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AN ANALYSIS OF CLASSROOM ECOLOGY PRACTICES OF MAED STUDENTS: A STUDY ACROSS PROGRAMS, SPECIALIZATIONS, AND SCHOOL CATEGORIES

[*]Walter Peter T. Arcenas
[**]Aljon G. Bohol
[***]Mark A. Buenafe
[****]Gerald Paul G. Caunga
[*****]Aljia O. Flores
[******]Jhon Leo S. Medel
[*******]Jerom M. Jamili
[********]Kristina M. Ortiz
[*********]John Mark C. Reyes
[**********]Mel Rose J. Silaya
[***********]Juvy Ann V. Trono

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Corresponding Author: Walter Peter T. Arcenas; doi: 10.46360/globus.edu.220261003

Abstract

This study analyzes the classroom ecology practices of graduate students enrolled in Master of Arts in Education programs across different specializations during the Summer of 2025 in Northern Negros. Using a descriptive-comparative research design, it examines practices related to routines and procedures, expectations and rules, proximity and movement, instruction and feedback, addressing misbehavior, engagement and pacing, and overall classroom ecology. Results show a generally high level of classroom ecology practices across all domains and groups, with Technology and Livelihood Education (MAT TLE) students rating routines and procedures significantly higher than other programs. No significant differences were found between private and public schools or between rural and urban settings. The findings highlight the influence of program-specific demands on classroom management styles and support the effective preparation of graduate students to create positive, structured, and engaging learning environments. The study recommends strengthening program-specific training and further research on long-term and integrative effects of classroom ecology.

Keywords: Classroom Ecology, Graduate Students, Classroom Management, Routines and Procedures, Engagement, Instructional Feedback, Misbehavior, Education Programs, Comparative Study, Northern Negros.

Introduction

Classroom Ecology, according to Pollock (2021) views the classroom as a dynamic ecosystem where relationships, behaviors, and learning outcomes are influenced by various interconnected factors. The concept of "classroom ecology" has emerged as a critical framework for understanding the complex interplay of factors that influence student learning and development. Drawing from ecological systems theory, primarily rooted in the work of Urie Bronfenbrenner (2019), this paradigm views the classroom not as a static setting but as a dynamic, interconnected ecosystem. This ecosystem is composed of a multitude of interacting components, including the physical environment, social and emotional dynamics, peer relationships, and teacher practices (Chen et al., 2020; Puteh et al., 2015). A positive classroom ecology is characterized by supportive interactions, a safe and inclusive atmosphere, and an environment that fosters student engagement, motivation, and overall academic success (Qiu, 2022).

Recent research has increasingly focused on the multidimensional nature of classroom ecology, exploring how its various elements contribute to student outcomes. For instance, studies have highlighted the significance of the physical classroom environment, including layout, lighting, and acoustics, in influencing student satisfaction and performance (Bhatti & Rizvi, 2018; Zamar et al., 2020). Beyond the physical, the social and relational aspects of the classroom have been a central point of inquiry. Demonstrated the influence of teacher-child relationships and classroom social management on

Carlos Hilado Memorial State University, Talisay City, Negros Occidental, Philippines.

students' perceived peer social experiences. Similarly, other research has shown that a positive classroom climate, built on mutual respect and clear expectations, leads to higher student participation and collaboration, Chen et al. (2020). This body of work underscores the idea that a student's experience is shaped not just by the content they are taught, but by the intricate web of relationships and environmental factors that surround them (Qiu, 2022).

Despite the growing body of literature on classroom ecology, several significant research gaps remain, particularly concerning its nuanced application and long-term effects. A primary evidence gap lies in the integration of diverse ecological dimensions. Many studies tend to focus on one or two specific elements of classroom ecology - for example, the physical layout or teacher-student relationships - without a comprehensive, integrative theoretical model that captures the full complexity of the classroom ecosystem (Ansari et al., 2019). While some theoretical models have been proposed (e.g., Bierman, 2019), there is a need for more empirical research that examines how these different dimensions - the physical, social, emotional, and academic - interact and influence each other over time to impact student development. For example, how does a specific classroom seating arrangement (a physical factor) influence the development of peer networks and social norms (social factors), and how do these combined effects subsequently impact a student's academic performance? This lack of an integrated, holistic perspective leaves many questions unanswered about the systemic nature of the classroom environment.

Another significant gap is the lack of longitudinal studies that track the long-term effects of a particular classroom ecology on students' development. While many studies demonstrate a correlation between a positive classroom environment and immediate academic and social outcomes, there is limited research that follows students beyond a single academic year to understand how their experiences in one classroom may shape their attitudes toward learning, social skills, and academic trajectories in subsequent years. Understanding these long-term effects is crucial for developing sustainable educational interventions and teacher training programs that create lasting positive impacts.

Finally, while research has examined classroom ecology in various settings, there is a need for more research that specifically addresses the unique challenges and opportunities of digital and hybrid learning environments. The traditional physical classroom has been replaced or supplemented by virtual spaces, yet the ecological factors at play in these new settings are not yet fully understood. For example, how do factors like platform design, virtual communication norms, and teacher digital literacy contribute to the "ecology" of an online classroom? Existing research on this topic is emerging but still limited, and more comprehensive studies are needed to bridge the gap between our understanding of traditional classroom ecology and the new realities of modern education.

It is on this premise that the researchers conduct this investigation for teachers who are enrolled in their master's at one of the state universities in Northern Negros who took up current trends and strategies in teaching for the summer of 2025.

Statement of the Problem

This study aimed to determine the extent of classroom ecology practices of the graduate school students in one of the schools in Northern Negros for the Summer of 2025.

Specifically, it addressed the following questions:

1. What is the extent of classroom ecology practices of the graduate school students in the areas of *a. Routines and Procedures, b. Expectations and Rules, c. Proximity and Movement, d. Instruction and Feedback, e. Addressing Misbehavior, f. Engagement and Pacing and g. Overall Classroom Ecology,* when grouped according to program enrolled, school category, and geographic location?
2. Is there a significant difference in the extent of classroom ecology practices of graduate school students when grouped and compared according to the aforementioned variables?

Hypotheses

Based on the foregoing statement of the problem, the hypothesis was advanced:

1. There is no significant difference in the extent of classroom ecology practices of graduate school students when grouped and compared according to the aforementioned variables.

Methods/Theory/Calculation

This study aimed to examine the classroom ecology practices of Master of Arts in Education (MAED) students enrolled in the summer class of 2025 at one of the State Universities in Northern Negros. It specifically focused on their application of strategies related to routines and procedures, expectations and rules, proximity and movement, instruction and feedback, addressing misbehavior, and engagement and pacing and overall classroom ecology. The study further investigated whether these practices differed significantly when teachers were grouped by their program of enrollment, school category, and geographical location.

A descriptive-comparative research design was employed to address these objectives. This design was chosen because it allowed for the systematic

description and documentation of existing conditions in this case, the classroom ecology practices of MAED teachers, and facilitated the comparison of these practices across different groups (Calmorin, 2019). The descriptive aspect provided a comprehensive picture of the current state of affairs, while the comparative component enabled the analysis and interpretation of the similarities and differences among the groups (Best & Kahn, 2019). This approach was well-suited to the study's goal of understanding how contextual factors may influence a teacher's classroom management style without manipulating any variables.

Statistical Treatment

The data were analyzed using descriptive and non-parametric statistical methods to provide an in-depth understanding of classroom ecology practices among graduate students. Descriptive statistics, such as the mean and standard deviation, were used to summarize the levels of classroom ecology across seven areas: routines and procedures, expectations and rules, proximity and movement, instruction and feedback, addressing misbehavior, engagement and pacing, and overall classroom ecology. These statistics offered insight into the central tendency and dispersion of the data.

Because the data did not satisfy the assumption of normality, non-parametric statistical tests were employed to ensure accurate analysis. The Mann-Whitney U test was utilized to compare differences between two independent groups, while the Kruskal-Wallis H test was conducted to compare three or more groups. These non-parametric methods allowed for valid and reliable evaluation of variations in classroom ecology practices based on grouping factors such as program enrollment, school category, and geographic location. These statistical methods enabled the researchers to accurately evaluate and interpret the differences among groups.

Results and Findings

Table 1: The Extent of Classroom Ecology Practices of the Graduate School Students When Grouped According to Variables

	Routines and Procedures			Expectations and Rules			Proximity and Movement			Instruction and Feedback			Addressing Misbehavior			Engagement And Pacing			Overall Classroom Ecology		
Variable	M	IN	SD	M	IN	SD	M	IN	SD	M	IN	SD	M	IN	SD	M	IN	SD	M	IN	SD
A. Program Enrolled																					
MAED English	3.56	H	0.47	3.44	H	0.77	3.33	H	0.50	3.40	H	0.38	3.40	H	0.68	3.47	H	0.36	3.60	H	0.53
MAED Math	3.66	H	0.40	3.69	H	0.41	3.52	H	0.51	3.40	H	0.52	3.67	H	0.45	3.57	H	0.40	3.54	H	0.36
MAED PE	3.43	H	0.45	3.58	H	0.52	3.60	H	0.38	3.34	H	0.35	3.40	H	0.61	3.47	H	0.41	3.74	H	0.32
MAT TLE	4.00	H	0.00	3.36	H	0.33	3.73	H	0.15	3.36	H	0.17	3.87	H	0.18	3.13	MH	0.18	3.28	H	0.11
B. School Category																					
Private	3.56	H	0.36	3.48	H	0.66	3.67	H	0.40	3.43	H	0.38	3.28	H	0.62	3.56	H	0.37	3.61	H	0.36
Public	3.55	H	0.48	3.60	H	0.46	3.50	H	0.44	3.33	H	0.38	3.60	H	0.53	3.42	H	0.40	3.64	H	0.39
C. Geographical Location																					
Rural	3.51	H	0.31	3.72	H	0.34	3.51	H	0.49	3.36	H	0.43	3.58	H	0.62	3.58	H	0.34	3.56	H	0.47
Urban	3.56	H	0.48	3.51	H	0.58	3.56	H	0.41	3.36	H	0.37	3.47	H	0.57	3.43	H	0.41	3.66	H	0.35

Note: *3.25-4.00 High (H), 2.50-3.24 Moderate-High (MH), 1.75-2.49 Moderate-Low (ML), 1.00-1.74 Low (L)*

Table 1 presents the extent of Classroom Ecology Practices among Graduate School students, grouped according to variables. In the extent of routines and procedures in classroom ecology practices among graduate students, the results consistently indicated high ratings across all groups. Specifically, students enrolled in the Master of Arts in Teaching major in Technology and Livelihood Education (MAT TLE) program reported the highest level of routines and procedures (M = 4.00, SD = 0.00), which suggests highly structured classroom environments typical of technical and vocational education programs. Students in the MAED Math (M = 3.66, SD = 0.40) and MAED English (M = 3.56 SD = 0.47) programs also rated the extent of routines and procedures as high, whereas those in MAED Physical Education (PE) reported a slightly lower but still high level (M = 3.43, SD = 0.45). When considering school category, both private and public school students similarly perceived high adherence to classroom routines, with mean scores of (3.56 and 3.55), respectively. Regarding geographical location, urban students (M = 3.56, SD = 0.48) rated routines and procedures slightly higher than rural students (M = 3.51, SD = 0.31). These findings imply that structured routines and procedures are foundational for maintaining discipline and optimizing learning experiences in graduate classrooms regardless of program, school type, or location. The notably higher rating among MAT TLE students may reflect the specialized and rigorous nature of technical education requiring stringent procedures to ensure consistency and safety. This corresponds with extant research noting that clear and consistent routines minimize classroom disruptions and foster student engagement by creating predictable learning environments (Arlinghaus & Johnston, 2018; Collier-Meek, McGuire, & Wehby, 2019; Edutopia, 2024; Makaremi, 2024).

Similarly, the extent of expectations and rules was rated highly by students across all variables, but with some variation. Among academic programs, MAED Math students rated these classroom aspects highest (M = 3.69, SD = 0.41), followed by MAED PE (M = 3.58, SD = 0.52) and MAED English (M = 3.44, SD = 0.77), while MAT TLE students exhibited a somewhat lower rating (M = 3.36, SD = 0.33). Differences were also observed by school category, with public school students assigning higher importance to classroom expectations and rules (M = 3.60, SD = 0.46) compared to private school students (M = 3.48, SD = 0.66). Geographically, rural students gave higher ratings (M = 3.72, SD = 0.34) than their urban counterparts (M = 3.51, SD = 0.58), suggesting stronger emphasis or enforcement of behavioral norms in rural settings. These findings indicate that clearly articulated classroom expectations and rules form essential components of a conducive learning environment, promoting respectful conduct and positive interactions. The higher rural rating may derive from community or cultural values that prioritize orderliness and discipline. Such outcomes align with existing literature demonstrating that well-defined and consistently enforced classroom rules are pivotal in fostering a positive atmosphere and equitable treatment among students, and that involving students in rule-setting enhances their ownership and adherence (Freiberg, 1999; DiClementi & Handelsman, 2005; Marzano & Marzano, 2003; Wubbels, Brekelmans, den Brok, & van Tartwijk, 2016; Monteiro et al., 2021).

The extent of Proximity and Movement was rated highly by students across all variables, reflecting consistently strong classroom practices in this area. Among academic programs, Technology and Livelihood Education (MAT TLE) students reported the highest rating (M = 3.73, SD = 0.15), followed by Physical Education (MAED PE) (M = 3.60, SD = 0.38), Mathematics (MAED Math) (M = 3.52, SD = 0.51), and English (MAED English) (M = 3.33, SD = 0.50). This suggests that proximity and movement strategies are most emphasized in MAT TLE and MAED PE programs. In terms of school category, private school teachers reported a higher mean score (M = 3.67, SD = 0.40) compared to public school teachers (M = 3.50, SD = 0.44), indicating a more pronounced use of proximity and movement techniques in private schools. Geographically, urban teachers also rated Proximity and Movement slightly higher (M = 3.56, SD = 0.41) than rural teachers (M = 3.51, SD = 0.49), possibly due to differences in classroom space, resources, or teaching strategies between urban and rural settings. The high ratings for Proximity and Movement among graduate school students across all variables imply that teachers are effectively using their physical presence and movement to support classroom management and student engagement. According to Derakhshan (2021), teacher proximity serves as an effective non-verbal behavior management strategy that reduces off-task and disruptive behavior by fostering a sense of accountability and positive teacher-student relationships. Additional research highlights that teacher proximity is a key element of creating a supportive and motivating classroom environment that enhances student engagement and minimizes behavioral issues (Talvio et al., 2014; Hepburn & Beamish, 2019). These practices are most emphasized in Technology and Livelihood Education and Physical Education programs, and slightly more pronounced in private and urban schools, likely due to resources and classroom arrangements that encourage more interaction and movement.

Instruction and Feedback was also consistently rated highly across all variables, indicating effective practices in delivering instruction and providing

feedback to students. When grouped by program enrolled, MAED English and MAED Math teachers both reported the highest mean scores (M = 3.40, SD = 0.52), followed by MAT TLE (M = 3.36, SD = 0.17) and MAED PE (M = 3.34, SD = 0.35). This demonstrates that instructional support and feedback are priorities in English and Math programs, while still strong in other subjects. Regarding school category, private school teachers gave a higher mean rating (M = 3.43, SD = 0.38) than public school teachers (M = 3.33, SD = 0.38), suggesting private schools may place slightly greater emphasis on instructional quality and feedback mechanisms. Geographically, ratings for Instruction and Feedback were identical between rural and urban teachers (M = 3.36), signifying consistent standards regardless of location. Research by Gan, An, and Liu (2021) underscores the significant role teacher feedback plays in motivating students, enhancing course satisfaction, and improving academic performance. Their study emphasizes that effective feedback practices encourage active student engagement with feedback, which is critical for learning improvement. Consequently, schools should prioritize training teachers to optimize feedback strategies that foster student motivation and academic success.

Addressing Misbehavior was rated highly across all variables, indicating effective classroom management practices among graduate school students. Among academic programs, Technology and Livelihood Education (MAT TLE) teachers reported the highest mean score (M = 3.87, SD = 0.18), followed by MAED Math (M = 3.67, SD = 0.45), and both MAED English and MAED PE (M = 3.40, SD = 0.61). This implies that MAT TLE and Math teachers may employ more proactive or structured disciplinary practices in their classrooms. When grouped by school category, public school teachers rated this domain higher (M = 3.60, SD = 0.53) than private school teachers (M = 3.28, SD = 0.62), possibly reflecting differences in policy or teacher-student interactions. Geographically, rural teachers gave higher ratings (M = 3.58, SD = 0.62) compared to urban teachers (M = 3.47, SD = 0.57), suggesting that there may be more emphasis on behavior management in rural settings. These ratings highlight that addressing misbehavior is consistently prioritized, but approached with some variance depending on context. According to Basal (2025), effective classroom management lays the foundation for student learning by creating a structured, engaging, and well-organized learning environment. Such management enhances teacher performance and maximizes instructional time, thereby fostering positive student behavior and improving academic outcomes.

Engagement and Pacing also received strong ratings across variables, reflecting positive student experiences in lesson pacing and engagement strategies. Among academic programs, MAED Math teachers rated this highest (M = 3.57, SD = 0.40), followed by MAED English and MAED PE (M = 3.47, SD 0.41), while MAT TLE reported the lowest mean score (M = 3.13, SD = 0.18), indicating possible challenges or differences in engaging students in technology and livelihood classes. Private schools had higher ratings for this domain (M = 3.56, SD = 0.37) than public schools (M = 3.42, SD = 0.40), and rural teachers rated engagement and pacing slightly higher (M = 3.58, SD = 0.34) than urban teachers (M = 3.43, SD = 0.41). These results suggest that, overall, teachers are able to maintain student attention and manage lesson flow effectively, though some groups may achieve this more consistently than others. Studies have established a significant positive relationship between student engagement, including behavioral, emotional, and cognitive dimensions, and academic achievement, highlighting the critical role of engagement and pacing in educational success (Dotterer & Lowe, 2011).

Students in the MAED PE program had the highest average rating for classroom ecology (M = 3.74, SD = 0.32), indicating they successfully foster well-organized and stimulating learning environments. Next were the students in the MAED English program (M = 3.60, SD = 0.53), and the MAED Math program (M = 3.54, SD = 0.36). On the other hand, the students in the MAT TLE program achieved a respectable average rating (M= 3.28, SD = 0.11). These findings together indicate that graduate students from different disciplines demonstrate significant classroom ecology practices, especially in how they handle student misbehavior, encourage participation, and maintain effective classroom management.

In terms of school type, students from both private (M = 3.61, SD = 0.36) and public (M = 3.64, SD = 0.39) schools indicated high levels of classroom ecology practices, demonstrating a collective dedication to promoting organized and supportive learning environments. This result suggests that both educational sectors successfully develop classrooms that foster active learning and encourage suitable behavior. Additionally, students in urban environments (M = 3.66, SD = 0.35) evaluated classroom ecological practices somewhat higher than those in rural areas (M = 3.56, SD = 0.47), indicating that although urban schools might benefit from superior resources and professional development, rural schools still exhibit significant ecological practices, probably stemming from solid teacher-student connections and community backing.

These results support the study of Monteiro et al. (2021) where they pinpointed that through

behavioral and emotional engagement, the creation of supportive classroom settings is such a very great teacher that the students will be strongly motivated and will achieve academically better. The similar case is true for Makaremi (2024) who reported that students' learning outcomes and behaviors were very consistent in structured and classroom with class being very effectively managed. Moreover, Arlinghaus and Johnston (2018) stressed that by establishing the regular and specific behavior expectations in the classroom, the problem of misbehavior is downplayed and academic engagement is improved. Moreover, the research findings from an Edutopia study in 2024 have also shown that the creation of a student-centered and supportive environment where the teacher practices are common and consistent can promote the co-existence of collaboration, respect, and active participation. This was also the case for the research of Collier-Meek, McGuire, and Wehby (2019) who despite being focused on ecological support methods such as classroom pacing and engagement, still observed a more self-regulated and attentive group of learners in their classes. To sum it all up, these results indicate that the classroom culture is an essential component of good teaching, the pillars of which are management, engagement, and deep learning.

Table 2: U-test Results for the Significant Difference in the Extent of Classroom Ecology Practices of Graduate School Students When Grouped According to Geographical Location

	U	p
Routines And Procedures	280.000	0.318
Expectations And Rules	401.500	0.266
Proximity And Movement	322.000	0.791
Instruction And Feedback	321.500	0.788
Addressing Misbehavior	377.500	0.487
Engagement And Pacing	405.500	0.233
Overall Classroom Ecology	300.500	0.514

Note: Mann-Whitney U test.

Table 2 summarizes the data of the Mann-Whitney U-test results, that examined the significant differences in the extent of classroom ecology practices when grouped according to geographical location. The categories analyzed include Routines and Procedures, Expectations and Rules, Proximity and Movement, Instruction and Feedback, Addressing Misbehavior, Engagement and Pacing, and Overall Classroom Ecology. The analysis further determines whether significant differences exist between rural and urban groups.

As shown, the computed p-values for all categories, Routines and Procedures ($p = 0.318$), Expectations and Rules ($p = 0.266$), Proximity and Movement ($p = 0.791$), Instruction and Feedback ($p = 0.788$), Addressing Misbehavior ($p = 0.487$), Engagement and Pacing ($p = 0.233$), and Overall Classroom Ecology ($p = 0.514$)—are all above the 0.05 significance level. Following the decision rule, these p-values indicate failure to reject the null hypothesis; thus, there is no significant difference in the extent of classroom ecology practices between rural and urban graduate school students.

These results align with the findings of Wubbels et al. (2012), who emphasized that effective classroom management is mostly influenced by teacher beliefs, training, and professional development rather than by geographic or institutional factors. Similarly, Marzano (2003) discussed that the consistent application of well-defined routines and feedback strategies can foster effective classroom ecology across geographical locations.

Furthermore, the lack of significant difference may be attributed to the standardized competencies developed through graduate education. Both rural and urban teachers undergo similar coursework, training, and exposure to classroom management theories and practices (DepEd, 2017). This supports Bernardo's (2018) assertion that teacher professionalism, rather than contextual settings, predominantly dictates the level of classroom ecology implementation.

In essence, the results affirm that graduate school students - regardless of being from rural or urban areas - demonstrate strong command over classroom ecology practices. They effectively maintain structure, engagement, and responsiveness within their classroom capacities.

Table 3: U-test Results for the Significant Difference in the Extent of Classroom Ecology Practices of Graduate School Students when Grouped According to School Category

	U	p
Routines And Procedures	370.000	0.757

Expectations And Rules	384.500	0.941
Proximity And Movement	480.000	0.139
Instruction And Feedback	452.000	0.316
Addressing Misbehavior	270.500	0.052
Engagement And Pacing	456.500	0.274
Overall Classroom Ecology	353.500	0.555

Note: Mann-Whitney U test.

Table 3 presents the Mann-Whitney U test results comparing private and public school graduate students across various domains of classroom ecology practices. The p-values for all areas - Routines and Procedures (p = 0.757), Expectations and Rules (p = 0.941), Proximity and Movement (p = 0.139), Instruction and Feedback (p = 0.316), Engagement and Pacing (p = 0.274), and Addressing Misbehavior (p = 0.052) - are above the 0.05 significance level, with the latter close to significance but still not significant. The overall classroom ecology yields a p-value of 0.555. These results indicate that there are no statistically significant differences between private and public graduate school students in any domain of classroom ecology.

This lack of significant difference suggests that effective classroom ecology practices are similarly established across private and public graduate programs, likely reflecting comparable training standards and expectations. Recent studies reinforce this view, showing that while private school classrooms may have slightly higher mean scores in certain aspects such as physical environment or instructional clarity, these differences are generally minimal and statistically insignificant. For instance, Fatima et al. (2018) found private universities marginally outperform public ones regarding some classroom environment features but reported comparable classroom management quality. Likewise, Gentova (2020) noted that classroom climate and ecology - spanning discipline, assessment, and student interactions - are uniformly high in both public and private settings. The essential role of classroom management in fostering academic and socio-emotional development remains emphasized across school types, supporting the robustness of classroom ecology irrespective of school category.

Table 4: Kruskal-Wallis H Test Results for the Extent of Classroom Ecology Practices of Graduate School Students by Program

	Statistic	**df**	**p**
Routines and Procedures	10.480	3	0.015
Expectations and Rules	4.201	3	0.241
Proximity and Movement	2.959	3	0.398
Instruction and Feedback	0.604	3	0.896
Addressing Misbehavior	3.650	3	0.302
Engagement and Pacing	5.979	3	0.113
Overall Classroom Ecology	4.141	3	0.043

Table 4 presents the results of the Kruskal–Wallis H Test, examining differences in the extent of classroom ecology practices among graduate school students based on their enrolled program. The analysis reveals significant differences in the domains of Routines and Procedures (p = 0.015) and Overall Classroom Ecology (p = 0.043). However, no significant differences were observed for Expectations and Rules (p = 0.241), Proximity and Movement (p = 0.398), Instruction and Feedback (p = 0.896), Addressing Misbehavior (p = 0.302), and Engagement and Pacing (p = 0.113). These findings suggest that a student's program of enrollment influences how they manage routines and procedures and perceive the overall classroom ecology, while other domains remain consistent across programs.

The observed differences in Routines and Procedures and Overall Classroom Ecology may stem from the distinct pedagogical orientations and variations in classroom management training emphasized across graduate programs. Marzano, Marzano, and Pickering (2003) stressed that the establishment of clear routines and procedures forms a foundation for effective classroom management, shaped by teachers' academic preparation and professional contexts. Likewise, Evertson and Weinstein (2013) affirmed that differences in instructional programs and teacher education experiences often result in variations in how educators structure and maintain positive learning environments.

Conversely, the absence of significant differences in the other domains indicates that graduate students, regardless of their program, exhibit similar practices in maintaining classroom expectations, providing instructional feedback, promoting student engagement, and addressing misbehavior. This homogeneity is consistent with findings by Martin and Sass (2010), who reported that classroom management beliefs and behaviors tend to be stable across diverse educational contexts, reflecting a shared professional understanding of effective teaching practices.

Overall, these results underscore that while graduate programs influence certain aspects of classroom ecology - particularly in the establishment of routines and the overall classroom climate - most classroom management practices remain uniform across different programs. This reflects a common culture of effective teaching and learning shared by graduate students.

Table 5: Dunn's Post Hoc Test of Routines and Procedures by Program Enrolled

Comparison	r_{rb}	p	p_{holm}
MAED ENGLISH - MAED MATH	0.114	0.644	0.704
MAED ENGLISH - MAED PE	0.187	0.352	0.704
MAED ENGLISH - MAT TLE	0.600	0.037	0.187
MAED MATH - MAED PE	0.304	0.100	0.300
MAED MATH - MAT TLE	0.571	0.069	0.275
MAED PE - MAT TLE	0.839	0.002	0.013

The results of Dunn's Post Hoc Test in Table 5 show that the routines and procedures scores significantly differ between some graduate programs. Specifically, the MAT TLE program students rated routines and procedures significantly higher compared to MAED English ($p = 0.037$) and MAED PE ($p = 0.002$) students. This indicates that MAT TLE graduate students emphasize structured classroom routines and procedures more than their counterparts in these other programs. The higher focus in MAT TLE is likely due to the technical and hands-on nature of their coursework, which demands clear, organized procedures to ensure both safety and effective learning. Meanwhile, other program comparisons such as MAED English versus MAED Math, MAED English versus MAED PE, MAED Math versus MAED PE, and MAED Math versus MAT TLE showed no meaningful differences, with all p-values exceeding the 0.05 significance level. This underscores the importance of clearly established routines in practical and technical subjects, reinforcing the idea that a well-organized classroom environment is crucial for effective hands-on learning, as Oliver (2007) emphasizes the necessity of structured routines for safety and skill development in such settings

Table 6: Dunn's Post Hoc Test of Overall Classroom Ecology by Program Enrolled

Comparison	r_{rb}	p	p_{holm}
MAED ENGLISH - MAED MATH	0.114	0.423	0.846
MAED ENGLISH - MAED PE	0.065	0.510	0.846
MAED ENGLISH - MAT TLE	0.320	0.071	0.354
MAED MATH - MAED PE	0.336	0.076	0.354
MAED MATH - MAT TLE	0.343	0.207	0.620
MAED PE - MAT TLE	0.768	0.011	0.064

The Dunn's Post Hoc Test results in Table 6 compare overall classroom ecology ratings between pairs of graduate programs. Most pairs, such as MAED English vs. MAED Math ($p = 0.423$), and MAED English vs. MAED PE ($p = 0.510$), show no significant differences. However, the comparison between MAED PE and MAT TLE yields an unadjusted p-value of 0.011, suggesting a significant difference before correcting for multiple comparisons. After adjustment, the p-value is 0.064, which is marginally above the typical 0.05 significance threshold, indicating a trend but not definitive evidence that MAT TLE students rate their overall classroom ecology higher than MAED PE students. Similarly, the pairs MAED English vs. MAT TLE ($p = 0.071$) and MAED Math vs. MAED PE ($p = 0.076$) are close to significance but not conclusive.

This suggests that the MAT TLE program may encourage or maintain a more positive perception of overall classroom ecology compared to some other programs, particularly MAED PE. Although the statistical evidence is not strong enough to claim a difference definitively after adjustment, it highlights a potential area where program-specific factors influence how students experience their learning environment. It implies that MAT TLE's emphasis on structured, hands-on learning environments might contribute to this perception. Further research or larger sample sizes could clarify these trends.

Discussion

Based on the results of the study, the discussion highlights that graduate school students across various programs generally demonstrate high levels of classroom ecology practices, with specific emphases varying according to program specialization. Technical and hands-on programs like MAT TLE consistently report higher ratings in routines and procedures, likely due to the nature of their coursework that requires clear, structured environments for safety and effective learning. In contrast, other programs such as MAED English, MAED Math, and MAED PE exhibit uniformly high but not significantly different ratings, emphasizing a shared culture of effective classroom management, engagement, and organization across disciplines. The lack of significant differences in overall classroom ecology perceptions among graduate school students regardless of program, school category, or location suggests that foundational classroom practices are deeply embedded within institutional expectations and teacher training. This consistency aligns with research findings that highlight the influence of teacher professionalism, training, and shared classroom management strategies on effective ecological practice rather than contextual school factors.

Conclusion

1. Graduate students overall demonstrate a high extent of classroom ecology practices across all measured domains.
2. The MAT TLE program stands out with significantly higher ratings in routines and procedures, reflecting the practical nature of the discipline.
3. There are no significant differences in classroom ecology practices between private and public school students or between rural and urban students.
4. Shared professional training likely accounts for the uniformity in classroom management approaches across different programs and contexts.
5. Although some pairwise comparisons indicate trends in perceived overall classroom ecology, significant differences mainly exist in program-specific emphases, especially for MAT TLE versus other programs.

Recommendations

1. Graduate programs, especially those outside MAT TLE, should continue strengthening training on clear routines and procedures to support effective classroom management.
2. Tailor classroom ecology training to reflect the specific demands of different graduate programs to optimize teaching effectiveness.
3. Ensure consistent application of classroom management principles across private and public, rural and urban schools through regular professional development.
4. Emphasize strategies to promote student engagement and effective instructional feedback as these are consistently pivotal across all groups.
5. Conduct studies with larger sample sizes and longitudinal designs to clarify trends in overall classroom ecology perceptions, particularly between MAT TLE and other programs.

Conflict of Interest

The authors declare no conflict of interest in conducting this research.

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