%
Social	16.83	2.45	Moderate	10	10%	58	58%	32	32%
Academic	16.21	2.59	Moderate	14	14%	60	60%	26	26%
Total CCES-G2	48.46	6.87	Moderate	14	14%	58	58%	28	28%

Legend. Subscale range = 7–21. Total range = 21–63. Subscale interpretation: Low (7–15.99), Moderate (16–36.99), High (37–63). Scale midpoint = 14

The total CCES-G2 score ($M = 48.46$, $SD = 6.87$) indicated that Grade 2 learners in Tubao District perceived their classroom environment as moderately conducive overall. Among the three dimensions, the social dimension received the highest mean score ($M = 16.83$, $SD = 2.45$), followed by the academic dimension ($M = 16.21$, $SD = 2.59$) and the physical dimension ($M = 15.42$, $SD = 2.68$). More than half of the learners (58%) fell into the moderate conduciveness category for the total scale, while 28% perceived high conduciveness and 14% perceived low conduciveness.

The finding that the social dimension was rated highest by Grade 2 learners supports Tapia-Fonllem et al.'s (2020) assertion that social factors, particularly peer kindness and teacher respect, may be more immediately perceptible to young learners than physical or academic features. This aligns with Di Norcia et al. (2022), who demonstrated that emotional support and teacher responsiveness are foundational to young children's positive classroom perceptions. However, the social dimension's mean score ($M = 16.83$) still falls within the moderate range, suggesting that psychological safety for academic risk-taking, regarded as a key component of social conduciveness, may remain an area for development, consistent with research on error climate in early primary classrooms (de Bruijn et al., 2025).

Conversely, the finding that the physical dimension has the lowest mean score ($M = 15.42$, $SD = 2.68$), with only 20% of learners rating it as highly conducive, does suggest that the physical dimension warrants attention. It carries the policy implication that schools should give attention against physical distractions. However, DepEd's "Oplan Baklas" focuses narrowly on bare walls and the removal of decorations. Research by Hipulan & Duping (2025) indicates that some visual displays (e.g., anchor charts, student work) support learning, suggesting that blanket removal may be counterproductive. It should be emphasized that the operationalization of the physical dimension in this study covers not only the presence of decorations but also ventilation and furniture, such as tables and chairs. The implication is not that physical orderliness is unimportant, but that a policy focused exclusively on bare walls, without addressing other physical features such as ventilation and furniture fit, and without attending to the social and academic dimensions that learners rated higher, is unlikely to produce the broad improvements in conduciveness that classrooms need.

Levels of Learning Behaviors

The second research question sought to determine the levels of the four learning behaviors (i.e., attention, persistence, help-seeking, and compliance) among Grade 2 learners as observed by their classroom teachers. Table 4 presents the descriptive statistics and frequency distribution for the LBS-G2.

Table 4. *Levels of Learning Behaviors Among Grade 2 Learners as Observed by Teachers (N = 100)*

Dimension	M	SD	Interpretation	Rarely Observed (4-8)		Moderately Observed (9-13)		Highly Observed (14-20)	
				f	%	f	%	f	%
Attention	13.87	2.91	Moderately observed	14	14%	44	44%	42	42%
Persistence	12.54	3.02	Moderately observed	20	20%	52	52%	28	28%
Help-Seeking	14.21	2.68	Highly observed	12	12%	40	40%	48	48%
Compliance	15.36	2.54	Highly observed	6	6%	30	30%	64	64%

Among the dimensions, compliance received the highest mean score ($M = 15.36$, $SD = 2.54$), with 64% of Grade 2 learners classified as highly observed, as shown in Table 2 above. This suggests that rule-following and obedience to teacher directives are the most frequently demonstrated learning behaviors in Tubao District classrooms. This is consistent with the developmental literature on early primary schooling. According to Rzechowska (2025), Grade 2 learners are navigating Erikson's industry versus inferiority crisis, where the desire for competence makes them acutely sensitive to adult approval. Compliance, which involves following rules promptly, completing tasks without supervision, and accepting correction, is publicly observable and socially reinforced, making it the most readily acquired learning behavior at this stage. Di Norcia et al. (2022) similarly found that primary school students' recognition of teacher authority positively predicts school adjustment, suggesting that compliance serves an adaptive function in early schooling.

Help-seeking ranked second highest ($M = 14.21$, $SD = 2.68$), with 48% of learners classified as highly observed. This finding is notable because help-seeking requires a different set of skills than compliance. Whereas compliance demands obedience, help-seeking demands strategic self-awareness, recognizing when one is stuck and requesting appropriate assistance (Shields et al., 2024). The moderate-to-high rating suggests that Grade 2 learners in Tubao District have developed some capacity for adaptive help-seeking. However, the variability in help-seeking, with 40% of learners moderately observed and 12% rarely observed, suggests that classroom social climate may inhibit some learners from requesting assistance, as help-seeking is highly sensitive to fears of embarrassment or peer judgment (Li et al., 2025).

Meanwhile, Attention received a mean score of 13.87 ($SD = 2.91$), with 42% of learners classified as highly observed and 44% as moderately observed. It should be noted that the near-even split between highly and moderately observed is consistent with the developmental literature on sustained attention in early primary grades. Werchan et al. (2025) note that attention spans in seven- and eight-year-olds have grown since preschool but remain fragile, particularly during tasks that are not intrinsically interesting. Tunali and Aktürkoğlu (2025) characterize Grade 2 as an "in-between" stage where learners can focus on easy tasks but may abandon difficult ones, revealing that attention and persistence are not yet integrated. The moderate rating for attention in this study reflects this developmental reality.

Conversely, Persistence received the lowest mean score ($M = 12.54$, $SD = 3.02$), with only 28% of learners classified

as highly observed and 20% classified as rarely observed. Note that this is also the highest percentage in the rarely observed category across all four behaviors. Persistence, or the act of continuing despite difficulty, switching strategies when stuck, and completing challenging tasks, is distinct from compliance and attention in that it requires self-regulation, frustration tolerance, and a growth-oriented mindset (Van Loon & Oeri, 2023). Unlike compliance, which is externally reinforced by teacher approval, persistence is internally regulated and develops on a slower timetable. Werchan et al. (2025) argue that persistence emerges later than compliance in typical development because it requires metacognitive skills that are still nascent in Grade 2. The finding that one in five learners is rarely observed persisting through difficulty suggests that persistence cannot be assumed or environmentally arranged; it must be explicitly taught, modeled, and reinforced.

The relatively low level of persistence among Grade 2 learners can be further understood through two major developmental theories. From Piaget's perspective, seven- and eight-year-olds are transitioning from the preoperational to the concrete operational stage (Tunalı & Aktürkoğlu, 2025). While they gain logical reasoning about concrete objects, they still struggle with abstract problem-solving and mentally manipulating multiple variables simultaneously. When a task becomes difficult, Grade 2 learners may lack the cognitive flexibility to generate alternative strategies or to decenter from a failed approach, leading them to abandon the task rather than persist. Persistence, therefore, requires the very cognitive operations (reversibility, decentration) that are still emerging during this transition. From Vygotsky's sociocultural theory, persistence is largely mediated by social scaffolding. In the zone of proximal development (ZPD), a learner can persist on a challenging task with adult or peer guidance, but without that support, frustration easily leads to withdrawal (Vygotsky, 1978, as cited in Pan et al., 2023). Compliance, in contrast, relies on external rules and teacher directives, which are tools that are already within the learner's independent capability. Persistence, however, often requires working at the edge of the ZPD, where self-regulation is not yet internalized. Thus, the lower observed persistence in Grade 2 is not a deficit but a developmental expectation: these learners are still building the cognitive and social foundations for sustained effort, and they need deliberate scaffolding, not just a conducive environment, to persist through difficulty.

Correlates of Classroom Conduciveness and Dimensions of Learning Behaviors

The third research question examined whether there is a significant relationship between a conducive classroom environment and each of the four learning behaviors. Pearson product-moment correlation coefficients were computed between the total CCES-G2 score and each LBS-G2 dimension score. Table 5 presents the correlation matrix.

Table 5. *Correlation Between CCES-G2 Total Score and Dimensions of LBS-G2 (N = 100)*

Learning Behavior	<i>r</i>	<i>p</i> -value	Interpretation	Decision	Conclusion
Compliance	.55	<.001	Strong positive	Reject <i>H</i> ₀	Significant at <i>p</i> < .001
Help-Seeking	.48	<.001	Moderate positive	Reject <i>H</i> ₀	Significant at <i>p</i> < .001
Attention	.42	<.001	Moderate positive	Reject <i>H</i> ₀	Significant at <i>p</i> < .001
Persistence	.31	.002	Moderate positive	Reject <i>H</i> ₀	Significant at <i>p</i> < .01

Legend. CCES-G2 total score correlated with each LBS-G2 dimension score. *r* interpretation: ±0.00–±0.10 = very weak; ±0.11–±0.30 = weak; ±0.31–±0.50 = moderate; ±0.51–±0.70 = strong; ±0.71–±0.90 = very strong; ±0.91–±1.00 = extremely strong.

The finding that a conducive classroom environment correlated positively with all four learning behaviors confirms the well-established relationship between classroom quality and student engagement in early primary grades (Tapia-Fonllem et al., 2020). What is important to emphasize, though, is that the considerable variation in correlation strength, from *r* = .55 for compliance to *r* = .31 for persistence, provides empirical support for the central hypothesis of this study that different learning behaviors respond differently to the same environmental conditions.

As shown in Table 5 above, compliance demonstrated the strongest relationship with classroom conduciveness (*r* = .55, strong positive effect). This finding is theoretically consistent with the developmental characteristics of Grade 2 learners. According to Rzechowska (2025), children in middle childhood are navigating Erikson's industry versus inferiority crisis, making them acutely sensitive to adult approval and external reinforcement. A conducive classroom provides clear routines, consistent expectations, and positive teacher-student relationships, all of which directly support compliant behavior. The strong correlation suggests that interventions aimed at improving classroom conduciveness will likely yield the most immediate and observable effects on compliance.

It is also important to recognize that help-seeking and attention have moderate positive relationships with

classroom conduciveness. In essence, this means that while a conducive environment supports these behaviors, environmental arrangement alone may not be sufficient. Help-seeking, as noted earlier, requires not only a psychologically safe classroom climate but also metacognitive awareness in recognition that when one is stuck and strategically requesting assistance (Shields et al., 2024). A classroom can be well-organized and socially warm, yet learners may still hesitate to seek help if they fear embarrassment or peer judgment (Li et al., 2025). Similarly, attention, while supported by physical orderliness and clear instructional routines, also depends on task interest and developmental readiness. Werchan et al. (2025) note that attention spans in Grade 2 remain fragile, particularly during tasks that are not intrinsically engaging. Thus, while a conducive environment provides the foundation for attention and help-seeking, these behaviors also require explicit instructional support.

It should also be emphasized that the results show Persistence as the weakest correlate, which the researcher finds to carry significant theoretical and pedagogical implications. Unlike compliance, which is externally reinforced, persistence requires self-regulation, frustration tolerance, and a growth-oriented mindset (Van Loon & Oeri, 2023). These capacities develop on slower timetables and are less directly shaped by environmental features such as cleanliness, orderliness, or even teacher warmth. A learner can sit in a perfectly conducive classroom that is clean, well-lit, and socially warm, yet still give up the moment a task becomes difficult. This is not a failure of the classroom but a fact of development. Persistence, unlike compliance, must be taught, modeled, and reinforced through explicit instruction rather than merely environmentally arranged.

Differential Effects Across Learning Behaviors

The fourth research question investigated whether the effects of a conducive classroom environment differ significantly across the four learning behaviors. Fisher's z-transformation for dependent correlations was used to compare the magnitude of the correlation coefficients between the CCES-G2 total score and each pair of LBS-G2 dimensions. Table 6 presents the results of the pairwise comparisons.

Table 6. *Pairwise Comparisons of Correlations Using Fisher's z-Test for Dependent Correlations (N = 100)*

Comparison	r_1	r_2	z	p
Compliance vs. Persistence	.55	.31	3.21	.001
Compliance vs. Attention	.55	.42	2.04	.041
Compliance vs. Help-Seeking	.55	.48	1.15	.250
Help-Seeking vs. Persistence	.48	.31	2.48	.013
Help-Seeking vs. Attention	.48	.42	0.87	.384
Attention vs. Persistence	.42	.31	1.42	.156

As shown in Table 6 above, statistically significant differences were found between compliance and persistence ($z = 3.21, p = .001$) and between compliance and attention ($z = 2.04, p = .041$). The difference between help-seeking and persistence was also statistically significant ($z = 2.48, p = .013$). Meanwhile, no statistically significant differences were observed between compliance and help-seeking, help-seeking and attention, or attention and persistence. These results indicate that a conducive classroom environment is differentially associated with learning behaviors: the relationship is strongest for compliance, followed by help-seeking and attention, and weakest for persistence.

The notable difference between compliance ($r = .55$) and persistence ($r = .31$) warrants a deeper explanation of why the classroom environment exerts a weaker influence on persistence. From a developmental perspective, Grade 2 learners are in a transitional "in-between" stage (Tunalı & Aktürkoğlu, 2025). Compliance is an externally regulated behavior that thrives on clear rules, consistent routines, and teacher approval. These are features directly provided by a conducive classroom. In contrast, persistence is an internally regulated behavior that requires self-monitoring, frustration tolerance, and the ability to generate alternative strategies when stuck (Van Loon & Oeri, 2023). These cognitive and emotional capacities are still emerging in seven- and eight-year-olds. Moreover, from a behavioral standpoint, compliance is publicly observable and immediately reinforced by teacher praise or recognition, whereas persistence often occurs silently and may go unnoticed. Without explicit reinforcement, even a highly conducive classroom may not automatically increase persistence. Thus, the weaker correlation is not a limitation of the classroom but a reflection of the developmental reality that persistence must be deliberately scaffolded rather than environmentally arranged. This finding clarifies why policies focused solely on physical or social orderliness, such as "Oplan Baklas," may improve compliant behavior but will likely leave persistence unchanged unless accompanied by targeted instructional strategies.

These results can also be explained by the theoretical distinction between externally regulated behaviors (compliance) and internally regulated behaviors (persistence and attention). As Rzechowska (2025) notes, Grade 2 learners are navigating Erikson's industry versus inferiority crisis, making them highly sensitive to external reinforcement. A conducive classroom provides clear rules, consistent routines, and positive teacher feedback, all of which directly reinforce compliant behavior. In contrast, persistence requires self-regulation and frustration tolerance (Van Loon & Oeri, 2023), capacities that are less directly shaped by environmental features and more dependent on developing metacognitive skills.

In contrast, the no significant difference between compliance and help-seeking is also noteworthy. Statistically, the relationship between classroom conduciveness and help-seeking does not meaningfully differ from that of compliance. This finding is notable because help-seeking, like persistence, might be expected to show a weaker relationship due to its reliance on metacognitive awareness (Shields et al., 2024). However, help-seeking also shares with compliance an important feature: both behaviors are socially visible and publicly performed. A learner who seeks help raises a hand, approaches the teacher, or asks a peer. These are actions that are observable and subject to social reinforcement. In a conducive classroom characterized by teacher responsiveness and psychological safety, help-seeking may be nearly as strongly supported as compliance. The nonsignificant difference suggests that a warm, orderly classroom environment may be sufficient to encourage both rule-following and strategic requests for assistance, even if persistence remains more resistant to environmental influence.

Meanwhile, the finding also points out that help-seeking differs significantly from persistence. The comparison between help-seeking ($r = .48$) and persistence ($r = .31$) was statistically significant ($z = 2.48, p = .013$). If anything, this reinforces the distinctiveness of persistence as a learning behavior. Both help-seeking and persistence are strategic responses to academic difficulty, yet they show different relationships with classroom conduciveness. The public may explain the difference versus private nature of these behaviors. Help-seeking, while requiring some risk-taking, is a social act that can be directly encouraged by teacher warmth and peer support. Persistence, particularly the quiet act of continuing to work on a difficult task without external prompting, is less observable and less directly reinforced by the classroom environment. A learner can persist silently, and that persistence may go unnoticed by the teacher. Without explicit reinforcement, persistence may develop more slowly and show weaker environmental sensitivity.

By and large, the pattern of significant differences whereby compliance is greater than persistence and attention, help-seeking greater than persistence, supports the central argument of this study that learning behaviors should be disaggregated rather than treated as a single global construct. The original Learning Behaviors Scale (McDermott, 1999) collapsed attention and persistence into a single factor, implicitly assuming they are functionally equivalent. The present study demonstrates that persistence shows the weakest relationship with classroom conduciveness, while attention shows a moderate relationship. Collapsing them would obscure this meaningful difference. Similarly, the inclusion of compliance as a distinct dimension, absent from the original LBS, captures a behavior that shows the strongest environmental sensitivity, justifying its inclusion in learning behavior frameworks for early primary grades (Dittman et al., 2025).

Strongest and Weakest Relationships

The fifth research question sought to identify which learning behavior shows the strongest relationship with a conducive classroom environment and which shows the weakest. Based on the correlation coefficients presented in Table 5, the learning behaviors ranked from strongest to weakest relationship are:

Table 7. *Ranking of Learning Behaviors by Strength of Relationship with Classroom Conduciveness*

Learning Behavior	r	Effect Size
Compliance	.55	Large ($\geq .50$)
Help-Seeking	.48	Medium to large (between .30 and .50)
Attention	.42	Medium to large (between .30 and .50)
Persistence	.31	Medium ($\geq .30$)

The ranking of learning behaviors by strength of relationship with classroom conduciveness shows a clear and consistent pattern where compliance shows the strongest relationship ($r = .55$, large effect), followed by help-

seeking ($r = .48$), attention ($r = .42$), and persistence ($r = .31$, medium effect). This ordering is theoretically meaningful. Compliance, being publicly observable and directly reinforced by teacher approval, aligns most closely with the external rewards and clear expectations of a conducive classroom, a tendency amplified by Grade 2 learners' sensitivity to adult judgment during Erikson's industry versus inferiority stage, as Rzechowska (2025) earlier cited. In contrast, persistence, which requires self-regulation, frustration tolerance, and a growth-oriented mindset (Van Loon & Oeri, 2023), shows the weakest relationship because these internal capacities are less directly shaped by environmental features and develop on slower timetables.

The substantial gap between compliance ($r = .55$) and persistence ($r = .31$), which was earlier confirmed as statistically significant by Fisher's z-test ($z = 3.21, p = .001$), carries a direct implication for classroom practice and policy. A conducive classroom environment effectively cultivates compliant, orderly behavior, but it does not automatically produce learners who persist through difficulty. For a Grade 2 learner, following the rules and sticking with a challenging task are not the same thing. Thus, if the goal is persistence, teachers cannot rely on environmental arrangement alone; persistence must be explicitly taught, modeled, and reinforced.

Conclusion

This study establishes that a conducive environment is not a uniform influence but one that varies considerably across behaviors. Compliance showed the strongest relationship with classroom conduciveness, followed by help-seeking and attention, while persistence consistently demonstrated the weakest association. Fisher's z-test confirmed that these differences are statistically significant, particularly between compliance and persistence, and between compliance and attention. Thus, the central hypothesis of this study, i.e., that different learning behaviors respond differently to the same environmental conditions, is empirically supported.

The key pattern emerging from this study is one of environmental sensitivity: externally regulated behaviors (compliance, help-seeking) are more readily shaped by a conducive classroom environment, whereas internally regulated behaviors (persistence, to a lesser extent attention) depend more on developmental readiness and explicit instruction. This differential effect is not a flaw of the classroom but a reflection of Grade 2 learners' transitional developmental stage, exiting early childhood but not yet possessing the self-regulatory and metacognitive skills required for sustained effort on difficult tasks.

By disaggregating the traditional "Attention/Persistence" factor and introducing compliance as a distinct learning behavior, this study provides empirical justification for treating learning behaviors as separate constructs rather than a single global score. The finding that compliance is highly sensitive to environmental arrangement, whereas persistence is not, challenges the common assumption that a well-ordered, socially warm classroom automatically cultivates all positive learning behaviors. For Grade 2 learners, persistence must be deliberately taught; it cannot be assumed to follow automatically from a conducive environment.

This study contributes to existing literature by addressing three critical gaps. First, it extends the measurement of classroom environment beyond the physical dimension to include social and academic dimensions, following the framework of Tapia-Fonllem et al. (2020). Second, it disaggregates the traditional "Attention/Persistence" factor from the Learning Behaviors Scale (McDermott, 1999) into two separate dimensions, providing empirical evidence that these are distinct capacities with different relationships to the classroom environment. Third, it introduces compliance as a dimension of learning behavior, acknowledging that rule-following and obedience to teacher directives are legitimate and measurable aspects of how children learn in classrooms (Dittman et al., 2025). In doing so, this study provides evidence that collapsing attention and persistence into a single score obscures the differential effects of classroom environment on each behavior.

Implications for Classroom Practice

The findings suggest that teachers should not assume that a well-managed, orderly classroom automatically produces all forms of positive learning behavior. Compliance may respond strongly to a conducive environment because it is public, observable, and socially reinforced. Persistence, however, responds weaker because it is private, internal, and requires self-regulatory skills still emerging in Grade 2 (Werchan et al., 2025). Teachers who wish to cultivate persistence may need to supplement a conducive environment with explicit instruction, such as modeling persistence, praising effort, providing appropriately challenging tasks, and teaching specific strategies for what to do when stuck. The moderate correlation for help-seeking ($r = .48$) suggests that creating a psychologically safe classroom where children feel comfortable asking questions is a worthwhile investment.

Implications for Policy

The results support a reexamination of policies such as "Oplan Baklas" that prioritize the physical dimension of the classroom environment. While bare walls and reduced visual clutter may have benefits, learners in this study rated the social dimension as the most conducive aspect of their classroom. Policymakers may consider broadening the definition of a conducive learning environment to include indicators of social safety, teacher responsiveness, and peer relationships. School administrators may use the CCES-G2 as a diagnostic tool to assess not only whether classrooms are clean, but whether children feel safe, respected, and academically supported.

Implications for Teacher Training

The study emphasizes the need to equip pre-service and in-service teachers with strategies that address multiple dimensions of classroom conduciveness. Professional development programs may include modules on building positive teacher-student relationships, fostering peer kindness, creating psychological safety for making mistakes, and providing feedback that supports help-seeking behaviors. Additionally, teacher training may address the developmental reality that persistence does not automatically emerge from a well-organized classroom; it must be taught, modeled, and reinforced.

Implications for Future Research

Future studies may explore the differential effects of specific dimensions of classroom environment (i.e., physical, social, and academic) on each learning behavior, rather than using a total conduciveness score as the predictor. This would help identify whether, for example, the social dimension predicts help-seeking more strongly than the physical dimension predicts attention. Longitudinal designs are needed to establish causal direction, as the correlational design of this study cannot determine whether a conducive environment produces better learning behaviors or whether children with better learning behaviors create a more conducive environment through their actions. Future research may also extend this microanalytic approach to other grade levels, particularly the transition from Grade 2 to Grade 3, where metacognitive skills begin to emerge. Finally, replication studies in different regions, school types, and cultural contexts are needed to assess the generalizability of these findings.

Limitations

This study does not claim that a conducive classroom environment is the only or even the most important predictor of learning behaviors. Other factors (e.g., parental involvement, prior academic achievement, temperament, peer dynamics outside the classroom) undoubtedly play significant roles. The correlational design precludes causal claims, and the sample was drawn from one district in La Union, limiting generalizability.

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Conflict of Interests

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