Enhancing Pupil Attention and Engagement during Lesson Transitions through Movement Breaks

Dela Cerna, Norgie Anne F., Gerigdig, Via Alia S., Lamorin, Xaris Trisha S., Sacasac, Allyzalyn V

Department of Professional Education University Town, Musuan, Bukidnon

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ABSTRACT

This study examined the effectiveness of movement breaks in enhancing pupils' attention and engagement during lesson transitions among Grade 3 Humility pupils of Laligan Central School, Valencia City, Bukidnon. Using a quasi-experimental one-group pre-test–post-test design, the study involved 30 pupils who were observed before and after the implementation of structured movement breaks. The intervention included stretching and breathing exercises, dancing or music-based activities, and game-based activities conducted during classroom transitions with varying durations of 1–3 minutes, 4–6 minutes, and 7–10 minutes. Data were gathered using an adapted observation checklist that measured observable indicators of attention and engagement, such as listening attentively, staying focused, participating actively, cooperating with peers, and showing enthusiasm. The results revealed that before the intervention, pupils' attention and engagement were both at a very low level, with mean scores of 0.22 and 0.23, respectively. After the implementation of movement breaks, attention increased to a very high level with a mean score of 0.80, while engagement increased to an extremely high level with a mean score of 0.98. The paired sample test further showed significant differences between the pre-test and post-test scores for attention and engagement, with p-values of 0.000. These findings indicate that movement breaks significantly improved pupils' focus, participation, and readiness during lesson transitions. Therefore, the study concludes that movement breaks are an effective classroom strategy for promoting attention and engagement among elementary pupils.

Keywords: Dancing based activities, Engagement, Game-based activities, Lesson transitions, Movement breaks, Non-cream class section, Stretching/breathing activities

INTRODUCTION

This chapter presents the background of the study, the statement of the problem, and the objectives of the study. It also discusses the significance, scope, and delimitations of the study, and provides the contextual definitions of terms used throughout the research.

Background of the Study

In today's dynamic educational landscape, sustaining pupils' attention and engagement throughout the school day had become one of the most pressing challenges faced by educators. As learning demands increased, young learners often struggled to maintain focus for extended periods, particularly during lesson transitions. These transitions, though short, could significantly influence pupils' readiness to learn and their overall classroom behavior. When not managed effectively, transitions could lead to restlessness, distraction, and a decline in engagement. To address this, teachers and researchers explored the use of movement breaks—short, structured periods of physical activity integrated within academic instruction—to help students refocus and re-energize for learning (Watson et al., 2017).

Movement breaks, also referred to as brain breaks or active breaks, were brief physical activities conducted between lessons or during class time. They usually lasted from one to ten minutes and were designed to refresh students' minds, reduce fatigue, and enhance attention and participation (Infantes-Paniagua et al., 2021). According to Schmidt (2016), these short bursts of movement stimulated blood flow to the brain, improved

mood, and increased students' capacity to concentrate on subsequent tasks. As schools continued to prioritize holistic learning, movement breaks gained recognition as a simple yet effective strategy for supporting cognitive, emotional, and physical development.

Recent research supported the benefits of integrating movement breaks into the classroom routine. Melguizo-Ibáñez et al. (2024) found that incorporating active breaks during school hours significantly improved students' attention and engagement, especially when activities involved rhythm and coordination. Similarly, Peiris et al. (2022) observed that classroom-based physical activity breaks not only enhanced attention but also contributed to better academic performance and classroom behavior. These findings were consistent with Infantes-Paniagua et al. (2021), who concluded that active school breaks positively influenced children's focus and readiness to learn, particularly when they were implemented consistently across the school day.

The effectiveness of movement breaks depended on several factors, such as the type and duration of the activity. The Community Preventive Services Task Force (n.d.) recommended implementing active breaks lasting between four to ten minutes, noting that moderate-intensity movements yielded the most positive effects on attention and engagement. Schmidt (2016) also emphasized that movement activities requiring balance, coordination, and motor control could enhance executive functioning and attentional processes. However, despite these promising outcomes, there was no universal standard for determining the most effective duration and structure of movement breaks, as results often varied depending on the age group, learning environment, and instructional context (Watson et al., 2017).

Most studies on movement breaks were conducted among primary and middle school learners, with limited research focusing on early grade-level contexts such as Grade 3. This age group represented a crucial stage in children's cognitive and behavioral development, as learners transitioned from play-based learning to more structured academic settings. Maintaining attention and engagement during this phase was vital for promoting learning continuity and reducing classroom disruptions (Melguizo-Ibáñez et al., 2024). Furthermore, research examining the effects of movement breaks in local educational settings, such as Laligan Central School, remained scarce. Contextual factors, including classroom environment, teacher facilitation, and cultural norms, influenced how effectively movement-based learning strategies were applied in Philippine schools.

Given the growing need to support pupils' attention and engagement during critical learning transitions, this study examined the effectiveness of movement breaks as a practical classroom strategy for Grade 3 learners. By exploring how structured physical activities influenced pupils' focus, participation, and classroom behavior, the research aimed to provide relevant insights that could guide teachers in creating more engaging and responsive learning environments. Ultimately, this study sought to contribute to the development of evidence-based, context-appropriate practices that promote both academic success and holistic pupil development.

Statement of the Problem

This study sought to investigate the effects of movement breaks on pupils' attention and engagement during classroom lessons. Specifically, it aimed to answer the following questions:

1. What is the level of pupils' attention and engagement during lesson transitions prior to the implementation of movement breaks?
2. What is the level of pupils' attention and engagement during lesson transitions after the implementation of movement breaks?
3. Is there a significant difference between the pre-test and post-test scores of the pupils?

Research Objectives

Despite the growing recognition of movement breaks as a strategy to support classroom engagement, this study sought to contribute to the existing body of knowledge by examining how such breaks affect attention and participation among Grade 3 pupils at Laligan Central School.

1. To determine the level of pupils' attention and engagement during lesson transitions prior to the implementation of movement breaks.
2. To assess the level of pupils' attention and engagement during lesson transitions after the implementation of movement breaks.
3. To ascertain the significant difference between the pre-test and post-test scores of the pupils.

Significance of the Study

This study on enhancing pupil attention and engagement during lesson transitions through movement breaks held significant value for various stakeholders in the educational setting, particularly in elementary education.

The integration of movement breaks in classroom routines greatly benefited Grade 3 pupils by making learning more active, enjoyable, and responsive to their developmental needs. Through short and structured physical activities such as stretching, dancing, and game-based movements, pupils reduced fatigue, released excess energy, and improved mood and concentration. These effects helped them maintain focus during lessons, participate more actively, and develop a more positive attitude toward learning, which led to improved attention, stronger engagement, and smoother transitions between classroom activities.

The findings of this study may also provide teachers with practical insights into effective classroom strategies that integrate physical activity with instruction. By understanding which types and durations of movement breaks best support pupils' attention and engagement, teachers can better manage classroom behavior, facilitate smoother transitions, and sustain learner focus without compromising instructional time. This may ultimately contribute to a more dynamic, organized, and responsive learning environment.

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For school administrators and leaders, this study served as evidence-based guidance for strengthening classroom practices and curriculum implementation. Since movement breaks were shown to be effective, they may be adopted as part of daily classroom routines or school-wide programs as a simple and cost-effective strategy to enhance pupil well-being and engagement. This can support the development of a more active and learner-centered school environment.

The study may also help parents gain a better understanding of the importance of incorporating movement into children's learning experiences. With this awareness, parents may be encouraged to support similar practices at home, which can help reinforce children's focus, behavior, and overall learning development beyond the classroom.

Lastly, this study contributed to the growing body of research on movement-based learning and its effects on attention and engagement among elementary pupils. It served as a useful reference for future researchers who wished to explore similar interventions in other grade levels, subjects, or educational settings, as well as provided a foundation for further studies on the long-term impact of movement breaks on academic performance and learner development.

Scope and Delimitation of the Study

This study was limited to Grade 3 Humility pupils at Laligan Central School, Valencia City, Bukidnon, specifically within a non-cream section that represented an average-performing class. The setting of the study was conducted during the afternoon session, when pupils were generally more prone to fatigue and reduced attentiveness, which may have influenced their level of engagement during lesson transitions.

The study focused on three specific types of movement breaks: stretching/breathing exercises, dancing/music-based activities, and game-based activities. Other forms of physical activity were not included. The intervention followed a structured schedule over a four-week period, consisting of one baseline week without intervention and three consecutive weeks of movement break implementation.

Each movement break type was observed across three duration levels (1–3 minutes, 4–6 minutes, and 7–10 minutes), applied systematically per day. However, the study did not explore variations beyond these fixed durations or alternative scheduling approaches.

Data collection was limited to observable behavioral indicators using an observation checklist, focusing on pupil attention and engagement during lesson transitions. The study did not include standardized academic tests, cognitive assessments, or long-term academic performance measures.

Furthermore, the study involved only a single Grade 3 class; thus, the findings were not generalizable to other grade levels, sections, or school settings. The research also did not employ random assignment of participants, which limited the ability to establish causal relationships and instead focused only on observable patterns associated with the intervention. External factors such as classroom environment, individual pupil differences, emotional states, and teacher facilitation were not controlled, although they may have influenced the results.

Definition of Terms

The following terms were contextually defined for the purpose of this study:

Attention is the ability of pupils to focus on classroom instruction and learning tasks during lesson transitions. In this study, it refers to observable behaviors such as eye contact with the teacher or materials, listening attentively, following instructions, staying on-task, and minimizing off-task behavior during and after movement breaks.

Dancing-Based Activities refer to movement breaks that involve rhythmic body movements performed with music to increase energy, enjoyment, and active participation among pupils.

Engagement is the active involvement of pupils in classroom activities during lesson transitions. It refers to observable behaviors such as participation in discussions, enthusiasm, cooperation with peers, verbal responses, and non-verbal expressions of interest such as nodding and leaning forward.

Game-Based Activities refer to structured physical activities or classroom games designed to promote movement, teamwork, and engagement while serving as a form of movement break.

Lesson Transitions refer to the short periods in between classroom activities or subjects when pupils shift from one lesson to another. In this study, it is the specific time when movement breaks are implemented to observe changes in attention and engagement.

Movement Breaks are short, structured physical activities conducted during lesson transitions to help pupils refocus, re-energize, and prepare for the next learning task. These include stretching/breathing exercises, dancing or music-based activities, and game-based activities.

Non-Cream Class Section refers to a regular or average-performing Grade 3 class where the study is conducted, not classified as an advanced or high-performing section.

Stretching/Breathing Activities refer to simple physical movements combined with controlled breathing exercises designed to relax pupils' bodies, improve blood circulation, and enhance readiness for learning.

REVIEW OF RELATED STUDIES

This chapter presents the literature and studies relevant to the present investigation on enhancing pupils' attention and engagement during lesson transitions through movement breaks. The chapter also includes the theoretical and conceptual frameworks that provide direction and structure to the study.

Classroom Attention and Engagement Challenges

Attention and engagement are essential factors in effective learning, especially among elementary pupils who naturally have shorter attention spans and higher energy levels. However, sustaining focus during extended instructional periods remains a challenge in modern classrooms.

Lee (2024) explains that pupils' attention spans have declined due to increased digital distractions, prolonged sedentary learning, and reduced motivation. This decline often leads to off-task behavior and reduced learning efficiency. Lee further emphasizes that teachers must adopt more interactive and movement-based strategies to help learners regain focus and sustain engagement.

Similarly, Hall (2019) highlights that engagement is not simply about activity participation but involves meaningful cognitive and emotional involvement in learning. Without appropriate engagement strategies, pupils are more likely to experience boredom, restlessness, and reduced academic focus, especially during lesson transitions.

These findings highlighted the need for classroom strategies that actively supported attention regulation and engagement, particularly for young learners.

Theoretical Basis of Movement Breaks and Cognitive Function

Movement breaks are grounded in the principle that physical activity enhances cognitive functioning. Research suggests that short periods of physical movement increase cerebral blood flow, stimulate neurotransmitter activity, and improve mental alertness (Infantes-Paniagua et al., 2021). These physiological responses contribute to improved attention, working memory, and processing speed.

Additionally, combining physical activity with cognitive tasks has been shown to further enhance engagement. Schmidt et al. (2016) found that movement activities involving mental challenges significantly improve pupils' focused attention and information processing. This supports the idea that movement is not merely a physical activity but a cognitive tool that prepares the brain for learning.

These findings provide a theoretical foundation for integrating movement breaks into classroom routines, particularly during transitions when pupils experience cognitive fatigue and decreased focus.

Effects of Movement Breaks on Attention and Engagement

A growing body of research demonstrates that movement breaks positively influence pupils' attention and engagement. Studies consistently show that incorporating short, structured physical activities into classroom routines leads to increased alertness, improved concentration, and enhanced participation.

Several researchers (Melguizo-Ibáñez et al., 2024; Bonilla, 2024; Arenas, 2024) found that movement breaks improve cognitive engagement, motivation, and task persistence. These activities help pupils release excess energy, reduce fatigue, and return to academic tasks with renewed focus. Similarly, Peiris et al. (2021) reported that movement breaks increase physical activity and enjoyment, which contribute to better classroom engagement and participation.

In terms of behavioral outcomes, movement breaks have been linked to improve on-task behavior and reduced off-task actions. Mahar et al. (2006) and Lehman et al. (2021) found that brief physical activity breaks significantly increased pupils' time-on-task, particularly during periods when attention typically declines, such as after transitions or extended instruction.

These findings suggested that movement breaks can effectively address attention-related challenges by promoting both cognitive and behavioral engagement in the classroom.

Movement Breaks During Lesson Transitions

Lesson transitions are critical points in classroom instruction where pupils often lose focus and become disengaged. Research highlights that integrating movement breaks during these periods can significantly improve attention and readiness for learning.

Peters (2021) found that incorporating short movement-based activities between lessons helped pupils feel more refreshed, attentive, and prepared for subsequent tasks. Similarly, classroom-based studies (Cortland, 2024) revealed that structured movement breaks during transitions reduced off-task behavior and increased pupils' focus.

Lehman et al. (2021) further emphasized that timing movement breaks during attention decline—such as between lessons—maximizes their effectiveness. Pupils who participated in these activities demonstrated improved behavioral readiness and smoother transitions between tasks.

These findings directly supported the use of movement breaks as a strategy for improving engagement during transitions, making them highly relevant to the present study.

Types and Implementation of Movement Breaks

Movement breaks can take various forms, including stretching, dancing, game-based activities, and music-integrated exercises. These activities are typically short (1–15 minutes), structured, and easy to implement within classroom routines.

Research by Hall (2019) highlights the effectiveness of combining music and movement in increasing pupils' motivation and engagement. Rhythmic activities encourage participation and provide both a mental and physical reset. Similarly, brain breaks and "Energizers" (Mok et al., 2020) have been widely used to improve attention and classroom behavior.

The flexibility of movement breaks allows teachers to adapt them to their classroom context without requiring special equipment or significant time. This makes them a practical and accessible strategy for enhancing engagement, particularly in elementary settings.

Synthesis of Foreign Literature

The reviewed foreign literature consistently demonstrates that movement breaks are an effective strategy for enhancing pupils' attention, engagement, and on-task behavior. These benefits are supported by physiological and cognitive mechanisms, including increased brain activity, reduced mental fatigue, and improved readiness for learning.

Importantly, studies highlighted that the effectiveness of movement breaks was most evident when they were implemented during critical periods such as lesson transitions. During these moments, pupils were more likely to lose focus, making movement-based interventions particularly valuable in restoring attention and engagement.

While existing research confirmed the positive impact of movement breaks, there remained a need for studies that specifically examined their effects on pupils' engagement before and after implementation, as well as the statistical significance of these changes. This gap was particularly relevant in elementary settings, where attention regulation was still developing.

Thus, the present study aimed to address this gap by examining the level of pupils' attention and engagement prior to the implementation of movement breaks, identifying changes after the intervention, and determining whether there was a significant difference between pre-test and post-test scores.

Philippine-Based Classroom Strategies for Attention and Engagement

In the Philippine classroom context, sustaining learners' attention and engagement remains an important concern, especially among young pupils who often need interactive and structured activities to remain focused. Mepieza (2023) examined the impact of icebreaker activities on student participation and engagement in the classroom. The study found that icebreakers helped create a comfortable and respectful learning environment where learners became more willing to participate, communicate, and engage in classroom tasks. These activities also supported students' mood, confidence, and readiness for learning.

In relation to the present study, Mepieza's findings suggest that short, enjoyable, and structured classroom activities can help learners become more attentive and participative. Although icebreakers differ from movement breaks, both strategies serve as energizing activities that prepare learners for classroom participation. In the Philippine setting, this supports the idea that movement breaks during lesson transitions may help pupils refocus, reduce restlessness, and become more ready for the next learning activity.

Movement-Based Interventions and Attention Improvement

Local research further supports the effectiveness of movement-based strategies in enhancing pupils' attention. Comisio et al. (2024) investigated the use of the Brain Break Strategy (BBS) among Grade 2 learners and found that pupils initially exhibited short attention spans and frequent off-task behavior during extended discussions. However, after implementing structured movement breaks, there was a noticeable improvement in learners' focus, participation, and overall classroom behavior.

The study also reported a reduction in unnecessary movements, indicating that physical activity helped regulate pupils' energy levels. In the Philippine classroom setting, these findings demonstrate that movement-based interventions are effective tools for sustaining attention and minimizing distractions. This supports the present study's assumption that integrating movement breaks during lesson transitions can enhance engagement and improve classroom management.

Attention-Boosting Exercises and Academic Readiness

Relente (2026) explored the impact of attention-boosting exercises on Grade Two pupils in a local context, focusing on teachers' perceptions of learners' cognitive and academic development. The results indicated that such exercises significantly improved pupils' attention span and ability to stay on task. Teachers strongly agreed that these interventions enhanced learners' readiness and capacity to process new information.

These findings suggest that structured physical and mental activities play a crucial role in managing pupils' energy and sustaining focus in Philippine classrooms. In connection with the present study, movement breaks during lesson transitions serve a similar purpose by providing learners with opportunities to reset and refocus. This reinforces the value of integrating purposeful movement as a strategy to maintain engagement and support continuous learning.

Music and Movement in Managing Classroom Behavior

In the Philippine early childhood setting, Alontaga et al. (2017) conducted action research on the use of music and movement activities to reduce disruptive behaviors among preschool learners. The intervention utilized action songs combined with simple physical movements, resulting in a significant decrease in problem behaviors. Notably, the greatest improvements were observed during transition periods, where disruptions were reduced significantly.

These findings indicate that music-integrated movement activities can serve as effective behavioral cues that guide pupils during transitions. Within the local classroom context, such strategies help learners shift smoothly from one activity to another while maintaining focus and discipline. This supports the present study by demonstrating that movement breaks, especially those incorporating music, can enhance both engagement and behavioral regulation.

Gamified Activities and Learner Motivation

Travinio and Gonzales (2022) examined the effectiveness of game-based applications in enhancing student engagement and performance in a Philippine educational setting. The study found that learners showed increased motivation, enthusiasm, and participation when activities were presented in a game-like format. These interactive approaches reduced monotony and encouraged active involvement, leading to improved academic outcomes.

In relation to the present study, these findings suggest that framing movement breaks as structured or game-based activities can make lesson transitions more engaging for pupils. By transforming transitions into interactive experiences, learners are more likely to remain attentive and emotionally invested in the lesson. This highlights the importance of incorporating engaging and dynamic strategies to sustain participation in Philippine classrooms.

Synthesis of Local Literature

The reviewed local studies consistently emphasize that in the Philippine educational context, pupils' attention and engagement are influenced using interactive, movement-oriented, and learner-centered strategies. Activities such as icebreakers, brain breaks, music and movement, and gamified tasks have been shown to improve focus, regulate behavior, and enhance participation, particularly during lesson transitions.

These findings collectively support the present study by demonstrating that movement breaks are a practical and effective intervention for addressing attention-related challenges in local classrooms. By incorporating structured physical activities during transitions, teachers can create a more engaging, organized, and responsive learning environment that promotes active pupil involvement and readiness to learn.

THEORETICAL FRAMEWORK

This study is anchored on Self-Determination Theory and Attention Restoration Theory, which together explain how movement breaks enhance pupils' attention and engagement during lesson transitions. Self-Determination Theory, developed by Edward Deci and Richard Ryan, is a theory of human motivation that emphasizes the importance of fulfilling three basic psychological needs: autonomy, competence, and relatedness. Autonomy refers to the learners' sense of control and freedom in their actions, competence involves the feeling of effectiveness in performing tasks, and relatedness refers to the sense of connection with others. When these needs are satisfied, learners are more likely to develop intrinsic motivation, which leads to higher levels of engagement, participation, and persistence in learning activities. In the context of this study, movement breaks provide pupils with opportunities to move freely, actively participate, and interact with peers through activities such as stretching, dancing, and game-based exercises. These activities support autonomy by allowing self-expression, enhance competence by enabling pupils to successfully perform enjoyable tasks, and promote relatedness through social interaction and cooperation. As a result, pupils become more motivated, attentive, and actively engaged during lesson transitions. Thus, Self-Determination Theory explains how movement breaks increase intrinsic motivation, which contributes to improved attention and sustained engagement in the classroom.

Complementing this, Attention Restoration Theory, proposed by Rachel Kaplan and Stephen Kaplan, explains how individuals recover from mental fatigue and restore their ability to focus. The theory distinguishes between directed attention, which requires effort and becomes easily fatigued, and involuntary attention, which is automatic and does not require mental effort. Prolonged periods of classroom instruction often exhaust pupils' directed attention, leading to decreased concentration, restlessness, and reduced engagement. According to the theory, engaging in activities that are enjoyable and mentally refreshing allows the brain to recover, thereby restoring attention and cognitive functioning. In relation to this study, movement breaks serve as restorative activities that shift pupils away from effortful concentration to enjoyable physical movement and play. These short breaks allow pupils to relax cognitively, reduce mental fatigue, and regain their capacity to focus. Consequently, when pupils return to academic tasks after movement breaks, they demonstrate improved attention, increased alertness, and greater readiness to participate. Therefore, Attention Restoration Theory explains how movement breaks function as a recovery mechanism that restores pupils' attention and supports sustained engagement during lesson transitions.

Together, Self-Determination Theory and Attention Restoration Theory provide a strong theoretical foundation for this study by explaining both the motivational and cognitive processes involved in enhancing pupils' attention and engagement. While Self-Determination Theory explains how movement breaks increase intrinsic motivation by satisfying psychological needs, Attention Restoration Theory explains how these breaks restore cognitive focus by reducing mental fatigue. Combined, these theories support the assumption that integrating movement breaks during lesson transitions can effectively improve pupils' attention, participation, and overall engagement in the classroom.

Conceptual Framework

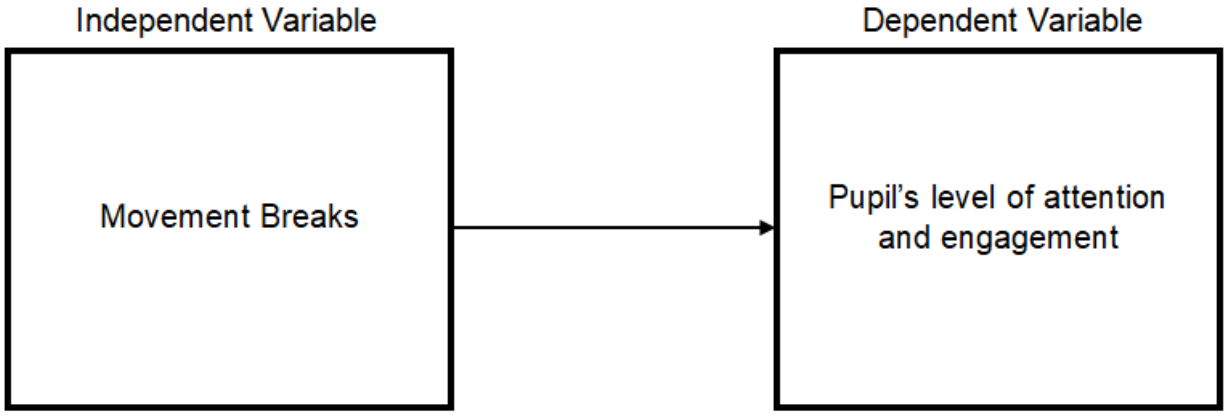

Figure 1: The schematic diagram of the Independent and Dependent Variables of the Study.

The conceptual framework presented in Figure 1 shows the relationship between the independent and dependent variables of the study. The independent variable is movement breaks, while the dependent variable is the pupils' level of attention and engagement. This framework illustrates that movement breaks serve as the main intervention used to influence pupils' attention and engagement during lesson transitions. Through the implementation of activities such as stretching, dancing, and game-based exercises, changes in pupils' focus and participation are expected. As shown in Figure 1, the independent variable (movement breaks) directly affects the dependent variable (pupils' level of attention and engagement). This means that any improvement in pupils' attentiveness and active involvement in class is attributed to the use of movement breaks. Overall, the framework highlights a direct relationship where the application of movement breaks leads to increased attention and enhanced engagement among pupils.

METHODOLOGY

This part presents the discussion of the following parts of the paper which include: Research Design, Locale of the Study, Participants, Instrument, Scoring Procedure, and Data Gathering Procedure.

Research Design

This study used a quasi-experimental research design, specifically a one-group pre-test–post-test design, to examine how movement breaks influenced the attention and engagement of Grade 3 pupils during lesson transitions at Laligan Central School. The participants consisted of one group of 30 pupils from a single class section. A quasi-experimental design was suitable for this study because the pupils could not be randomly assigned to different groups, as they already belonged to a fixed class.

In this design, the researchers first observed the pupils during lesson transitions without movement breaks to establish a baseline of their normal attention and engagement levels (pre-test). After this, different types and durations of movement breaks were introduced during transitions for several days. The pupils' attention and engagement were then observed again after the implementation of movement breaks (post-test). By comparing the baseline observations with the post-intervention observations, the researchers were able to determine whether movement breaks helped improve pupils' focus, participation, and readiness to learn.

This design was practical and appropriate for a real classroom setting because it allowed the researchers to study the effects of movement breaks naturally as they occurred, without disrupting existing class groupings. Through this approach, the study aimed to determine the direct impact of movement-based activities on Grade 3 pupils' attention and engagement in an actual school environment.

Locale of the Study

Figure 2: Location Map of the Study Site: (A) Map of Valencia City; (B) Map of Laligan Central School

This study was conducted at Laligan Central School, a public elementary school located in Laligan, Valencia City, Bukidnon. The school is one of the educational institutions in the locality that provides basic education services under the Department of Education (DepEd) curriculum. It operates within a structured classroom system where teaching and learning activities follow scheduled lesson periods and organized instructional transitions.

Laligan Central School was chosen as the study site because it follows standard routines such as subject transitions, teacher-led instruction, and structured learning activities, making it suitable for classroom-based interventions. Its physical and instructional environment allowed for the observation of how movement-based strategies can be integrated into daily classroom routines without disrupting lesson flow.

Participants of the Research

The participants of this study were the Grade 3 Humility pupils of Laligan Central School. The participants were drawn from a single class section composed of 30 pupils. Grade 3 pupils are classified as intermediate primary learners who are in the stage of gradually shifting from play-based learning to more structured academic activities. They are typically characterized by developing attention span, a growing ability to follow instructions, and increasing engagement in classroom tasks under teacher guidance. This group was selected as the focus of the study due to their relevance to examining how movement breaks may support attention and engagement during classroom activities.

Research Instrument

In this study, an adapted observation checklist was utilized, based on Huynh's (2025) Classroom Engagement Checklist, which was originally designed to measure classroom engagement through observable pupil behaviors. The instrument was revised to evaluate the attention and engagement of Grade 3 pupils before and after the implementation of movement breaks during lesson transitions. The modified checklist was composed of three sections:

Part A (General Information) recorded relevant contextual details such as the observer's name, participant code, date and time of observation, grade and section, lesson or subject observed, type of movement break, and

duration. Movement breaks were classified into stretching or breathing exercises, dancing, and game-based activities, with time intervals categorized as 1–3 minutes, 4–6 minutes, and 7–10 minutes.

Part B (Attention Indicators) focused on attention indicators, which involved observable behaviors related to pupils' attention before and after the movement break. These included maintaining eye contact with the teacher or instructional materials, listening attentively to instructions, staying seated and focused on the task, minimizing off-task behaviors such as fidgeting or talking, and completing assigned activities within the given time. Each of these behaviors was marked as either “Observed” or “Not Observed” during both the pre-test and post-test periods.

Part C (Engagement Indicators) assessed engagement indicators, which included active participation in class activities or discussions, displaying enthusiasm such as smiling or volunteering, cooperating, and interacting positively with peers, expressing ideas verbally or raising hands to answer, and demonstrating engagement through non-verbal cues like nodding or leaning forward. Similarly, these engagement behaviors were also rated as “Observed” or “Not Observed” during both the pre-test and post-test periods.

Overall, the adapted checklist functioned as a structured tool for documenting changes in pupils’ attention and engagement, offering descriptive evidence on the effectiveness of movement breaks in improving focus and participation during lesson transitions.

To establish the reliability of the adapted observation checklist, Cronbach’s alpha was computed. Based on the commonly accepted reliability threshold of 0.70, the instrument demonstrated acceptable internal consistency. Specifically, the Attention indicator obtained a Cronbach’s alpha value of 0.70, which indicates acceptable reliability. This suggests that the items under the Attention category were sufficiently consistent in measuring pupils’ attentiveness during classroom observation. Likewise, the Engagement indicator obtained a Cronbach’s alpha value of 0.75, which also indicates acceptable reliability and suggests that the engagement-related items consistently measured the same underlying construct of pupil engagement. Overall, the adapted observation checklist served as a structured and reliable tool for documenting changes in pupils’ attention and engagement before and after the implementation of movement breaks.

Scoring Procedure

The adapted observation checklist was scored using a binary system where each indicator was marked as either "Observed" or "Not Observed" before and after the implementation of movement breaks. For each attention and engagement indicator, a score of 1 was given if the behavior was observed, and a score of 0 if it was not observed. There were five observable behaviors under both attention and engagement categories, allowing each pupil to score a total ranging from 0 to 5 for both attention and engagement. A score of 0 meant no behaviors were observed, while a score of 5 indicated all behaviors were observed. The scores were interpreted according to the following scale: 0 for no engagement, 1 for minimal engagement, 2 for emerging engagement, 3 for developing engagement, 4 for active engagement, and 5 for highly sustained engagement. After scoring, the pre-test and post-test scores for both attention and engagement were recorded separately, and the frequency and percentage of pupils under each level were calculated. To assess whether there was a significant difference between the pre-test and post-test scores, a paired sample test was used to compare the scores of the same group of pupils before and after the movement breaks were implemented.

Data Gathering Procedure

The data gathering procedure for this study began with obtaining the necessary approvals. The researcher sought approval from the Dean of the College of Education, Dr. Julie Ann A. Orobia, and the Research Adviser, Dr. Gladys S. Escarlos. Once approved, the researcher coordinated with the school principal and teachers at Laligan Central School to discuss the study’s objectives and schedule a suitable four-week observation period. This coordination ensured that the implementation of movement breaks would not disrupt regular instructional time.

After finalizing the schedule, consent forms were distributed to parents or guardians, outlining the study’s purpose and ensuring voluntary participation. Only pupils who returned signed parental consent forms were

included in the study. To maintain confidentiality, each pupil was assigned a unique participant code, and no personal identifiers were included on the observation checklist. The Day-1 observations served as the pre-test, establishing baseline data on pupils' attention and engagement levels before the implementation of movement breaks. On Day-1, no movement breaks were implemented, and the researchers recorded the natural attention and engagement of pupils during lesson transitions, using Parts B (Attention Indicators) and C (Engagement Indicators) of the observation checklist. From Day 4 to Day 12, different types and durations of movement breaks were introduced: Day 4 involved stretching and breathing exercises for 1–3 minutes; Day 5 extended it to 4–6 minutes, and Day 6 involved a 7–10-minute stretch. On Day 7, dancing or music-based activities were introduced for 1–3 minutes, followed by 4–6 minutes on Day 8 and 7–10 minutes on Day 9. Day 10 introduced game-based activities for 1–3 minutes, with durations of 4–6 minutes on Day 11 and 7–10 minutes on Day 12. Observations were made after each movement break to assess changes in pupils' attention and engagement. Each behavior was recorded as "Observed" or "Not Observed" for both attention and engagement indicators. After the 12-day observation period, the collected data were organized and analyzed to identify trends and patterns regarding the effects of different types and durations of movement breaks on pupils' attention and engagement during lesson transitions. The analysis focused on observable behavioral changes such as improved focus, participation, cooperation, and enthusiasm, providing insight into the effectiveness of movement breaks as an intervention. The Day-12 observations served as the post-test, allowing for a comparison of the pre-test and post-test data to evaluate any significant changes in pupil behavior.

Ethical Considerations

This study strictly observed ethical principles to ensure the safety, privacy, and well-being of all Grade 3 pupil participants. Prior to the conduct of the research, the researchers secured approval from the school principal and coordinated with the Grade 3 classroom teacher to explain the purpose, procedures, and schedule of the study. After coordination, written informed consent was obtained from parents or guardians, since the participants were minors. Only pupils with signed parental consent forms were included in the study. Participation was voluntary, and pupils were not forced to engage in any movement break or observation activity. They could withdraw from participation at any time without penalty or any effect on their grades or academic standing. The movement breaks implemented (stretching/breathing, dancing/music-based, and game-based activities) were simple, safe, and age-appropriate to prevent physical strain or harm.

Confidentiality was strictly maintained throughout the study. Pupils' names did not appear on the observation checklist; instead, each participant was assigned a unique participant code to protect their identity. All data collected from the observation checklist, including attention indicators, engagement indicators, and summary notes, were used solely for academic purposes. The information remained confidential and was not disclosed outside the research team. The researchers also ensured that the study did not disrupt regular classroom instruction and respected the routines of both the teacher and the pupils. Through these measures, the study upheld the principles of respect for persons, beneficence, and confidentiality throughout the research process.

RESULTS AND DISCUSSION

This part presents the result, analysis, and interpretation of the data gathered during the conduct of the study.

Table 1: The level of pupils' attention and engagement during lesson transitions prior to the implementation of movement breaks.

Level	Attention		Engagement	
	Pre-test		Pre-test	
	N	%	N	%
No engagement observed	11	36	11	36
Minimal engagement	7	23	8	26
Emerging engagement	10	33	8	26

Developing engagement	2	6	1	3
Active engagement	0	0	2	06
Highly sustained engagement	0	0	0	0

Legend:

0 – No engagement observed

1 – Minimal engagement

2 – Emerging engagement

3 – Developing engagement

4 – Active engagement

5 – Highly sustained engagement

Table 1 presents the level of pupils' attention and engagement during lesson transitions prior to the implementation of movement breaks. In terms of attention, 11 pupils, or about 36%, were classified under no engagement observed; 7 pupils, or about 23%, showed minimal engagement; 10 pupils, or about 33%, were at the emerging engagement level; and only 2 pupils, or about 6%, reached the developing engagement level. No pupil was recorded under active engagement or highly sustained engagement. For engagement, the same number of pupils, 11 or about 36%, were classified under no engagement observed; 8 pupils, or about 26%, showed minimal engagement; another 8 pupils, or about 26%, were under emerging engagement; 1 pupil, or about 3%, reached developing engagement; and 2 pupils, or about 6%, were classified under active engagement. However, no pupil reached the highly sustained engagement level before the intervention.

The results show that most pupils were concentrated in the lower levels of attention and engagement during lesson transitions before movement breaks were introduced. For attention, the largest group of pupils fell under no engagement observed, followed closely by emerging engagement, while only a small number reached developing engagement. For engagement, the pattern was also low, with most pupils falling under no engagement observed, minimal engagement, and emerging engagement. This means that before the intervention, pupils were not yet consistently focused, attentive, or actively involved during transitions. The absence of pupils in the highly sustained engagement category further shows that sustained focus and participation were not yet evident among the learners.

These findings imply that lesson transitions were difficult moments for the pupils because they tended to lose focus, become less responsive, or show limited participation before the next lesson began. Since the study involved Grade 3 pupils, this low level of attention and engagement may be connected to their developmental stage, where learners still need structure, movement, and guidance to maintain focus during classroom routines. The results suggest that without movement breaks, transitions may become periods of restlessness, distraction, and reduced readiness for learning. Therefore, the pre-test results served as a clear baseline showing the need for an intervention that could help pupils become more attentive and prepared during lesson transition.

The results align with the findings of Lee (2024), who noted that young learners often experience reduced attention due to limited attention spans and routine classroom demands, which can result in off-task behavior during instructional periods. Similarly, Hall (2019) emphasized that engagement requires sustained cognitive and emotional involvement, and when such involvement is not fully activated, learners tend to show low participation and minimal responsiveness in classroom activities. Watson et al. (2017) also highlighted that attention levels among elementary pupils naturally fluctuate, particularly during instructional shifts such as lesson transitions. In the same way, Melguizo-Ibáñez et al. (2024) observed that pupils often display inconsistent engagement patterns in structured learning environments, especially when transitioning between tasks. These studies collectively confirm the observation that low levels of attention and engagement during lesson transitions are a common occurrence among elementary learners in similar classroom settings.

Table 2: The level of pupils' attention and engagement during lesson transitions after the implementation of movement breaks.

Level	Attention		Engagement	
	Post-test		Post-test	
	N	%	N	%
No engagement observed	0	0	0	0
Minimal engagement	0	0	0	0
Emerging engagement	0	0	0	0
Developing engagement	0	0	0	0
Active engagement	6	20	3	10
Highly sustained engagement	24	80	27	90

Legend:

0 – No engagement observed

1 – Minimal engagement

2 – Emerging engagement

3 – Developing engagement

4 – Active engagement

5 – Highly sustained engagement

Table 2 presents the level of pupils' attention and engagement during lesson transitions after the implementation of movement breaks. For attention, 6 pupils (20%) were classified under active engagement, while 24 pupils (80%) demonstrated highly sustained engagement. For engagement, 3 pupils (10%) were classified under active engagement, and 27 pupils (90%) reached the highly sustained engagement level. The absence of pupils in the lower engagement categories such as no engagement observed, minimal engagement, emerging engagement, and developing engagement indicates a significant shift towards higher levels of attention and participation after the movement breaks.

The data show a strong concentration of pupils in the highest engagement category, particularly under highly sustained engagement. Engagement (90%) is slightly higher than attention (80%), suggesting that pupils were not only attentive but also more actively involved during transitions. The absence of pupils in the lower categories indicates a complete shift from passive or low engagement behaviors to active and sustained participation. Meanwhile, the smaller proportion under active engagement suggests that some pupils were still progressing toward maximum engagement, but overall, the group displayed consistently high performance.

The data reveal that after the implementation of movement breaks, most pupils exhibited active or highly sustained attention and engagement during lesson transitions. A large proportion of pupils—80% for attention and 90% for engagement—were categorized as highly sustained, indicating that the majority of the class maintained a high level of focus and participation. The proportion of pupils categorized under active engagement (20% for attention and 10% for engagement) further supports the conclusion that the intervention successfully

elevated pupils' involvement in classroom activities. The absence of students in the lower levels of attention and engagement suggests that movement breaks had a profound impact on pupil behavior, making transitions more effective and improving the overall learning environment.

These findings imply that the implementation of movement breaks had a significant positive impact on pupils' attention and engagement. The dominance of highly sustained engagement suggests that pupils were able to maintain focus, actively participate, and remain on-task during lesson transitions. This indicates that movement breaks effectively addressed issues such as restlessness, distraction, and lack of readiness. Furthermore, the higher engagement percentage compared to attention suggests that movement breaks not only improved focus but also enhanced pupils' enthusiasm and cooperation. Overall, the results demonstrate that integrating structured physical activities during transitions creates a more attentive, participative, and engaging classroom environment.

The high levels of attention and engagement observed in this study confirm the findings of Infantes-Paniagua et al. (2021) and Schmidt et al. (2016), who reported that active breaks enhance cognitive functioning, improve attention, and increase classroom participation. Moreover, the results of this study conform with the study of Melguizo-Ibáñez et al. (2024), which found that incorporating movement-based activities into classroom routines leads to significant improvements in pupils' attention and engagement. Similarly, this is aligned with the findings of Peiris et al. (2021) and Lehman et al. (2021), who emphasized that short physical activity breaks increase on-task behavior and active participation among learners. Furthermore, local research by Mepieza (2023) found that icebreaker activities, similar to movement breaks, also fostered improved engagement and participation, especially during classroom transitions. These studies collectively validate the effectiveness of movement breaks as an intervention to enhance pupils' focus and active involvement during lesson transitions, further supporting the outcomes of this study.

Table 3: The significant difference between the pre-test and post-test scores of the pupils.

Paired Sample Test						
	Paired Differences					
	Mean	**Std. Deviation**	**t**	**df**	Sig. (2-tailed)	
Attention Pre-Test & Post-Test	-3.70000	1.05536	-19.203	29	0.000	significantly different
Engagement Pre-Test & Post-Test	-4.73333	1.22990	-21.079	29	0.000	significantly different

Table 3 presents the results of the paired sample test comparing the pre-test and post-test scores for attention and engagement among pupils. The mean difference for attention was -3.70 with a standard deviation of 1.06, and for engagement, the mean difference was -4.73 with a standard deviation of 1.23. The test statistics for both attention (t = -19.203) and engagement (t = -21.079) show significant differences, with p-values of 0.000 for both, indicating a statistically significant change after the implementation of movement breaks.

The results suggest a significant improvement in both attention and engagement, as reflected in the negative mean differences, which signify a decrease in the gap between pre-test and post-test values. The t-values for both categories are highly significant, supporting the conclusion that the movement breaks had a measurable effect on pupils' attention and engagement levels. Additionally, the relatively low standard deviations (1.06 for attention and 1.23 for engagement) indicate that the responses were consistent across the sample, with variation in the improvements observed after the intervention**.**

These findings indicate that movement breaks were effective in enhancing pupils' attention and engagement during lesson transitions. The significant differences between the pre-test and post-test scores reflect a shift from very low to very high levels of attention and engagement, suggesting that the short bursts of physical activity

successfully improved pupils' focus, participation, and overall readiness to engage in classroom activities. Such improvements also suggest that these breaks provide a strategy for overcoming common challenges in sustaining pupils' focus during transitions.

Moreover, the significant improvement in attention and engagement observed in this study supports the findings of Melguizo-Ibáñez et al. (2024), who conducted a meta-analysis on the effects of active school breaks and found that incorporating physical activity into classroom routines significantly enhances both attention and engagement. Their findings indicated that movement breaks, particularly those involving rhythm and coordination, lead to substantial improvements in pupils' focus and classroom participation. The results of this study are aligned with the conclusions of Melguizo-Ibáñez et al. (2024), confirming that short, structured movement breaks serve as an effective strategy for enhancing pupils' attention and engagement, especially during transitions between lessons. This study further confirms that movement-based interventions, such as those implemented in this research, are essential in addressing attention and engagement challenges in elementary classrooms.

CONCLUSIONS AND RECOMMENDATIONS

This part presents the conclusions and recommendations formulated on the findings of the study.

Conclusion

Based on the findings of the study, the following conclusions were drawn in relation to the specific problems:

1. Before the intervention, the level of pupils' attention and engagement during lesson transitions was generally low, with most pupils falling under the categories of no engagement observed, minimal engagement, and emerging engagement for both attention and engagement, and only a very small number reaching the developing level, with no pupils demonstrating active or highly sustained engagement. The results indicate that pupils had difficulty maintaining focus, participation, and readiness during transitions, showing that lesson transition were characterized by low and inconsistent engagement and highlighting the need for structured movement breaks to improve classroom attention and engagement.

2. After the intervention, pupils' attention and engagement during lesson transitions were generally high to very high, with most classified under highly sustained engagement and the rest under active engagement, and no pupils observed in the lower engagement levels. The results showed that 80% of pupils reached highly sustained engagement and 20% active engagement in attention, while 90% reached highly sustained engagement and 10% active engagement in engagement. These findings indicate a clear improvement in pupils' focus, participation, and readiness during lesson transitions, showing that movement breaks effectively enhanced sustained attention and active classroom engagement.

3. The paired sample test results revealed a significant improvement in both attention and engagement after the implementation of movement breaks. With mean differences of -3.70 for attention and -4.73 for engagement, along with highly significant t-values of -19.203 and -21.079, the results confirm that the movement breaks had a substantial effect on enhancing pupils' focus and participation. The relatively low standard deviations of 1.06 for attention and 1.23 for engagement suggest consistent improvements across the sample, highlighting the effectiveness of movement breaks in overcoming common challenges related to pupils' attention and engagement during lesson transitions.

Recommendations

With the conclusion of the study, the following recommendation were suggested:

1. Incorporate Movement Breaks as a Regular Practice - It is recommended that teachers integrate such movement breaks into their regular classroom routines, especially during lesson transitions. These short, structured physical activities can help maintain pupils' focus, enhance active participation, and improve overall classroom dynamics. Additionally, teachers are encouraged to explore various types of movement

breaks, such as stretching, dancing, or game-based activities, to cater to different pupil preferences and maximize the effectiveness of these breaks**.**

2. Continue Implementing Movement Breaks – Given the significant improvement in both attention and engagement following the introduction of movement breaks, it is recommended that teachers consistently integrate these breaks into their daily lesson routines. These breaks not only re-energize pupils but also foster a more focused and engaged classroom environment. Teachers should consider incorporating a variety of physical activities to maintain high levels of engagement and participation across diverse student preferences. Furthermore, it is advised that movement breaks be scheduled strategically during lesson transitions to maximize their impact on pupils' attention and overall classroom behavior.

3. Tailor Movement Breaks to Specific Classroom Needs – Considering the positive outcomes observed, it is recommended that movement breaks must be tailored to meet the specific needs of different student groups and learning contexts. Teachers could vary the types of activities based on the subject being taught or the energy levels of the students at particular times of the day. For example, more calming stretches could be introduced after intense cognitive activities, while more dynamic games could be used to re-energize students after long periods of sitting. Additionally, teachers should experiment with the duration and frequency of breaks to find the optimal balance that maximizes attention and engagement for each class.

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Dedication

This piece of work is heartily and lovingly dedicated and offered to the almighty God, the source of everything.

Their parents,

Mr. & Mrs. Alfredo T. Sacasac

Mr. & Mrs. Norberto L. Dela Cerna

Mr. & Mrs. Oscar A. Lamorin

Mr. & Mrs. Vito L. Gerigidig;

You are the reason for our success and the strength behind every accomplishment we achieve…

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APPENDICES

Appendix A. Observation Checklist

Part A. General Information

Observer's Name:
Participant Code:
Date & Time:
Grade & Section:
Lesson/Subjects:
Type of Movement Break: ☐ Stretching/ Breathing ☐ Dancing ☐ Game-based
Duration of Movement Break: ☐ 1–3 min ☐ 4–6 min ☐ 7–10 min

Part B. Attention Indicators

Indicators	Before Movement Break	After Movement Break
1. Pupils maintain eye contact with the teacher or instructional materials.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
2. Pupils listen attentively to teacher instructions.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
3. Pupils stay seated and focused on the task.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
4. Pupils avoid off-task behaviors (e.g., fidgeting, talking, looking around).	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
5. Pupils complete assigned activities within the given time.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed

Part C. Engagement Indicators

Indicators	Before Movement Break	After Movement Break
1. Pupils actively participate in class discussions or activities.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
2. Pupils show enthusiasm (e.g., smiling, volunteering, energetic behavior).	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
3. Pupils cooperate and interact positively with peers.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed

4. Pupils express ideas verbally or raise hands to answer.	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed
5. Pupils demonstrate engagement through non-verbal cues (e.g., nodding, leaning forward).	☐ Observed ☐ Not Observed	☐ Observed ☐ Not Observed

Appendix C. Participants Consent

Republic of the Philippines

COLLEGE OF EDUCATION

Central Mindanao University

University town, Musuan, Bukidnon

Department of Professional Education

Early Childhood Education Program

Participant's Consent

Research Working Title	"Enhancing Pupil Attention and Engagement During Lesson Transitions Through Movement Breaks"
Researchers	Norgie Anne F. Dela Cerna, Via Alia S. Gerigdig, Xaris Trisha S. Lamorin, Allyzalyn V. Sacasac.
Adviser	Dr. Gladys S. Escarlos

Name of the Student/Participants: _____

I have read and understood the nature and purpose of the study titled **"ENHANCING PUPIL ATTENTION AND ENGAGEMENT DURING LESSON TRANSITIONS THROUGH MOVEMENT BREAKS,"** and I agree to allow my child to participate as a subject of this study. I understand that my child will be involved in simple, safe movement breaks during lesson transitions, and that observations of my child's attention and engagement will be made by the researchers.

Furthermore, I agree to the following terms:

a. I understand that my child's participation is voluntary, he/she can refuse any time without any penalty.

b. The researchers will observe my child's attention and engagement during movement breaks.

c. The researchers may use devices to record their observations.

d. All information gathered will be kept confidential and used solely for academic purposes.

e. I have the right to ask questions regarding the study at any time.

f. The signed consent form and any personal information will be securely stored by the researchers.

g. My child's identity will be removed from the final manuscript and any published articles to ensure confidentiality.

I allow my child to participate in the quasi-experimental research project by the above-mentioned third year Bachelor of Early Childhood students, with a working title, "Enhancing Pupil Attention and Engagement During Lesson Transitions Through Movement Breaks"

Name of the Parent: _____

Signature: _____

Date Signed: _____

Appendix E. Documentation

Day 1

Day 2

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Day 3

Day 4

Day 6

Day 7

Day 8

Day 9

Day 10

Day 11

Day 12

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