

Winter 12-21-2018

Effectiveness of Visual Cues During Transitions in a Third Grade Classroom

Tory Gaard
gaardto@mnstate.edu

Follow this and additional works at: <https://red.mnstate.edu/thesis>

 Part of the [Curriculum and Instruction Commons](#), and the [Elementary Education Commons](#)

Recommended Citation

Gaard, Tory, "Effectiveness of Visual Cues During Transitions in a Third Grade Classroom" (2018). *Dissertations, Theses, and Projects*. 120.
<https://red.mnstate.edu/thesis/120>

This Project (696 or 796 registration) is brought to you for free and open access by the Graduate Studies at Red. It has been accepted for inclusion in Dissertations, Theses, and Projects by an authorized administrator of Red. For more information, please contact kramer@mnstate.edu.

EFFECTIVENESS OF VISUAL CUES DURING TRANSITIONS
IN A THIRD GRADE CLASSROOM

A Project Presented to
The Graduate Faculty of
Minnesota State University Moorhead

By

Tory Michelle Gaard

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in
Curriculum and Instruction

December 2018

Moorhead, Minnesota

TABLE OF CONTENTS

| | |
|---|----|
| ABSTRACT | 4 |
| CHAPTER ONE..... | 5 |
| Introduction..... | 5 |
| General Problem/Issue | 5 |
| Subjects and Setting | 6 |
| Description of Subjects | 6 |
| Selection Criteria | 6 |
| Description of the Setting | 6 |
| Informed Consent | 7 |
| CHAPTER TWO | 8 |
| Review of Literature | 8 |
| Definition of Terms | 8 |
| On-Task Behavior in Elementary School Students..... | 8 |
| Influence of Technology in General Education..... | 9 |
| Importance of Classroom Transitions..... | 10 |
| Research of Classroom Transitions..... | 10 |
| Statement of Hypothesis | 12 |
| CHAPTER THREE | 13 |
| Research Design..... | 13 |
| Research Questions | 13 |
| Research Plan | 13 |
| Methods and Rationale | 13 |

Schedule 14

Ethical Issues 15

Response 15

CHAPTER FOUR.....16

Data Analysis and Interpretation 16

 Description of Data16

 Baseline Data17

 Research Questions19

 Question One 19

 Interpretation 19

 Question Two.....21

 Interpretation 21

Conclusions22

CHAPTER FIVE.....24

Action Plan.....24

Plan for Sharing.....25

REFERENCES26

APPENDIX A30

ABSTRACT

The purpose of this research was to investigate the impact of using visual cues during transition periods vs. verbal cues. The visual cues are a Google Slide with a list of the required materials and an embedded timer. The investigation employed ongoing monitoring of students during their transitions throughout the school day. The ongoing monitoring was documented using the attached data table. The data table tracked the time it takes students to transition, the # of students in attendance, number of students with all required materials, and the number of students in the correct location. Outcome analysis includes a comparison between the classroom that used visual cues and a neighboring third grade classroom that used verbal cues.

Chapter One

General Problem/Issue

Identifying ways for classroom staff to promote efficient transitions is critical to helping students succeed in classroom settings (Ladarola, et al, 2018). Some of the items that I have found effective, during transitions, are finding routines, modeling expectations for students and reinforcement systems to help them through the transitions in a positive environment. Transition-related difficulties can greatly disrupt a classroom, but available strategies are fragmentary and require substantial individualization (Ladarola, et al, 2018). Therefore, I have set out to find a system that helps smooth transitions for all students in the classroom setting.

Classroom transitions involve moving students in and out of the classroom and between activities smoothly to save valuable instruction time. Transitions can be difficult because some children may not know or understand the expectations of that specific transition (Mathews, 2012). Oftentimes I will give my students the first step of the instructions, especially during a transition, and that is the only thing they can wrap their brains around. They are already out of their seats instead of listening to the whole sequence of steps. When students are not able to follow multi-step instructions, it could also influence their ability to solve multi-step problems in other curricula, such as math.

Every time children move from one learning activity to another, they experience a transition (Mathews, 2012). Adding technology will allow the classroom transitions to be routine and transparent. Students will know exactly what is required of them and what the completion expectations are. The use of technology, a Google Slide shown on the projection screen, will be accessible and readily available for students. Google Slide is a presentation editor in the Google Drive production suite. Google Slide is a free application for users with a Google e-mail account.

My district is on a Google platform; therefore, I felt that Google Slide would be the most effective choice for this research. It seems that when technology integration is at its best the learning process is seamless, and students are more actively engaged.

Subjects and Setting

Description of subjects. The participants of this study are 25 students in third grade from a Midwestern elementary school. Of the participants, sixteen are Caucasian, four are Native American, four are African American and one is Hispanic. Fourteen of the participants were female and eleven participants were male. Sixteen of the participants received free and reduced lunch; therefore, come from low socioeconomic status families. Five of the students receive services for speech, three receive services for a learning disability and two receive services for emotional/behavior disorder disabilities. There were no other adults in the room during the transition times for these students. Students from the control group had similar characteristics as those of the experimental group. The population size varied depending on the students in the room at the time of the transition.

Selection criteria. Students for the experimental group were chosen based on entrance into my third-grade classroom. Students for the control group were chosen based on entrance into another third-grade classroom at the same school.

Description of setting. The study took place in a regionally large city. The school district is made up of four elementary schools, one middle school, and one high school. The study took place in one of the elementary schools.

The student population of the school district is primarily Caucasian, non-Hispanic. The student body is composed of approximately 76.6% Caucasian, non-Hispanic students; 8.5% African American, non-Hispanic student; 8.5% Hispanic students; 1.8% Asian or Pacific Islander

students; and 4.7% American Indian or Alaskan Native students. The population has 6.6% of students with limited English proficiency. Roughly 16.7% of the student population receive special education services. The free and reduced lunch ratio is quite high, with approximately 57% of students receiving free and reduced meals. The population of the elementary school, where the study took place, enrolls roughly 750 students.

Informed Consent. Permission was obtained from the Institutional Review Board at Minnesota State University – Moorhead and from the school district to conduct this study on October 3, 2018. Protocol from the Review Board at the University and the school district was followed by obtaining permission from the Superintendent and Principal from the school district where the research was conducted.

Protection of human subjects participating in research was assured. Participants and their guardians were informed of the purposes of the research and any procedures required by the participant, including disclosures of risks or benefits. Confidentiality was protected by assigning a number identification to each participant without identifying information. The choice to participate or withdraw at any time was outlined verbally and in writing. Since some students were not eighteen, their parents were informed of the nature of the study and consent was obtained for their child to participate in the research study. Students were read a Method of Assent regarding their participation in the study.

Chapter Two

Review of Literature

Researchers suggest that students spend a substantial amount of time transitioning between classroom activities, which may reduce time spent academically engaged (Hine, Ardoin, & Foster, 2015). The purpose of this study is to investigate how using visual cues impacts the time and readiness of the students during transitions. Students may prolong transition times by ignoring directions, engaging in problem behavior, or being poorly organized (Sainato, 1990). Therefore, if we can find a way to keep students on task during transition times, it will increase instructional time in the classroom. The goal of this study is to research the impact of visual cues using computer-based technology to support effective transition times in a third-grade general education classroom.

Definition of terms. For purposes of this study, the following terms are defined:

Classroom Transition: moving students in and out of class and between activities smoothly to save instructional time.

Technology integration: use of technology resources – computers, mobile devices like smartphones and tablets, digital cameras, social media platforms and networks, software applications, the Internet, etc – in daily classroom practices and in the management of a school

On-Task Behavior in Elementary School Students. It has been estimated that students who experience academic or behavioral difficulties in the classroom are on-task 50% of the time or less (Rhode, Jenson, & Reavis, 2010). In comparison, research has found that the average student is on-task between 77% and 89% of the time (McConaughy, Achenbach, & Gent, 1988; Weisz, Chaiyasit, Weiss, Eastmann, & Jackson, 1995). During the school day, as students are off-task, a substantial amount of classroom instruction is lost.

When children know what is expected of them, what to do, when to do it, and how to do it, they are less likely to engage in challenging behavior (Corso, 2007). Students are aware of what is expected of them through modeling and repetition. Children cannot expect to understand a routine unless the expectations are taught and reinforced in ways that are meaningful to each child (Corso, 2007). Engagement is key to preventing challenging behavior (Kaiser & Rasminsky, 2003). If children are engaged in the task, they are more likely to participate in positive behavior. To do this, teachers must have a planned approach and be intentional in the strategies they choose (Corso, 2007).

Influence of Technology in General Education. Today, students must learn to navigate, read, write, and think critically by using informational and communication technologies (Lacina, 2006). Advances in digital technologies are altering the text and instructional tools available for teachers and students (Biancarosa & Griffiths, 2012), as well as provided distant learning opportunities for students to take virtual field trips, collaborated with classrooms across the world, and tracked their academic progress (Morrow, Barnhart, & Rooyakkers, 2002). Technology is meant to be an additional manipulative to engage students and enhance their learning.

Researchers found the combination of media-based classroom instruction with direct instruction led to significant progress in academic abilities for children from low-income families (Linebarger, 2011). In addition, Behrman and Shields (2000) found that students who fail to respond to traditional approaches in instruction made more progress with the implementation of technology. By implementing technology, students found learning more interesting and engaging, and discovered new approaches for learning difficult concepts and critical thinking (Behrman & Shields, 2000).

Importance of Classroom Transitions. Transitions during the school day are defined as the times during which a student stops one academic-related activity and starts another (Arlin, 1979; Brophy, 1988). In elementary schools, student transitions may occur between classrooms, subjects, teachers, and areas (e.g., activity centers, playground, classroom, and cafeteria) and are one of the main sources of interruptions to instructional time (Hollowood, Salisbury, Rainforth, & Palombaro, 1995). One feasible way to increase time spent in instruction is to decrease time associated with transitions (Arlin, 1979).

Research suggests that effective management of transitions increases student independence, decreases disruption, and maximizes instructional time (Cameron, Connor, & Morrison, 2005; Coddling & Smyth, 2008). Addressing transitional activities in particular may be important as time in transition has been found to consume as much as 25% of non-learning activities in the classroom (Fisher et al., 1978).

It is important for classrooms to effectively move through school day transitions, such as the time between subject content areas and whole group/small group transitions, so that the students can continue to engage in learning opportunities. Although most school professionals are aware of this relationship, students spend up to one-half of instructional time engaged in tasks not related to learning, such as classroom procedural matters, transitions between activities, discipline situations, and off-task activities (Anderson, 1981; Fredrick, Walberg, & Rasher, 1979). Effective management of transition time may lead to more opportunities for students to engage in (and respond to) learning opportunities and may also improve academic outcomes (Hine, Ardoin, & Foster, 2015).

Research of Classroom Transitions. There is little research done to find the effectiveness of different classroom interventions during transitions. Although transition signals

are commonly used in classroom settings, there are few empirical studies that support their use (Hine, Ardoin, & Foster, 2015). Transition signals could include ringing a bell, playing a chime, or beginning a call and response (i.e. the teacher says, “Hocus Pocus” and the students respond, “Everybody Focus” or "class, class", "yes, yes").

Group contingency games, where whole groups are rewarded by a token system, are an idea that has been shared through research. One option for decreasing transition times involves timing students’ behavior and providing them with performance feedback on the speed (i.e., duration) of their responses (Campbell & Skinner, 2004). For instance, Yarbrough, Skinner, Lee and Lemmons (2004) used the Timely Transitions Game (Campbell & Skinner, 2004) to reduce transition times in a sixth-grade classroom.

During the Timely Transitions Game, the teacher uses a stopwatch to time students during the transition. When all students are at their spot and ready, the teacher will put the time on the board and randomly select a card from a box with labeled specific times. If all students transition before the selected amount of time elapsed, the class earned a token toward a class wide reward (Hine, Ardoin, & Foster, 2015). The class reward could range from lunch with the teacher to extra recess time. One advantage to group contingency games is that they tend to be relatively easy for teachers to implement (Hine, Ardoin, & Foster, 2015).

Researchers suggest several ways to assist classrooms during transition times. In a study examining rates of on-task behavior associated with transition and non-transition times, Arlin (1979) observed that failure to wrap up a lesson and prepare students prior to a transition appeared to lead to more student disruption and peripheral interjections about previous tasks than in classes with teachers who used both of these strategies. Making adjustments to the physical arrangement of a classroom is another effective way to reduce transition time (Wilson &

Wesson, 1986). For example, ensuring that instructional materials and equipment are available in a single location that is easily accessible prior to instruction can reduce time students spend obtaining these materials (Reith et al., 1981; Wilson & Wesson, 1986).

A study by Coddling and Smyth (2008) was created to extend the research on performance feedback by applying procedures to transition time. The study examined the content of performance feedback by initially providing feedback on progress towards goals aimed at decreasing the number of seconds spent on transition, followed by feedback on implementation of classroom management strategies shown to reduce transition time (Coddling & Smyth, 2008). The results suggest that performance feedback, during transition times, was useful for adjusting the routines that were used by the teachers in the study.

Statement of Hypothesis

During my research, I did not come across a study where educators used visual cues to increase learning times by decreasing transition times. In this study, by giving students a clear understanding of what is expected of them during transitions, the hope is that they will have all materials out and will be ready to learn when the transition time is complete. The intervention for this study will be a Google Slide with a timer and a list of needed material. Therefore, it is hypothesized that classroom transitions are more effective when visual cues are used, as opposed to direct instruction.

Chapter Three

Research Design

Research Questions. As an elementary teacher, I know that every minute of the day is important to students learning. I was curious to see if adding visual cues to a transition routine would provide a smoother transition for students. Therefore, the research questions to my topic are:

1. In what ways does using technology to project visual cues positively impact the efficiency of transition (time)?
2. How often did students have all materials out and ready to begin the next subject?

Answering the above questions will allow for other teachers to implement this strategy with their students.

Research Plan

Methods and rationale. The researcher utilized Google Slides to include a visual timer, a list of the materials needed and where students should be located once they have all their materials. The Google Slide was adjusted for each transition and used throughout the day during all transitions. A checklist was used to indicate how long it took all students to transition, how many students had all materials that were requested and how many students were in the designated spot.

During the first day of the action research, the researcher went over the expectations of the classroom during transitions. The expectations are the following:

1. As soon as the Google Slide is put up on the overhead projector, the students will be responsible for getting the materials they need for the next class.
2. Students should do this quickly and respectfully.

3. Students should go to the designated spot (i.e. at desks, at carpet, lined up or flexible seating).
4. Once all students are in the correct spot, the teacher will begin the next content area.

During the second day, the researcher will again go through the procedures and expectations. The researcher will give verbal instructions for students that are not understanding the expectations. On the third day, the researcher began collecting data via the checklist (Appendix A). Data collection continued for 2 weeks.

The control group included another third-grade classroom, at the same school. The control group used only verbal instructions during each transition. The control group spent two days explaining their procedures and expectations. The control group also utilized the checklist (Appendix A) to track the time it took for students to transition. The checklist also tracked if all students had the appropriate materials out and were in the correct location, the materials and location instructions were given verbally by the teacher of the control group.

Schedule.

September 17, 2018: Introduced the visual cues on the Google Slide, model the procedures and expectations.

September 18, 2018: Went over the procedures and expectations of utilizing the Google Slide during transitions.

September 19, 2018 – October 3, 2018: Collected data via the checklist (Appendix A).

October 4, 2018: The research team (researcher and teacher from the control group) met to analyze and discuss all the data gathered throughout the study. The data collected was compiled in tables comparing the control group and experimental group for transition time, # of students with all materials, and # of students in the correct location.

Ethical Issues. Possible ethical issues may arise during the research process. One issue is that the researcher has no control over the procedures and expectations of the control group. Also, students with behavior interventions may need additional incentives during transition times. Students may also feel pressure to move quickly, which may trigger anxiety or nervousness in the subjects.

Anticipated response. If any of the ethical issues above arise, then the researcher addressed them accordingly. The researcher worked with the other teacher to ensure similar procedures and expectations were taught to all students. The researcher implemented incentive programs with all students to gain compliance throughout instruction within the resource setting. All participants received the same incentive, as measured on their daily point sheets and positive behavior intervention plan, to assist with completing the transition requests.

Chapter Four

Data Analysis and Interpretation

Description of Data. This study gathered data using observation checklists to determine the impact that visual cues have on transition times and percentage of students ready to learn. A Google Slide Document was used to assist students during transitions. The content of the Google Slide Document included a timer, material needed and instructions of where students should be at the end of the timer (i.e. at their desk, at the carpet). Twenty-five students (14 boys, 11 girls) in my third-grade classroom were tracked throughout the day for a two-week period.

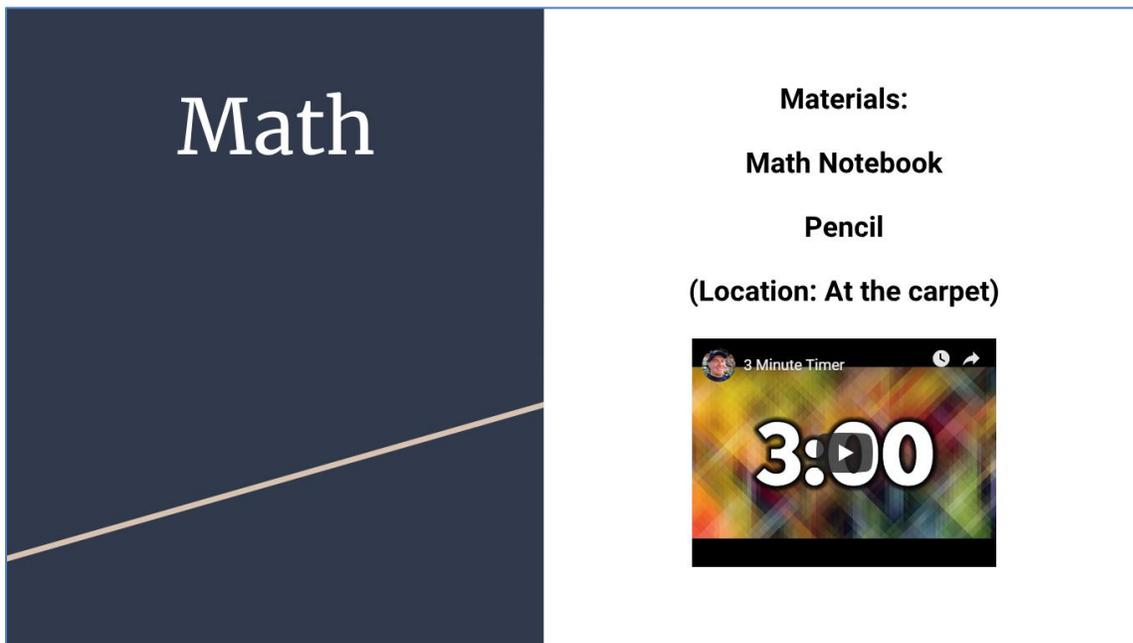


Figure 1.0: An example of the Google Slide Document that was used to present the visual information to students during a transition.

Baseline Data. Prior to the start of research, I collected baseline data by collaborating with another third-grade classroom using verbal cues during their transitions. The other classroom teacher used the same observation checklist for a two-week period to assist in providing baseline data for use in my research. Through the baseline data, students took an

average of 2 minutes and 37 seconds to transition to the next subject. The baseline data also showed that transitioning to morning meeting took the least amount of time at 1 minute and 40 seconds and the transition to math took the longest amount of time at 3 minutes and 10 seconds.

My colleague also tracked the percentage of times that students were ready to learn at the time the transition was completed. This included tracking if students had all materials that were needed for the next subject and whether the students were in the correct spot for the next subject (i.e. at their desk, at the carpet). The baseline data showed that, on average, 92% of students were ready to learn when the transition period was over.

Table 1.0 indicates the baseline data given to me from my colleague for transition times in her classroom. The transition time and % of students ready to learn are an average from her observation checklist over a two-week time period.

Table 1.0

Verbal Cues

| Transition Subjects | Transition Times | % of Students Ready to Learn |
|---------------------|------------------|------------------------------|
| Morning Meeting | 1:40 | 94% |
| Number Corner | 2:37 | 95% |
| Social Studies | 2:54 | 93% |
| Reading | 2:39 | 95% |
| Writing | 2:44 | 88% |
| Math | 3:10 | 88% |

Research Questions. The following research questions were asked at the onset of the action research.

RQ1: In what ways does using technology to project visual cues positively impact the efficiency of transition (time)? During the collection period, I collected data by tracking transitions between six subjects throughout the day. I used an observation checklist to track the students in a two-week time period. Through the data, students took an average of 2 minutes and 27 seconds to transition to the next subject. The data also showed that transitioning to morning meeting took the least amount of time at 1 minute and 49 seconds and the transition to math took the longest amount of time at 2 minutes and 53 seconds.

Table 2.0 indicates the data, tracked by the observation checklist, for transition times in my classroom. The transition time is an average over a two-week time period.

Table 2.0

Visual Cues

| Transition Subjects | Transition Times |
|---------------------|------------------|
| Morning Meeting | 1:49 |
| Number Corner | 2:29 |
| Social Studies | 2:52 |
| Reading | 2:08 |
| Writing | 2:31 |
| Math | 2:53 |

Interpretation. I expected that the time of transitions would decrease with visual cues. Although the time did decrease with visual cues, it was only by an average of 10 seconds. Transition times during morning meeting were the quickest, which I believe is because students do not need any materials and they are eager to start our discussions about the day or share what they did the night before. The transition to math took the longest in both scenarios. Math is at the end of the day and typically needs the most materials which may have taken students longer to transition.

The subject with the biggest impact using visual cues was reading. The transition times in reading averaged 2 minutes and 08 seconds, where the baseline data averaged 2 minutes and 39 seconds. Overall, many differences were within 10-20 seconds, only saving an average of 1 minute of instruction time each day.

The data collection process may have been skewed because when using visual cues, I had given a timer of three minutes. Most of the time students were ready at some point within that three minutes, but they typically took their time to transition knowing they had at least three minutes to do so. I did not stop the time until all students were quiet and, in a position, showing they were reading for the next subject to start.

Figure 2.0 shows the difference between the average transition time of both visual cues and verbal cues. As you can see the data for this research question is very close and although the research question proved to be true, it is a very small margin and would not make much of a difference throughout the day.

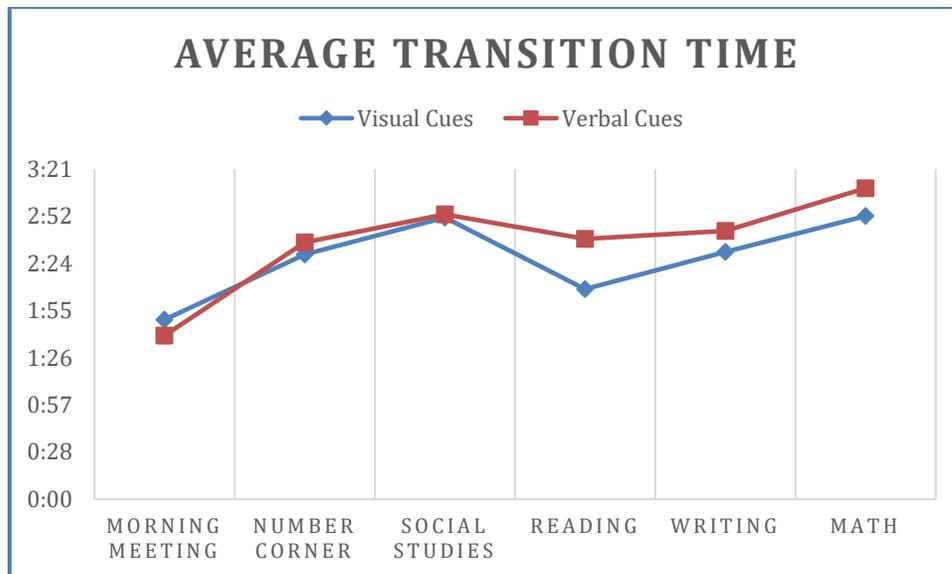


Figure 2.0: A comparison of the transition time data between verbal cues and visual cues during the research period.

RQ2: How often did students have all materials out and ready to begin the next subject? During the collection period, I collected data by tracking transitions between six subjects throughout the day. I used an observation checklist to track the students in a two-week time period. Through the data, I tracked if students had all materials that were needed for the next subject and whether the students were in the correct spot for the next subject. The data showed that, on average 96% of students were ready to learn when the transition period was over. The data also showed that transitioning to morning meeting and reading had the greatest result with an average of 99% of students being ready to learn. Social Studies had the least amount ready with an average of 93%.

Table 3.0 indicates the data, tracked by the observation checklist, for percentage of students ready to learn in my classroom. The percentage of students ready to learn is an average for each subject over a two-week time period.

Table 3.0

Visual Cues

| Transition Subjects | % of Students Ready to Learn |
|---------------------|------------------------------|
| Morning Meeting | 99% |
| Number Corner | 97% |
| Social Studies | 93% |
| Reading | 99% |
| Writing | 94% |
| Math | 96% |

Interpretation. I expected that the percentage of students ready to learn would increase with visual cues. I was impressed that the percentage increased from 92%, with verbal cues to 96% with visual cues. The percentage was the greatest during morning meeting and reading. Again, transition to morning meeting had the greatest number of students ready to learn. My interpretation of this is that the routine of morning meeting is the same each morning; students should put away their morning work and make an oval on the carpet in the front of the room. The percentage of students ready to learn was least in social studies and writing. Social studies is right after gym/music and writing is right after lunch. Those factors may have an impact on student's ability to redirect back to our classroom curriculum.

The subject with the biggest impact using visual cues was math. The percentage of students ready to learn increased an average of 8%, where the baseline data averaged 88% and my data was 96%. The differences in the data equates to an average of 1 or 2 more students being prepared for the next subject.

Figure 3.0 shows the difference between the average percentage of students ready to learn for both visual cues and verbal cues. The average of students ready to learn in many subjects is significant.

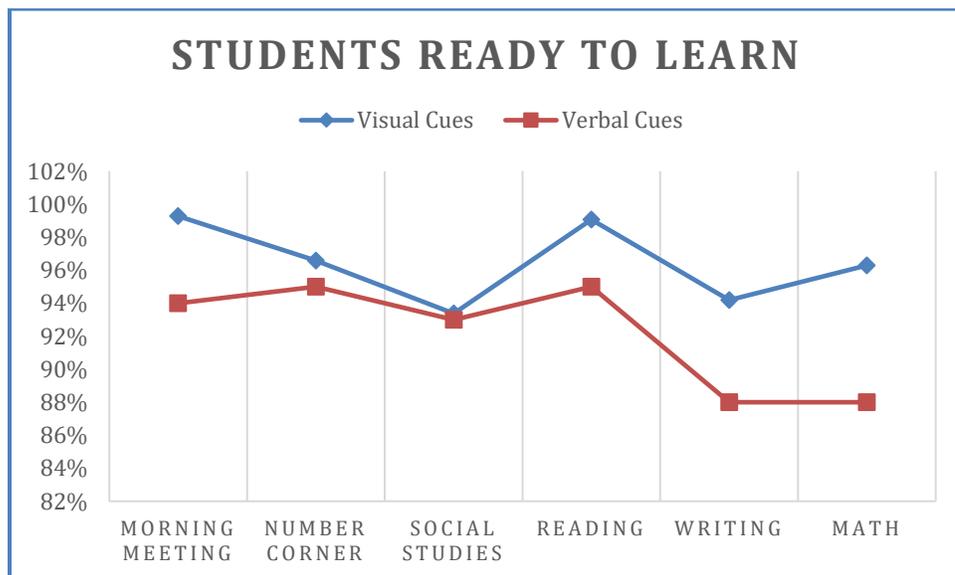


Figure 3.0: A comparison of the percentage of students ready to learn between verbal cues and visual cues during the research period.

Conclusion

After gathering data and analyzing the results, I believe utilizing the visual cues is beneficial in helping students transition into the next subject. Although the data is not significant regarding the transition times, it does give the students a baseline of how much time they have left to prepare their materials. With the visual cue a teacher would also be able to adjust the time

as he/she needs. It may be possible that students need a longer transition to wind down from gym, lunch or recess but a teacher could also determine that transitions within the classroom would not need as much time.

I felt that the percentage of students ready to learn did have a positive impact on teaching. I had less students getting up to get forgotten materials or sharpen their pencil. The transition time also allowed time for students to use the restroom or fill their water bottle, allowing less interruptions during the instruction time. As students continue to get used to relying on the Google Slide document to obtain their materials, I believe the percentages of those ready to learn will become even greater.

Chapter Five

Action Plan

The researcher will continue to use visual cues during each transition to ensure students have all materials and are at the correct spot prior to the timer going off. The Google Slide document will be altered as student needs change. For example, pictures may be added to the material list and location spot to assist English language learners or students with a low reading ability. The slide will be updated daily to incorporate the difference in materials that may be needed each day.

Currently, there are slides during reading rotations that are changed daily based on the students who will have a rotation at the small group table. During reading rotations, a timer of 20 minutes is used to indicate how much time is remaining during each rotation. In the future, I would like to add a feature that also incorporates a 2-minute transition between each rotation. Without the continuous rotation to transition timer I must leave the small group table when the rotation timer goes off and switch to a 2-minute transition slide. The enhancement would allow me to finish out my small group lesson, while all other students are making the transition to their next rotation.

The visual cues also encourage students to become more independent during transitions. During transitions, students know what they are responsible for and can go get it or wait for a classroom helper to pass the item out to the class (i.e. worksheet, folders, workbooks). From a teacher perspective, taking a few minutes to update the daily slideshow with visual cues has many benefits for the students. The independence of the students also allows me more time to prepare for the next subject, respond to e-mails or visit with students as needed.

Plan for Sharing

The results of this study will first be shared with the rest of the common grade level, third grade, teachers at the school where the study was conducted. Two third grade colleagues have already begun using the process and have found similar results in their classroom. After sharing with the whole third grade team, the researcher will then share the information regarding this study at each grade level and special education Professional Learning Committee (PLC) meeting. During these PLC meetings, educators discuss subject area data. The researcher will discuss the benefits of using visual cues during transitions and share a template with other staff members for easy implementation.

During spring parent-teacher conferences, the researcher will discuss the results with participants' and their parents. In addition, graduate students and administration from the researcher's respective university will be able to access the results through electronic format and move forward with their process if they choose.

References

- Anderson, L. (1981). Instruction and time-on-task: A review. *Journal of Curriculum Studies, 13*, 289-303.
- Arlin, M. (1979). Teacher transitions can disrupt time flow in classrooms. *American Educational Research Journal, 16*, 42-56.
- Behrman, R. E., & Shields, M. K. (2000). Children and computer technology: Analysis and recommendations. *The Future of Children, 10*(2), 4-32.
- Biancarosa, G., & Griffiths, G. G. (2012). Technology tools to support reading in the digital age. *The Future of Children, 22*(2), 139-160.
- Brophy, J. (1988). Educating teachers about managing classrooms and students. *Teaching and Teacher Education, 4*, 1-18.
- Cameron, C. E., Connor, C. M., & Morrison, F. J. (2005). Effects of variation in teacher organization on classroom functioning. *Journal of School Psychology, 43*, 61-85.
- Campbell, S., & Skinner, C. H. (2004). Combining explicit timing with an interdependent group contingency program to decrease transition times: An investigation of the Timely Transitions Game. *Journal of Applied School Psychology, 20*, 11-27.
- Codding, R. S., & Smyth, C. A. (2008). Using performance feedback to decrease classroom transition time and examine collateral effects on academic engagement. *Journal of Educational and Psychological Consultation, 18*, 325-345.
- Corso, R. (2007). Practicing for enhancing children's social-emotional development and preventing challenging behavior. *Gifted Child Today, 30*(3), 51-56.

- Fisher, C. W., Filby, N. N., Marliave, R., Cahen, L. S., Dishaw, M. M., Moore, J. E., & Berliner, D. C. (1978). *Teaching Behaviors, Academic Learning Time and Student Achievement: Final Report of Phase III-B, Beginning Teacher Evaluation Study in Beginning Teacher Evaluation Study Technical Report Series*. San Francisco: Far West Laboratory for Educational Research and Development.
- Fredrick, W.C., Walberg, J., & Rasher, S. P. (1979). Time, teacher comments, and achievement in urban high schools. *Journal of Educational Research*, 73, 63-65.
- Hine, J., Ardoin, S., & Foster, T. (2015). Decreasing transition times in elementary school classrooms: using computer-assisted instruction to automate intervention components. *Journal of Applied Behavior Analysis*, 48(3), 495-510.
- Hollowood, T. M., Salisbury, C. L., Rainforth, B., & Palombaro, M. M. (1995). Use of instructional time in classrooms serving students with and without severe disabilities. *Exceptional Children*, 61, 242-252.
- Kaiser, B., & Rasminsky, J. S. (2003). *Challenging behavior in young children: Understanding, preventing and responding effectively*. Boston: Allyn & Bacon.
- Lacina, J. (2006). Learning to read and write using the internet: Sites you don't want to miss! *Childhood Education*, 83(2), 117-121.
- Ladarola, S., Shih, W., Dean, M., Blanch, E., Harwood, R., Hetherington, S., Mandell, D., Kasari, C., & Smith, T. (2018). Implementing a manualized, classroom transition intervention for students with ASD in underresourced schools. *Behavior Modification*, 42(1), 126-147.
- Linebarger, D. L. (2011). Teaching with television new evidence supports an old medium: TV still gets a bad rap in education precincts, but studies consistently confirm TV's value

in teaching rudimentary concepts to children, especially those from low-income homes.

Phi Delta Kappan, 93(3), 62-67.

Mathews, S. E. (2012). Singing smoothes classroom transitions. *Dimensions of Early Childhood*, 40(1), 13-17.

MCConaughy, S. H., Achenbach, T.M., & Gent, C.L. (1988). Multiaxial empirically based assessment: Parent, teacher, observational, cognitive, and personality correlates of child behavior profile types for 6- to 11-year old boys. *Journal of Abnormal Child Psychology*, 16, 485-509.

Morrow, L., Barnhart, S., & Rooyakkers, D. (2002). Integrating technology with the teaching of an early literacy course. *Reading Teacher*, 56(3), 218.

Reith, H. J., Polsgrove, L., & Semmel, M. I. (1981). Instructional variables that make a difference: Attention to task and beyond. *Exceptional Education Quarterly*, 2, 246-251.

Rhode, G., Jenson, W. R., & Reavis, H. K. (2010). *The Tough Kid Book*. Eugene, OR: Pacific Northwest.

Sainato, D. M. (1990). Classroom transitions: Organizing environments to promote independent performance in preschool children with disabilities. *Education and Treatment of Children*, 13, 288-297.

Weisz, J. R., Chaiyasit, W., Weiss, B., Eastman, K. L., & Jackson, E. W. (1995). A multimethod study of problem behavior among Thai and American children in school: Teacher reports versus direct observation. *Child Development*, 66, 402-415.

Wilson, R. & Wesson, C. (1986). making every minute count: Academic learning time in LD classrooms. *Learning Disabilities Focus*, 2, 13-19.

Yarbrough, J.L., Skinner, C. H., Lee, Y.J., & Lemmons, C. (2004). Decreasing transition times in a second grade classroom: Scientific support for the Timely Transitions Game. *Journal of Applied School Psychology, 20*, 85-107.

Appendix A

Date:

| Transition | Time | # of students in attendance | # of students with all materials | # of students in the correct location |
|------------------------|-------------|--|---|--|
| Morning Meeting | | | | |
| Number Corner | | | | |
| Social/Science | | | | |
| Reading | | | | |
| Writing | | | | |
| Math | | | | |

Date:

| Transition | Time | # of students in attendance | # of students with all materials | # of students in the correct location |
|------------------------|-------------|--|---|--|
| Morning Meeting | | | | |
| Number Corner | | | | |
| Social/Science | | | | |
| Reading | | | | |
| Writing | | | | |
| Math | | | | |