



The Use of Movement Pathways on Off-Task Behaviors

Reggie Hipolito¹, Ann Dominique Rivera¹ and Jasper Vincent Alontaga^{1,*}

¹ De La Salle University - Manila

*Corresponding Author: jasper.alontaga@dlsu.edu.ph

Abstract: In the day care center, students spend more time sedentary thus it can result to them exhibiting off-task behaviors, which can interfere with the students' learning. There are three categories of off-task behaviors which are motor, verbal and passive. The movement pathway was a tool that aimed to help regulate and calm their bodies, ideally to lessen the off-task behaviors of the students. The study selected five 3-4 year old students in a barangay day care who frequently exhibited off-task behaviors. They observed and gathered the frequency of each students' off-task behaviors before and during the intervention. The study used mixed method to gather data and see for any changes in the students' off-task behaviors. Other factors were examined for possible effect on the students' off-task behaviors. The results show that for motor off-task behaviors, specifically engaging in any out of seat behavior, there was a slight decrease in two out of five students. The verbal off task behavior, specifically talking to a classmate, three out of five students decreased their behavior. For passive off-task, looking out the window or around the room, two out of four students that exhibited the behavior decreased. It was observed that the environment, instructional format and parental monitoring had an effect on the students' off-task behaviors. As a group, there was no consistency in the changes of the students behavior. However, individually, the students were able to lessen at least one of their off task behavior. It is recommended that the movement pathway be recreated outside of the classroom for the teacher's convenience. To add, the movement pathway should have a balance of activities and design that appeals to both genders. For further results, the intervention should be implemented for a longer period of time and routinely.

Key Words: Off task behavior; movement pathway; early childhood

1. INTRODUCTION

In the day care center, students are spending more time engaged in classroom instruction and are sedentary for longer periods of time. The barangay

day care centers are following the trend of increasing instructional time or other academic sedentary activities (e.g. coloring activity) and less physical activities (e.g. play). The longer the instructional time without movement, the more difficult it is to control classroom behaviors such as off-task behaviors.



Off-task behaviors mean that the students are giving into distractions around them or are becoming distractions themselves (Embling, 2011). Observers from Mahar et al (2006) used a chart that categorized off-task behaviors into three separate categories: verbal (talking to classmates, making vocal noises, etc.); motor (engaging in any out of seat behavior, manipulating objects, etc.); and passive (sleeping, looking out the window, etc.). During observations, the off-task behaviors displayed by the students were: playing with classmates, talking with classmates, head on table, tapping of pencils, and were out of their seat without the teacher's permission (Wiebelhaus and Hanson, 2016). These behaviors were a distraction to the teacher and the other students learning.

The National Association for Sport and Physical Education (NASPE) recommended that toddlers (between 2-5 years), should accumulate at least 30 minutes daily of structured physical activity and should not be sedentary for more than 60 minutes at a time, except when sleeping (Nonis & Daswani, 2007). Movement and physical activity are important in young children because any underdevelopment can lead to difficulties in the future. According to Strauss (2014), some children have poor core strength and balance due to underdeveloped vestibular (balance) systems, which is caused by restricted movement.

Aside from physical and health benefits, multiple studies have shown that physical activity can increase concentration, mental cognition, academic performance, and reduce fidgeting and other self-stimulatory behaviors (Mahar et al, 2006). According to Blythe (2005), "a child who is unable to sit still and maintain attention needs more frequent opportunities to move around and exercise the body in order to concentrate again". A contemporary theorist, Michael Ellis, developed a theory called the Arousal Theory of Motivation, which suggests that people are driven to perform actions in order to maintain an optimum level of physiological arousal (Henniger, 2013). In the context of young children, play is an opportunity for them to be stimulated,

thus it may influence their performance in the classroom.

Play time, recess, and outdoor activities are crucial for each and every child no matter what their age (Carlson et al, 2015). A child's brain can only process a certain amount of information one at a time, the rest would go to waste. Teachers are aware, yet often fail to address this by giving the children what they need. Movement breaks that may take two to four minutes, yet it can be a breather for students from lengthy lesson time. Children spend much of their time at school, thus the school environment presents an excellent opportunity for them to be physically active (Mahar et al, 2006). There are multiple studies about the use of physical activities to address students' classroom behaviors and many have shown improvement on on-task behaviors, concentration, and reduced fidgeting (Harvey et al, 2017).

Thus, a movement pathway, a teacher made path that features different movement tasks, was created to help regulate and calm the students' bodies before class (Wilgosh, 2018; and Albert Lea Tribune, 2018). Taking inspirations from Move, Play, & Learn with Smart Steps (2016) and the Roland School's 120 Foot Sensory path, it was recommended that for ages 3 to 4 years old big, whole-body movements are encouraged because it can serve as energizers for students at the beginning of class.

2. METHODOLOGY

This research follows a quasi-experimental design where the independent variable was manipulated but the participants were not randomly assigned to conditions because there will be no control group (Cook & Campbell, 1979; cited in Price, Jhangiani & Chiang, 2015).

The participants are composed of 5 students who exhibit off-task behaviors frequently; frequent behaviors means that the specific off-task behavior was exhibited at least 3 times or more within the number of minutes of observing the students and it is observed for consecutive days.



There were 4 instruments that were used: (1) The classroom behavior, (2) Movement Pathway (3) Movement Pathway rubric (4) Video Recording. Classroom Behavior form is a modified observation tool that was used by the researchers to note the frequent off-task behaviors that students were displaying in the classroom during instruction time and activity time. The movement pathways was a teacher made intervention tool; a path featuring different movement tasks for the students to help regulate and calm their bodies (Wilgosh, 2018; and Albert Lea Tribune, 2018). The Movement Pathways Rubric was an instrument used to take note the amount of movement tasks that the student accomplished on the movement pathway. Video recording was another tool used in gathering data; it helped in cases when the observers missed anything important during the designated observation periods.

In gathering data for the research, it consisted of four (4) phases: parental consent, pre-intervention phase, intervention phase, and post-intervention phase. During the pre-intervention phase, the researchers conducted an observation and evaluation using the Classroom Behavior Form. Each student that was part of the study was observed in a round-robin fashion for two minutes, with 30 seconds interval and was repeated until each student was observed at least once during the instruction time and activity time. The researcher ticked which behavior was exhibited by the student during the specified time. The intervention phase happened for 8 days, the focus was the implementation of the movement pathways, created by the researchers. The intervention was done for 15 minutes before the start of the class and during that time the researchers scored the amount of movement pathway tasks the students accomplished. The post-intervention phase happened for one day due to time limitations. The researchers removed the intervention before the lesson proper. In a similar process as the pre-intervention phase, each student that was part of the study was observed in a round-robin fashion for two minutes, with 30 seconds interval and will be repeated until each student has been observed at least once.

3. RESULTS AND DISCUSSION

RQ1: What were the off-task behaviors of the daycare students prior to the intervention?

According to Baker (2007), an off-task behavior in the learning environment is defined as behavior "where a student completely disengages from the learning environment and task, to engage in an unrelated behavior". Ideally, students must be focused on the lesson or the given task with a range of 84-100% during their observed time (Mahar et al. 2007).

All students had the off-task behaviors talking to a classmate, manipulating objects, and engaging in any out of seat. Four students exhibited looking out the window or around the room. Only student C exhibited frequently the passive off-task behavior head on desk and only student E exhibited frequently the verbal off-task behavior of making vocal noises.

The results show that the most frequent off-task behavior done by the selected students prior to the intervention was motor off-task, specifically engaging in any out of seat behavior. It shows that due to the lack of physical activities such as outdoor play, the students have an abundance of energy stored in them. According to Blythe (2005), it is important to provide frequent opportunities for children to move around and exercise their bodies in order to concentrate. Based on the National Association for Sport and Physical Education (NASPE), children between 2 to 5 years old, should not be sedentary for more than 60 minutes at a time except for sleeping. A physical activity may serve as a positive and self-regulatory tool for children to expend their energy prior to instructional time (Ludwig & Rauch, 2018). Hence, the use of the movement pathway can serve as a self-regulating tool for the students to release excess energy and calm their bodies before the start of class.

RQ 2: What were the off-task behaviors of the students during the intervention?



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According to Connell, Pirie, and McCarthy (2016), it was recommended that whole-body movements are encouraged for ages 3 to 4 years old because they can serve as energizers for students at the beginning of class. The movement pathway was designed to include high energy level activities that will allow students to release any excess energy; and medium to low energy level activities that will help regulate and calm the students bodies.

In general, engaging in any out of seat behavior was the only off-task behavior that was observed in all of the selected daycare students. This off-task behavior is still evident during the intervention, which implies that the tasks on the movement pathway were not enough to lessen the student copious amounts of energy. It could be possible that the movement pathway was too much for the students and it overstimulated them before the start of class. As Michael Ellis stated in the Arousal Theory of Motivation, play is an opportunity for them to be stimulated, thus influence their performance in class; however, there is a risk of overstimulation and impair the students' performance instead.

During the intervention, there were four out of five students that still exhibited the off-task behaviors of talking to a classmate (unrelated to the lesson) and manipulating objects. These behaviors may have still appeared during intervention because the movement pathway consisted of whole-body movement and there were no fine motor activities to address the off-task behavior of manipulating objects. It was observed that as the students use the movement pathway, they are provided time to interact and socialize more with each other, thus the verbal off-task behavior of talking to a classmate may have increased or remained the same. For example, prior to the intervention student C was shy and did not interact as much with her classmates, however during the intervention she gained confidence to talk to her seatmates because they spent time before class to play together.

Additionally, three out of five students were observed frequently looking out the window or around the room; and these students are A, C, and D.

These students are often observed to space out in between instructional and activity time. Student A was easily distracted and curious about his surroundings. For example, instead of starting the worksheet or task, he would look around the room and at his classmates while waiting for a teacher to come by and help him during activity time. Similarly, student D was easily distracted by her peers and would be observed looking at them sometimes during instructional and activity time. Whereas, student C exhibited two of passive off-task behaviors prior to the intervention, and they are head on desk and looking out the window. She was often observed to be disinterested during instructional time and would finish half of the task during activity time.

RQ 3: Was there a change in the off-task behaviors of the daycare students?

In general, the changes in each of the students' off-task behaviors varied. The off-task behavior exhibited by all of the students before and during the intervention was engaging in any out of seat behavior. Although student A completed all of the tasks on the movement pathway, it was at a slower pace compared to student B and E, thus the number of this behavior exhibited remained unchanged. Whereas for student B and E, they were able to lessen their out of seat behavior because they were energetically running and playing on the movement pathway. They have calmed themselves from going out of their seat, but not enough to lessen their want to talk to their nearby classmate or manipulate small objects, such as pencils and toys from the play area.

Although play is an opportunity for them to be stimulated and energized to learn before the start of class, the movement pathway may have been too much for student C and D. Student C and D, most especially student C, had a huge increase in their off-task behaviors such as engaging in any out of seat behavior and manipulating objects. Instead of calming their bodies, they were overstimulated, thus it carried over during their instructional and activity time.



RQ 4: Were the off-task behaviors of students affected by other factors (i.e classroom environment, instructional format, and parental monitoring)?

Aside from lack of physical activities, there could be other factors that may have caused students to exhibit off-task behaviors in the classroom. These possible factors are classroom environments, instructional formats, and parental monitoring.

The barangay daycare center has limited classroom decorations around the classroom, however there was a new installment of a play area at the back of the classroom. There was a shelf that served as a minor wall between the main classroom and the play area, however, the furniture scale of the shelf was too high, thus students were often seen going at the back to play with the toys. The tall shelf also served as a play equipment for the students, especially the boys as they loved to climb over and throw stuff over. Student A and B are often found going at the back of the classroom to play in the play area. From the front of the classroom, the teacher is unable to see if there is a child in the play area or not.

Another contributing factor could be the instructional format because in the barangay daycare center the three instructional formats often used were whole-class instruction, small-group instruction, and individual work. The main teacher of the class often used whole-class instruction with a one-on-one at the board to know if the students understand the lesson or not. The duration of this instructional format depends on the concept being taught. Some concepts takes a long time for the students to grasp and always need repetition, while others are short, such as reviewing concepts they previously learned. The pace of transition between instructional time and activity time varied as well depending on the teacher's preparation. There were instances that the teacher has not yet prepared the coloring or tracing worksheet for the students, thus the longer the students wait for the teacher to prepare for the next activity, then their off-task behaviors heighten. Small-group instruction was

used during intervention days 2, 3, and 5. This instructional format was used to teach the students about the five senses and the main teacher had the teacher assistants conduct small-group instruction with interactive activities. Thus, on day 5 during intervention, all of the students had an increase of off-task behaviors specifically out of seat because it was a different instructional format that their usual routine. The teacher brought actual materials that the students could touch, see, hear, smell and taste. The teacher went to each student to interact with the materials, and since the other students were curious, they would go out of their seat to go to the teacher and have a closer look at the materials.

The last contributing factor was parental monitoring, as mentioned by Hofer, Kilian, Kuhnle (2009), students may internalize their parents' expectations in order for on-task behaviors and academic growth to occur. In the barangay day care, parents are allowed to sit in the classroom, especially when the child needs comfort and the teacher has other students to teach. There were many instances that parents came in to manage their child, and ended up helping teachers in getting other students (student B, C, and E) to sit down and finish their activities. There were multiple times that the main teacher asked the parents to teach their children to be well-behaved and to listen to the teacher in class.

4. CONCLUSIONS

In conclusion, the results show that for motor off-task behaviors, specifically engaging in any out of seat behavior, there was a slight decrease in two out of five students. The verbal off task behavior, specifically talking to a classmate, three out of five students decreased their behavior. For passive off-task, looking out the window or around the room, two out of four students that exhibited the behavior decreased. It was observed that the environment, instructional format and parental monitoring had an effect on the students' off-task behaviors. As a group, there was no consistency in the changes of the students behavior. However, individually, the



students were able to lessen at least one of their off task behavior.

For the day care center, the researchers recommend that the movement pathway be recreated outside of the classroom instead of using the movement pathways mat. Practically, one teacher would have enough time to prepare the mat for only 15 minutes of play and it is cumbersome to prepare by one person only. It is recommended to change or revise some of the movement pathway activities that would attract boys, that are in their interest and it is visually designed for them. The movement pathway should have a balance of activities and design that appeals to both genders.

For further research, the researchers recommend that the research should be implemented for a longer period of time and consecutively to ensure that students are familiarizing themselves with the tool and to see if there would be a pattern in the results of the students' behavior as a group and individual data. With a longer intervention phase, gender differences can also be examined. The researchers recommend that the classroom behavior form have even smaller intervals such as 10 or 20 seconds because the 30 second interval was still too long that within the time frame, two different behaviors can occur and would be marked in the same time interval.

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