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**Abstract**

This action research study investigates the use of visual activity schedules (VAS) and augmentative and alternative communication (AAC) charts in a first-grade classroom in Washington State to increase the amount of time that students are on-task during independent and whole group assignments. Students tend to display decreased on-task behavior when transitioning from one activity to another within the academic day, leading to a decreased amount of time spent learning within the classroom. Current research shows that by utilizing VAS and AAC charts within the classroom will positively impact on-task behaviors regardless of transition. Based on current research, implementing VAS and AAC charts throughout the classroom with every student should increase on-task behavior within the classroom throughout the entire academic day.

### **Introduction**

Educators have applied numerous tools to support students with their focus, including technology and visual communication charts. Researchers have been endeavoring to see an advancement with students becoming independent in the classroom by staying on-task throughout the academic day with limited adult intervention as well as support students with adequately communicating with their peers (Kearney, 2018; Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017). While the methods to improve focus include utilizing visual communication charts and technology, the research revealed significant promise in how to better-assist students in the classroom with staying on-task and minimizing challenging behavior, which can significantly contribute to a student's future academic success (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Zimmerman, Ledford, & Barton, 2017; Spriggs, Mims, van Dijk, & Knight, 2017).

### **Dilemma**

The dilemma is that students often solicit adults for assistance in the classroom as a form of task-avoidance, which leads to decreased learning throughout the academic day. The predicament of off-task behavior manifests itself in the classroom in numerous. First, when adults continue to assist students even when the student knows the answer. Second, through various interruptions that take place throughout the academic day, and third, due to transitions that take place throughout the academic day. Frequently as educators, it can seem necessary to assist students all the time, especially with younger students. However, after working with children, this researcher noticed that asking questions back to students is a great way of assessing conceptual understanding, and this can assist adults in better-assisting students who need assistance.

It can be helpful in understanding which students are seeking adult attention as a way of task-avoidance. This researcher noticed that while students needed assistance, other students were working towards avoiding the task at hand. Students would also display different forms of off-task behavior, and this could be seen in students talking to other students at their table as well as working on a different task that was not assigned, such as drawing or even reading. The problem that comes with students displaying off-task behavior in the classroom while other students are working is that it can prompt other students to not continue working on their learning and then it becomes off-task behavior for many students. The next issue is transitioning that takes place throughout the academic day, and this can be in the form of announcements that may come over the intercom or in moving from one class to another.

### **Rationale**

Research has shown that by utilizing visual activity schedules (VAS) and augmentative and alternative communication (AAC) charts with students who display challenging, or off-task behavior or students with autism have shown significant improvement when given VAS or AAC charts to show next steps or use as a way to adequately communicate with their peers or teachers. While working towards resolving the dilemma of how students can be more focused throughout the academic day, students will produce a more comprehensive way of understanding material and become more focused within an educational setting to become more academically successful in the future. Most developed research asserts that there should be additional research completed to further completely understand how VA and AAC charts may enhance student focus (MacDonald, Trembath, Ashburner, Costly, & Keen, 2018; MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

## **Literature Review**

### **Introduction**

The objective of this literature review is to analyze the different methods that educators and researchers have used to improve focus with their students. Educators have applied numerous tools to support students with focus, including technology and visual communication charts. Researchers have been endeavoring to see an advancement with students becoming with their peers (Kearney, 2018; Krantz, & McClenaghan, 2001; Spriggs Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017). While methods to improve focus such as, utilizing visual communication charts and technology may vary, the research revealed significant promise in better-assisting students in the classroom with staying on-task and minimizing challenging behavior, which can significantly contribute to a student's future academic success (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Zimmerman, Ledford, & Barton, 2017; Spriggs, Mims, van Dijk, & Knight, 2017).

### **Visual Communication Charts**

Zimmerman, Ledford, and Barton (2017) proposed that “approximately five million young children are at-risk for or are currently exhibiting challenging behavior” (p. 339). Administering classroom management is not enough; there must be various types of intervention throughout the classroom. Intervention is necessary, but it needs to happen often and promptly to assist students academically. To adequately support students with a range of challenging behaviors and disabilities to become more independent and better communicate with their peers and instructors, researchers have been striving to apply various types of visual communication charts. The different types of charts that researchers have been using are varying forms of visual activity schedules (VAS), graphic organizers, and augmentative and alternative communication

(AAC) charts (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

Typically, these charts provide sequence goals, as the next steps to students that exhibit off-task or challenging behavior in the classroom to measure if these charts could lead to overall academic success throughout a student's education (MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

Understanding different types of charts currently being used to assist students in transitioning through different activities during their academic day will provide perspective to why different charts might be selected over others depending on the students and research.

While using VAS and AAC charts have been used to assist students in various capacities (MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017) conceivably using them may be of use to students who are still discovering how to communicate effectively with peers and instructors in an academic setting. Additionally, utilizing VAS and AAC charts to teach lessons throughout the classroom, can conceivably explain to other students in the classroom how the application of the charts might be used and could set an example to their peers to more effectively communicate with students using the charts (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

Considering that VAS and AAC charts vary, it is necessary for this research to understand both types of charts as they were significant to most of the studies involved. Spriggs, Mims, van Dijk, and Knight (2017) have discussed within their research that there are different types of visual charts and that each chart will be utilized differently based on the student's needs. VAS is utilized to show students next steps through the use of different pictures or visual

prompts. One aspect where researchers and educators typically used VAS is during various transitions where a lack of focus is high within the classroom as well as a way to show students how much work needs to be completed and next steps for assignments (Spriggs, Mims, Van Dijk, & Knight, 2017). Applying AAC and VAS charts to teach whole group lessons throughout the classroom, can also explain how the application of the charts might be utilized to potentially interact with all peers in a way that might be more suitable for communication with all of their peers (Bryan & Gast, 2011; Ganz & Flores, 2008; Spriggs, Mims, van Dijk, & Knight, 2017).

### **Visual Activity Schedule (VAS)**

Havlik (n.d.) emphasized visual activity schedule (VAS) charts are devices concerning intervention for students with autism. Through applying VAS charts as a support for learners with autism, we can assist with understanding “routines, transitions between activities, develop new skills, and reduce dependence on caretakers when completing daily activities” (p. 6).

Researchers apply VAS charts to begin to structure expectations for students by visually showing students next steps that will be carried out in that specific moment, in a specific order. Visual activity schedule charts attempt to establish expectations for learners by visually presenting students with subsequent steps expected in one singular moment. On a VAS board, complex actions are expressed visually and could conceivably explain the measures in a sequence or an action that represent various steps depending on the learner that is receiving assistance in that moment. Visual activity schedule (VAS) charts can be employed to explain to students how to maintain their current routines or how to acquire a different or new skill by breaking the new skill into shorter divisions for the student by expressing every piece visually (Cohen, & Demchak, 2018); Havkik, n.d.; Kidder, & McDonnell, 2017; Lopez, 2015).

Havlik (n.d.) and Zimmerman, Ledford, and Barton (2017) found that most researchers used VAS charts concerning intervention with students who have autism and students who displayed challenging behavior or off-task behavior within the classroom. Kearney (2018) also defined visual activity schedule (VAS) charts as “a series of images, pictures, or photographs, or line drawings or series of activities” (p.2). These images are used to assist in establishing expectations for learnings by visually presenting students with subsequent steps expected. While most VAS charts function similarly, there must be an understanding that an individual VAS charts looks different for every student in some cases (Kearney, 2018; Ledford, 2015; Zimmerman, Ledford, & Barton, 2017). The reality is that a VAS chart can be used to collect data for research and to ensure fairness and effectiveness.

### **Augmentative and Alternative Communication (AAC) Charts**

Augmentative and alternative communication (AAC) charts are comparable to visual activity schedules, but regularly with non-verbal students requiring supplementary assistance communicating in an academic environment with their teachers or peers. Thomas (n.d.), explained that:

Augmentative and alternative communication (AAC) charts include forms of communication (other than oral speech) that are used to express thoughts, needs, wants, and ideas. We all use AAC when we make facial expressions or gestures, use symbols or pictures when we write (p. 5).

With AAC charts, every student and educator can practice using this because it is just another form of communication with students who may be nonverbal or learning another language. Just like VAS charts, AAC charts are also set up in an individualized approach in that all visuals will be in different areas on one student’s AAC chart versus another learner’s AAC charts. The most

significant variation from a VAS chart is that AAC charts can be employed to communicate feelings and emotions, just like we can communicate verbally or even use our body language. Augmentative and alternative communication (AAC) charts better assist students who are missing the ability to communicate these needs/wants verbally.

Both AAC and VAS charts can be created as a paper document or also created within an app that runs on a computer or tablet. According to Frankoff and Hatfield (2011) when creating AAC charts for individuals it helps to ensure that the user or family member is there to calibrate that specific board, “operational competence involves the individual’s ability to master technical skills to operate an AAC system, including selection of accurate vocabulary, updating vocabulary and overall maintenance of system components” (p. 9). When creating charts, each student has their own setup based on their needs (Balasubramanian, 2018; Frankoff & Hatfield, 2011).

### **Participants for VAS and AAC Research**

While most of the students that participated in VAS and AAC research were preschool aged students (3 years old to 4 years old) (Ganz, & Flores, 2008; Kearney, 2018; Kidder, & McDonnell, 2017; Zimmerman, Ledford, & Barton, 2017), there was also a large group of elementary aged students (5 years old to 11 years old) (Cohen & Demchak, 2018; Linderman & Lopez, 2015; Sevin, Reiske, & Matson, 2015), and a select few studies included middle school or high school aged students (Linderman, Whatley, Gast, & Hammond, 2009). Researchers selected students with autism on varying degrees of the spectrum as well as learners who exhibited off-task or challenging behaviors while in the classroom (Cohen, & Demchak, 2018, Ganz, & Flores, 2008; Kearney, 2018; Kidder, & McDonnell, 2017; Linderman, 2015; Lopez,

2015, Sevin, Reiske, & Matson, 2015; Whatley, Gast, & Hammond, 2009; Zimmerman, Ledford, & Barton, 2017).

### **Autism**

This literature review focused on students with autism and information concerning autism may assist in providing context for the challenges that may have been found throughout the research conducted. A person with autism may encounter numerous health and behavioral concerns (Centers for Disease Control and Prevention, 2014). The critical aspect to note is that autism is a spectrum disorder, and some people may encounter symptoms more or less severe than others (Centers for Disease Control and Prevention, 2014, Lopez, 2015).

Balasubramanian (2018), Cohen, and Demchak (2018), Frankoff, and Hatfield (2011), and Thompkins (2019) discussed central challenges students with autism experience. These included, social interactions between peers, verbal and non-verbal behaviors, and as such, they used other resources to interact and communicate with their families, peers, and teachers. In some examples, the use of VAS and AAC charts before implementation may have a slight influence on the outcome for individual students that participated in the study because autism can range from very mild to severe cases of autism, and as such, students with autism will function very differently and require various types of supports with concerns to being in the classroom and their need for learning (American Psychiatric Assoc., 2013; Centers for Disease Control and Prevention, 2014; Cohen & Demchak, 2018; Lopez, 2015).

Recognizing that the spectrum of autism has an extensive reach, the outcome of the studies may vary as well as the implementations, and there will be various outcomes as such (Lopez, 2015). By utilizing VAS charts with students who are autistic this can prompt a student into better understanding their next tasks in order to better set them up for academic success.

According to Thompkins (2019), children who are autistic at times resist, “change in their environment which negatively affects them because of an inability to predict future activities and events, and because it can manifest in difficulties coping with minor changes in daily routines” (p. 19). Regarding students with autism it can be easy to understand how different types of visual communication and possibly even more depending on the activity (Heflin & Alaimo, 2007; Thompkins, 2019).

### **Off Task and Challenging Behavior**

Within the completed research, an attempt to curb the challenging behavior in favor of the student actively engaging in the classroom assignments and whole group lessons was paramount. The challenging behaviors observed throughout the research were objection and disagreement by not beginning tasks promptly, including not completing tasks at all. Additionally, Zimmerman, Ledford, and Barton (2017) found that students would leave the classroom without permission from an adult. At times, students who exhibited challenging behavior would also throw different objects around the room with the intention of the object hitting other students or not, depending on the moment and the student. Challenging behavior included hitting other students, which involved contact with another student’s body with an open or closed hand and/or using their feet to kick other students. This challenging behavior also included yelling with a voice level that was above normal conversing within the classroom. The most important focus in this case was striving to get students back on-task throughout the school day versus engaging in challenging behavior. It is important to note that most of the challenging behavior that was noticed came about during times of the day where there were transitions from one activity to another within the classroom (Zimmerman, Ledford, & Barton, 2017).

### **Horizontal and Vertical Transitions**

According to Stoner, Angell, House, and Bock (2007), there are two different types of transitions that students will experience during the academic day. The first type of transition is considered a vertical transition, which is a transition that every student within the class will experience. A vertical transition is something that students are expecting to happen. For example, the students in class A know that on Mondays they will transition from mathematics in their general education classroom to another classroom where they will learn music from a different teacher. These types of transitions cause some small focus issues but are typically low stress for students because this is a known transition, it is less stressful for students, and therefore students may need intervention at this time but not as much as with other transitions (Johnson, 2008; Stoner, Angell, House, & Bock, 2007).

The next transition that some students experience is horizontal transitions, and these transitions tend to be unexpected for students. A horizontal transition can cause anxiety for a student that, without intervention, can cause students to lack focus from one transition to the next transition. An example of this type of transition could be telling a student to go to a new group that is out of the ordinary, typical day for this student. Not all students experience horizontal transitions the same way or at all, some students welcome the change. Nevertheless, other students experience a horizontal transition in a way that causes anxiety for students, which can lead to a lack of focus. Ensuring that there is a plan in place for these transitions such as an AAC or VAS chart can be beneficial for students who struggle with transitions and focus (Johnson, 2008; Stoner, Angell, House, & Block, 2007).

### **Implementing VAS and AAC Charts**

Through the use of VAS and AAC charts, time management improved, along with student's responsibilities and assignment completion (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017). Implementation of charts are different based on the research conducted also based on the different needs of the students selected to participate in research as outlined previously. However, the way in which charts differed was due in large part to the fact that every child is different and as such the directions on each of these charts had to be different (Cohen, Demchak, 2018; Lindeman, Lopez, 2015; Sevin, Reiske, & Matson, 2015).

With the implementation of using visual activity schedule (VAS) charts, Zimmerman, Ledford, and Barton (2017), made the decision to introduce VAS to students during students' free choice time in order to hope to better implement the chart. In some cases, the choice was made to introduce the charts within inclusive play groups. Ganz and Flores (2008) utilized inclusive play groups whereby students would interact with each other based on different play themes created, such as barbershop or hairstylist. Within these play groups, students would work towards helping the students learn to take turns and focus more around improving social peers' interaction and communication (Ganz, & Flores, 2008).

Cohen and Demchak (2018) created order to their visual activity schedule research by utilizing the following guidelines outlined below. Students were given the activity and then students were given time to respond to that activity. But if students did not respond, the students would be show what was to take place again, then, if that did not prompt the student to begin the correct activity, students were given a verbal prompt. While researchers had similar goals of getting students to follow steps, the students implemented the charts differently.

### **Other Strategies to Increase On-Task Behavior**

There are numerous strategies that teachers and researchers have attempted to apply to increase a student's on-task behavior while inside and outside the classroom. Research has also been completed to find methods to increase on-task behavior by applying technology and cognitive-behavioral modification as well as by implementing the use of visual communication charts around the student's home and community.

#### **WatchMinder**

One way that Finn, Ramasamy, Dukes, and Scott (2015) have attempted to increase a student's productivity within the classroom is by using technology called, WatchMinder. Fundamentally, WatchMinder is a watch that comes in different colors for students to wear. While students are working, this watch is programmed to prompt students with next steps on what to do throughout their academic day. With WatchMinder, students need to go through various activities and trainings to achieve the goal of staying on-task. Additionally, Finn, Ramasamy, Dukes, and Scott (2015) set up tasks for students to complete while wearing WatchMinder, "During the work session when the watch vibrated, the participant was taught to ask himself, 'Is what I am doing right?' And then check 'yes' or 'no' accordingly on the checklist" (p. 1411). To utilize WatchMinder it requires several training sessions for optimal performance.

When WatchMinder was used to increase productivity throughout a student's academic day it was reliant on one additional factor that typically has not been the focus of other research regarding on-task behavior and that is that students are self-monitoring. WatchMinder relies on students having the ability to self-monitor whether or not they were on task, this puts some of the responsibility on the students. As with using VAS and AAC charts, WatchMinder can be

programmed to reflect student individual needs and thus, all the programmed WatchMinder watches are different and programmed for an individual student. The result of WatchMinder was improved on-task performance within the classroom. However, once the research was completed data was then collected regarding on-task behavior, but without the use of WatchMinder watches, it was revealed that in every case, on-task behavior did increase, but in most cases the behavior did not drop to the baseline data previously collected (Finn, Ramasamy, Dukes, & Scott, 2015).

### **Cognitive-Behavior Modification**

Crum (2004) used a method called cognitive-behavioral modification to increase productivity with one student who exhibited challenging behaviors while in a classroom setting and as a result productivity was significantly decreased. By relying on cognitive-behavioral modification Crum (2004) also relied heavily on the student self-monitoring progress throughout the student's literacy time within their academic data. According to Crum (2004), cognitive-behavioral modification is "also known as cognitive-behavior management, self-monitoring, self-instruction, or metacognition, the program teaches individuals with behavior disorders to monitor their own work or behavior and to administer their own reinforcement, when appropriate, thereby enhancing their independence" (Crum, 2004, p. 305).

Crum (2004) set up a monitoring form for the student to complete while within the student's literacy block which included the following information:

When you are in class and think about it, put a "+" in a square if you are working or studying. Put a "0" in a square if you are off task and not working. Fill in Row 1 first, then Row 2, and so on. You should fill in at least two rows per class (p. 307).

Throughout this research, Crum (2004) asked students to collect their own data and once the study was complete the students were able to increase their on-task behavior from an average of 17.33% to 66.44% (Crum, 2004). The students were held accountable for tracking their results, thereby allowing the students to see the information they were providing the researcher.

### **Implementing AAC and VAS Charts at Home**

While many researchers conducted their research within classroom or school environments, there is very little research that has been conducted on the use of AAC and VAS charts to improve student's focus while at home or in the community. By utilizing AAC and VAS charts at home and within the community, there can be additional information on the effectiveness of the charts concerning their attempt to improve focus while students work to complete tasks throughout the research being conducted. Oono, Honey, and McConachie (2013) explained that in order for visual communication charts to be successful with children who have autism, their parents must also be utilizing these charts at home with their family (Oono, Honey, & McConachie, 2013). This research was initiated because studies regarding the different visual communication charts like AAC and VAS charts at home and within the community had been under-researched (Arthur-Kelly, Sigafos, Green, Mathisen, Arthur-Kelly, 2009; NICE, 2011; Oono, Honey, & McConachie, 2013; Rutherford, Baxter, Grayson, Johnston, & O'Hare, 2020). By researching how the charts could be used at home and in the community, this meant that researchers, Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) needed to include parent participants in the learning of how these charts function, as well as how they will, researchers needed to show participants how to interact with these charts while they used the charts at home to ensure that participants were utilizing these charts in the same way. This was necessary because there was an understanding that different levels of knowledge within-participant

populations existed and all participants would need to be carefully trained and selected (Rutherford, Baxter, Grayson, Johnston, & O'Hare, 2020).

For Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) to research the use of visual communication charts in the home and for their particular study, they needed to include the parent participants in education them with how these charts would be used while at home. To ensure that all participants met different requirements and levels of understandings for their study; Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) worked to find the right candidates to participate in the study by conducting a survey for families to complete in the community. The researchers also created requirements needed to be considered for participation within the study, they were looking for families that matched the following criterion; parents who had a child with a confirmed case of Autism Spectrum Disorder (ASD) of up to 13 years of age, and for professionals with an education or health background as well as had provided a wide range of support to ASD children and their families (Rutherford, Baxter, Grayson, Johnston, & O'Hare, 2020).

For Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) to research the use of visual communication charts in the home of their particular study, they needed to include the participants in educating them with how these charts would function. To ensure that all the participants met different requirements and levels of understanding for their study; Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) worked to find the right candidates to participate in the study by conducting a survey for families to complete in the community. The researchers also created requirements needed to be considered for participation within the study, they were looking for families that matched the following criterion; parents who had a child with a confirmed case of Autism Spectrum Disorder (ASD) of up to 13 years of age, and for

professionals with an education or health background as well as had provided a wide range of support to ASD children and their families (Rutherford, Baxter, Grayson, Johnston, & O'Hare, 2020).

Once the participants were selected for the study, Rutherford, Baxter, Grayson, Johnston, and O'Hare (2020) then split the children and the parents up to teach them separately on how to effectively utilize the visual communication charts using "naturalistic teaching and coaching methods" (Machalicek, Didden, Lang, Green, Laquia, Sigafoos, & O'Reily, 2014). Along with training, the researchers worked with the parents to go over goal setting and coaching of parent groups of parents as one-on-one training which proved ineffective for training the parents with information needed to visual communication charts effectively at home (Rutherford, Baxter, Grayson, Johnson, & O'Hare, 2020; Weitzman, 2013; Arthur, et. al., 2009). Rutherford, Baxter, Grayson, Johnston, & O'Hare (2020), then began teaching the students how to effectively use these charts at home and throughout their community per the study.

One limitation of the study was that there was not practical way to gather data about the time families spent utilizing different visual communication charts. However, participants were encouraged to utilize both types of charts, a chart that was created with the families specifically for the children participants, and a more standardized visual communication chart that could be interchangeable from person to person (Rutherford, Baxter, Grayson, Johnston, & O'Hare, 2020). As children get older and learn to use the visual communication chats more effectively, they should be taking a more self-managed approach to utilizing visual communication charts (Lequia, Machalichel, & Rispoli, 2012).

While Rutherford, Baxter, Grayson, Johnson, and O'Hare (2020) placed a significant value on the consistency throughout the setting of the study, several factors, created

inconsistency, within settings, and ultimately the researchers were not able to make any definite claims or conclusions from their research. Rutherford, Baxter, Grayson, Johnson, and O'Hare stated that more studies utilizing various forms of visual communication charts at home as well as in the community could prove valuable in gaining further understanding of how communication charts could be utilized.

### **Other Methods of Behavior Management**

The focus within much of the research is around ways to increase focus amongst elementary aged students; this is a form of behavior management. As such, it is essential to understand various methods of potentially useful types of behavior management. Some of the various of research concerning behavior management included thoughts on inclusion within general education classroom, utilizing the good behavior game, and utilizing response intervention (RTI).

### **Inclusion in General Education Classrooms**

One study researched behavior management of high functioning autism spectrum disorders (HFASDs) by including students into a general education classroom. At the time this was an extremely controversial topic, this study was due in large part to better understand an inclusion model for HFASD students and how it may benefit these students from a behavior standpoint (Sansosti, Sansosti, 2012). According to Sansosti and Sansosti (2012):

Although research generally has demonstrated that students with HFASDs can be educated within inclusive settings successfully, there is increasing acknowledgement that some students with HFASDs might benefit from time in segregated programs where they can develop skills that are difficult to train within general education (GE) classrooms

(i.e., behavioral regulation, adaptive skills) and where they are less likely to be shunned by others (p. 918).

To best research inclusivity amongst HFASD students in general education (GE) classes, Sansosti and Sansosti utilized a phenomenological approach meaning that the goal is to use actual experiences to fully understand differing perspectives amongst everyone involved within the research (Bogdan & Bilkan, 1998). Participants for this particular study came from a “mid-sized suburban fringe/rural school district in west central Florida that has demonstrated a disproportionate increase in the number of students on the autism spectrum” (Sansosti, Sansosti, 2012, p. 919). After looking at the school districts in Florida and identifying the school/school district that best fit the overall criteria, then additional following criteria were created for selecting participants:

(a) GE teachers who were responsible for the delivery of inclusive education for students with ASDs; (b) special education personnel at the school (self-contained and resource teachers) who were involved with the instructional and placement decision making for students with ASDs; and (c) additional personnel who were actively involved in the instructional planning and decision making for students with ASDs, including one administrator and up to two specialist (e.g., behavior specialist, school psychologist, speech/language pathologist) from each of the targeted schools (Sansosti, Sansosti, 2012, p. 919).

By utilizing this criterion, Sansosti and Sansosti were able to setup a study that would further understanding of how inclusivity of HFASD students in GE classrooms. Additional research focus groups and individual interviews were created where participants were asked questions and able to share in their experiences regarding the research being conducted. Once the focus groups

and interviews were completed, the recordings of both the focus groups and interviews were transcribed with notes and themes created to better go through and find common or reoccurring themes within the data that was gathered (Sansosti, Sansosti, 2012).

Based on the results gathered from the focus groups and individual interviews conducted Sansosti and Sansosti were able to conclude:

- (a) Inclusion for students with HFASDs is fundamentally different from inclusion for students with other disabilities, (b) inclusion as a general education practice is inherently flexible and variable, and (c) inclusion means not being dependent on an adult aide (Sansosti, Sansosti, 2012).

The other information that they were able to gather was that their studies with each student was different and therefore the results varied based on students. The focus, being scaffolding for students in the best way possible for GE teachers who were participants within the study. Some participants also commented that HFASD students who typically received one-on-one support were potentially losing an additional element to learning because for this inclusion model the students were to be placed in GE classrooms without the additional adult support they traditionally had prior to this research.

One interesting aspect to Sansosti's and Sansosti's (2012) research was its emphasis on further understanding how HFASD students interacted with peers their own age. In the research conducted, "Educator participants acknowledged that students with HFASDs are likely to benefit from access to typically developing peers who model age-appropriate skills (Sansosti, Sansosti, 2012, p. 924)." By having GE peers naturally model behaviors within the classroom, HSASD students were able to dramatically develop communication and social skills due in large part to this inclusivity research (Sansosti, Sansosti, 2012).

### **The Good Behavior Game**

Coombes, Chan, Allen, and Foxcroft (2016) utilize a mixed-method approach to researching more around the good behavior game (GBG). They selected 12 teachers to participate in their study, all the teachers were women with varying ages and on average had been teaching for 8 years. Once the teachers were selected, they went through training with different GBG coaches to learn how to use the game effectively within their classrooms. The teachers were teaching age levels from 5 years old to 8 years old. Coombes, Chan, Allen, and Foxcroft (2016), looked at how one could implement a “good behavior game” (GBG) within English primary schools to work towards combating challenging behavior within schools. To start, Coombes, Chan, Allen, and Foxcroft (2016) explained about the importance of inclusivity within the classroom but while education works towards the goal of inclusivity, there are times where inclusivity may not accommodate every student, which in turn resulted in challenging behaviors within the classroom. The researchers stated that the purpose of studying was to work towards creating school classrooms that are truly inclusive, and this can be assisted by having the ability to manage challenging behavior within the classroom (Coombes, Chan, Allen, & Foxcroft, 2016).

Coombes, Chan, Allen, and Foxcroft (2016), researched the effects of a game on the behavior of student with the classroom. The game that researchers begin utilizing is called the good behavior game (GBG) and the following outlines the rules of the game within the classrooms:

The premise of the GBG is that pupils who are grouped into teams in the classroom balanced for gender, behavior, learning and ability will encourage, influence and help each other to ‘win’ the game and meet behavioral expectations. In this way, pro-social

behavior and academic progress is rewarded for all within an inclusive group-oriented system, leading to the internalization of norms for appropriate behaviors and also to the generalization of these behaviors to other settings, including other school, home, and community settings (Coombes, Chan, Allen, and Foxcroft, 2016, p. 370-371).

By splitting the class into two groups while playing GBG, this game is led through social pressure from peers to create and work towards good behavior within the classroom. Students do not want to be the reason why their team cannot win the game, so all students tended to follow the rules of the game. The rules for GBG can be different depending on the teacher and what the lesson is. The teacher sets the parameters for GBG at the top of each lesson, for example, a teacher could say, “during our literacy block, we will be playing GBG and this means that all students must follow the rules during our literacy block, we will be playing GBG and this means that all students must follow the rules during our literacy block to win the game.” The rules for the game could be that the students must be quiet and cannot leave their seats but in other instances the rules could be that the students needed to work together to solve a problem and thus, they must follow the rules of working teams to win the game. While the game is being played, the emphasis for the teacher was to focus on the good behaviors that are happening around the classroom.

Coombes, Chan, Allen, and Foxcroft were able to conclude that there was improvement in three different areas: “inclusion and social participation, behavior and concentration (Coombes, Chan, Allen, & Foxcroft, 2016, p. 384).” As a result of the GBG, teachers found that challenging behavior was significantly reduced as a result of peers holding each other accountable and that behaviors while working in groups or teams also improved. Students were also able to complete more work throughout the day because of the GBG.

**Response to Intervention (RTI)**

Algozzine, Wang, White, Cooke, Helf, Marr, Algozzine, and Duran (2012) conducted a study on response to intervention (RTI). By utilizing RTI to assist students with challenging behavior in the classroom, teachers needed to screen and evaluate students to see what interventions were needed for students. For example, all students start out at the same place when learning but then screening or rather assessments can be completed. Once the first round of screening was completed the teacher could observe which students progressed and which students still need additional support. The students who needed additional support would then meet as a smaller group to learn the lesson in a different way. Then the students from the smaller group were screened. If a student moved to the next smaller group, then more resources and supports were found for these students to learn the content (Algozzine, Wang, White, Cooke, Helf, Marr, Algozzine, and Duran (2012)).

Algozzine, Wang, White, Cooke, Helf, Mar, Algozzine, and Duran utilized seven different elementary schools within one school district. The focus was on students in grades K-3 who struggled with behavior. The schools that were selected followed the following criterion: 40% of the school was on free and reduced lunch and were willing to use the research measurables to identify reading and behavior improvement. Within the research that was conducted, the schools were to use Dynamic Indicators of Basic Early Literacy Skills (DIBELS) to measure literacy improvement amongst the students participating within the research (Algozzine, Wang, White, Cooke, Helf, Mar, Algozzine, and Duran, 2012).

The researchers found data to support RTI as an effective approach to addressing academic and behavioral needs for students with the classroom. Algozzine, Wang, White, Cooke, Helf, Mar, Algozzine, and Duran (2012) do suggest that while RTI can be considered an

effective approach but that their main goal with this research was to assist in contributing to an understanding that the most important aspect of teaching is by “implementing high-quality instruction” (Algozzine, Wang, White, Cooke, Helf, Mar, Algozzine, and Duran, 2012).

### **Conclusion**

In most cases, using visual activity schedule (VAS) and augmentative and alternative communication (AAC) charts, reduced the amount of adult intervention that took place throughout a student’s day. As such, students were able to get more work completed on their own, as well as transition from one activity to the next, with little to no adult intervention (Cohen, & Demchak, 2018). Ganz and Flores (2008), were able to help younger kids communicate effectively and positively within a group of their peers while moving around a created social play group. Zimmerman, Ledford, and Barton (2017) were able to observe a decrease in challenging behaviors. There was also an increased level of engagement after the use of VAS and AAC charts in the classroom that in some cases, exceeded their peers’ level of engagement (Cohen & Demchak, 2018; Ganz, & Flores, 2008; Zimmerman, Ledford, & Barton, 2017).

### **Question**

How will utilizing visual activity schedule (VAS) and augmentative and alternative communication (AAC) charts during class affect students’ work performance when working groups and independently?

### **Purpose**

The purpose of this action research study was to discover if using visual activity schedule (VAS) and augmentative and alternative communication (AAC) charts will decrease students’ task-avoidance and increase time spent learning/studying. Prior to this action research proposal,

learners spend decreased on-task behavior when soliciting assistance from adults, while transitioning from one activity to another within the classroom, and students work on other work to avoid the task currently being worked on in the classroom. When students find ways of off-task behavior it leads to a decreased amount of time spent learning with a whole group or when operating independently on assignments.

Kearney (2018) noted that at times, “students had difficulties transitioning in and out of the classroom, and students who had no language ability had difficulty communicating” (p.6). At times this could lead students to being off-task for the duration of the assignment given or the whole group lesson which can lead to further problems throughout the academic day (Kearney, 2018). By using VAS and AAC charts with students with autism, as well as with students who display challenging behavior while in the classroom, researchers are able to raise the amount of focus time above that of their typically developing peers’ baseline data (MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

By utilizing VAS and AAC charts with students who have autism, researchers have been striving to see an advancement with students who have autism in becoming more independent in the classroom by staying on-task throughout the day with little adult intervention (Kearney, 2018; MacDuff, Krantz, & McClenaghan, 2001; Spriggs, Mims, van Dijk, & Knight, 2017; Zimmerman, Ledford, & Barton, 2017).

### **Methodology**

For this action research study, a qualitative approach served as the best method to address the subsequent purpose of the study: the purpose of this action research study is to find out if visual activity schedule (VAS) (Appendix C) and augmentative and alternative communication

(AAC) (Appendix D and Appendix E) charts would decrease students' task-avoidance and increase time spent learning. Within the action research study, the following data collection tools would have been used, tally sheets (Appendix A), student generated artifacts, interviews (Appendix B), and observational field notes. This action research would have utilized tally sheets (Appendix A), which according to Hendricks (2017), "can provide useful information about difference in increased achievement between and among groups" (p. 115). Baseline data would have been collected by adding a tally mark every time students were off-task throughout the entirety of the academic day before VAS and AAC charts were introduced to the class. Once the VAS and AAC charts were introduced to the class then tally marks would have been added to the tally sheet anytime students were off-task. The tally sheet is setup in such a way that each individual box held twenty marks to assist in data collection throughout the entire action research study.

Once collected, data would have been placed into charts using Microsoft Excel to give a better overall understanding of how the data related to each other with regard to baseline data and data collected after the intervention of VAS and AAC charts. The research would also have utilized student generated artifacts. These artifacts would have been used to gather additional baseline data and data throughout the study. Visual activity schedule (VAS) and augmentative and alternative communication (AAC) charts would have been implemented to see if there was a difference in how the students were performing with the charts versus without the charts. This data would have been tracked in Microsoft Excel to help visualize the data.

Student generated artifacts would also have been used to see if VAS and AAC improved student focus while working on independent or group assignments. To help measure on-task behavior, this researcher would have looked at all the following questions with relation to

student generated artifacts: (1) Is the work complete? (2) Is this the student's best example of work? (3) Was adult intervention needed to complete the assignment? The utilization of student generated artifacts also assisted in the process of generated baseline data so that once charts were introduced, this researcher could potentially see a change in the student generated artifacts that were being completed. If the students were not completing their work, then the behavior would not be considered on-task behavior and as such, this researcher needed to ensure that I looked at student generated artifacts because it does provide a greater understanding of actual work that has been completed throughout the action research study. For example, if a student was sitting quietly at a table, but the work was not completed, then I could not consider this on-task or more focused behavior. Just as with tally sheets, all information would have been collected, using each question above as a measurable point for student generated artifacts.

Student interviews would also have been utilized to identify themes or patterns that may have emerged from the data collection process. All the interview notes would have been kept in a field notebook specifically for this action research study. The interviews would have been conducted with rotating students, every Friday throughout the duration of the research with the exception of one Friday which we were not in school. In these structured interviews, students would have been asked the following questions: (1) Do you think that you were on-task for the entire assignment? (2) If so, why? If not, why? (3) Did you use VAS or AAC charts? (4) Why or why not? (Question 3 and 4 was not asked during baseline data collection) (5) Did you need help throughout the assignment? Five students were pulled each week to be asked the above questions.

By pulling five students every week it would have created an opportunity for all students to provide feedback with regards to student self-reflection and how they interacted with the VAS

and AAC charts. By asking these questions it also would have added additional information and perspective to the research. For example, information about whether students were finding the correct resources or if they needed different types of visuals on the visual activity schedule (VAS) or augmentative and alternative communication (AAC) charts.

Observational field notes would also have been recorded and then coded, and the codes would have been incorporated into the field notebook that was used for this action research study. The codes would have been compiled based on themes that emerged from observational field notes that were taken during the action research study. Observations would have focused on behaviors. This researcher would also have utilized peer debriefing, which Lincoln, Guba, Rossman, and Rallis (2012) described as, “discussing your study with a colleague, peer, or critical friend who is not invested in the study (not as a collaborator)” (p. 65). The peer debriefing happened between other teachers within the first-grade level Professional Learning Community (PLC), which meets weekly to collaborate and plan curriculum for the first-grade level band. Within the peer debriefing we utilized and discussed the study that was collected (Hendricks, 2017; Lincoln, & Guba, 1985; Rossman, & Rallis, 2012). According to Lincoln and Guba (2012), “the longer that you are able to collect data the more likely you are to see the true effects of your intervention” (p. 65).

Researchers Hendricks (2017) and Rossman, and Rallis (2012) suggested that intention concerning the overall research and as such would be completed over the period of one month to collect the most reliable information possible for the action research being conducted. Member checks will also be important when it comes to gathering more information (Simmons, 2009). Simmons also stated that conducting member checks is, “a useful way to reduce bias and increase credibility in your study” (p. 65). To follow through with member checks throughout

the research process, there will be regular weekly meetings with small groups of individuals, such as mentor teachers that are not involved in your research process. Member checks provided additional perspective with the data that was collected (Hendricks, 2017; Simmons, 2009).

### **Design**

The research design method would have been qualitative action research. By utilizing the qualitative design method for this action research study, it would have provided immeasurable insight into explaining the complexities of preparing students to focus while in the classroom throughout the academic day. One crucial element to note is that throughout the research, some variables would have made adequately capturing data more complex, and that is the understanding that in some cases, these charts may vary from student to student as all students have different needs with consideration to focus. Throughout the intervention and baseline data collection process, also through the interim analysis adjustments would have been made if necessary, for the students selected to participate and thus could impact the outcome of the study.

### **Context**

This action research would have been conducted in a suburban elementary school located in Washington, the fifth-largest municipality within Washington state. As of 2019, there was an estimated population of 145,300 residents. Of the residents that live within the city, 39% were foreign-born. The ethnicity/race of the residents divides down to approximately 50%, White, 34% Asian, 7% Hispanic or Latino, 3% Black or African American, and 6% were included as other. The majority of the occupations that made up the workforce in this city included management, nosiness, science, and the arts, having made up about 645 of the jobs within the city. The medium household income was roughly \$150,000 to \$199,999 (City Demographic profile, 2019).

The school in which this analysis would have taken place would have been in an elementary school that had approximately 684 students registered. This elementary school was considered a Title I school and a dual language education school, where some students learn English and Spanish with a 90-10 dual program model. The 90-10 dual program model refers to the amount of Spanish and English that was spoken in the classroom. For example, within this school 90 percent of the time within the dual classrooms Spanish had to be used, however for the other 10% of the time English would be spoken so that students were getting both English and Spanish. Additionally, this means that one or two subjects, depending on grade level would be taught in English versus Spanish due to the 90-10 dual program model, for example, in the first-grade dual classrooms science would be taught in English versus Spanish. Of the student that attended this elementary school, 50.9% were English language learner (ELL) students. Additionally, 44.0% of the learners were considered low-income students (OSPI, 2019).

### **Participants**

This action research study would have taken place within one first-grade classroom where this researcher completed her student teaching. One class would have been used to ensure that the study would have been manageable. By focusing on one class, it would have also increased the effectiveness of the study (Hendricks, 2017). The participants would have consisted of 22 first graders from one first-grade class. Of the 22 first grade students selected to participate in the study, one student had an Individualized Education Plan (IEP), and there were 13 English language learner (ELL) students enrolled within the first-grade class. Accompanying would have been one mentor teacher and the students in the first-grade class, the participants would have additionally incorporated parents who would volunteer their time to support the classroom during small groups and center activities.

Ethical guidelines were followed to gather participants in the action research being completed. This researcher was bound by the guidelines that protected human participants and as such, this researcher would follow those guidelines throughout, which included obtaining permission to use students' data from parents/guardians/participants and a statement was made on the permission form stating that participants were able to withdrawal from the study without penalty (Hendricks, 2017).

### **Intervention**

The intervention phase would have begun by collecting data other than baseline data, this researcher would have established new classroom conventions for students and the teachers that worked in the classroom. This researcher would have explained to the student participants the usual usage for the visual activity schedule (VAS) and alternative and augmentative communication (AAC) charts within the classroom in which we would have been utilizing throughout the duration of the action research study. Setting up the new classroom norms and conventions aligns within the ideas that with other studies researchers had completed in that it was a type of training that done between the researchers and the participants and it was necessary to ensure that participants utilized the VAS and AAC charts correctly to collect valuable and accurate results. The students would have learned how exactly to utilize both charts, the visual activity schedule (VAS) and the augmentative and alternative communication (AAC) charts in class. Teaching the students, the proper way to utilize the charts in class would have given students an idea of what the conventions would have looked like within the classroom when using VAS and AAC charts.

For this action research project, this researcher would have used VAS and AAC charts throughout the academic day observing the data results against the baseline data collected the

week prior to beginning the intervention phase. This data collection would have been implemented throughout the academic day because within the research that had been conducted prior to this action research study it was shown that students typically struggled with on-task behavior during the different types of transitions that took place throughout the school day (Johnson, 2008; Stoner, Angell, House, & Block, 2007). These transitions that took place throughout the entirety of the academic day, as such the decision was made to utilize VAS and AAC charts in the classroom throughout the day with students.

March 9-March 13	Begin collecting baseline data by utilizing tally sheets and observational data.
March 16-April 10	Begin intervention phase, collecting data through tally sheets, observational field notes, student-generated artifacts, and interviews (interviews on 03/06, 03/13, 03/19, 03/20, 03/27). Focus on interim analysis of data being collected throughout action research.
April 10-May24	Continue working on data analysis and writing/recording final results and completing action research study.

This action research study would have begun in March a little after mid-winter break would have completed. When the students would have returned from mid-winter break, it would have been a great time to begin reestablishing behavioral norms and classroom conventions that would be reinforced similar to the first week of school or even when coming back from any other longer break from school, and this would have been an ideal opportunity to introduce new concepts surrounding behavior and communication regarding research intervention with the students. Basic VAS and AAC charts would have been set up after the collection of baseline data that included academic language for next tasks to be completed and communicated on each of the student's desk; then larger versions VAS and AAC charts would have been projected onto

the smart board to use throughout the whole group lessons and when new vocabulary was taught within the classroom.

These VAS and AAC charts would showcase images with regards to new vocabulary being taught and assisted in providing imagery for students next steps for whichever specific lesson was being taught in that moment. For example, when writing, once students completed their whole group writing lessons, students would be given next steps of what would need to be completed for that individual assignment. If the assignment was an expository writing then the students would have been given their next steps visually so images would show beginning, key details, and conclusion, which would have let the students know their next steps. Student would have needed to be working until this was complete. The VAS and AAC chart directions would have been included for the next steps for each assignment on the smartboard before the beginning of every activity.

Throughout the intervention process, student generated work would also be utilized. If the students were not completing their work, then the behavior would have still not been considered on-task behavior and as such this researcher would have to ensure that the student generated artifacts would be utilized as it would have assisted in providing a good picture of actual work that was being completed throughout the study. For example, if a student was sitting quietly at a table but work had not been completed then we could not consider this more focused, on-task behavior. Just as with tally sheets, all this information would have been collected and analyzed utilizing Microsoft Excel to provide a visual way of seeing the data, utilizing each question as a measurable point.

Along with utilizing student generated work, student would have also been interviewed and asked a series of questions to gain a better perspective into how the students felt they were

interacting with the VAS and AAC charts as well as if the charts perhaps needed a change or an update in the visuals that would have been located on the VAS or AAC charts that the students were utilizing. By asking questions in student interviews it would have provided additional perspective to the research, for example: if students are not finding the correct resources or if they would need different types of visual for the students individual VAS or AAC charts that were placed on their desks throughout the academic day to assist with on-task behavior.

### **Data Gathering Instruments/Assessments**

To gather data for this intervention, there would have been various tools used for assessments such as, observation student data, student interviews, and students generated artifacts. Along with varying interventions, there would have been pre-assessments as well as post-assessments that would have been completed to compare and contrast data against established baseline data for the action research study. Various different tools would have been used for assessments and data collection because this would have created a more credible and reliable source of data according to Hendricks who stated that, “Multiple data collection strategies must be employed to establish credibility of research finding” (p. 70).

**Assessment #1: Pre/Post Assessment: Recorded Tally Marks.** There would have been a pre-assessment, which would have also served as baseline data for the action research study. For the baseline data collection, students would have been given their work throughout the academic day without AAC or VAS charts provided during the lessons or the assignments. A tally mark would have been recorded for all adult intervention when student had been given assignments during individual or group work that would have been completed after whole group instruction. Additionally, a post assessment would have also included the same process but would have provided further information on whether any change that occurred would stayed the

same or changed after the completion of the intervention phase of the action research study. Once the VAS and AAC charts would have been introduced to the class then tally marks would have been added to the tally sheet anytime the students were off-task. The tally sheet would have been setup in such a way that each individual box would have held twenty tally marks to assess with the data collection process throughout the entire action research study.

**Assessment #2: Student Generated Artifacts.** Student generated artifacts would have been collected to see if student work output was better based on additional focus or on-task behavior while working independently or in whole groups. To utilize student generated artifacts the following questions would have been asked:

1. Is the work complete?
2. Is this the student's best example of work?
3. Was adult intervention needed to complete this assignment?

The responses to these questions would have been used to gather both baseline data as well as once the VAS and AAC charts were implemented in the classroom to see if there would be a difference in how students would have performed with charts and without.

Once the data would have been collected, it then would have been placed into charts using Microsoft Excel to give better overall understanding of how all the data related to each other with regard to baseline data and data collected after the intervention of VAS and AAC charts. This researcher would also have utilized student generated artifacts. These artifacts would also have been used to gather additional baseline data and data throughout the study. Visual activity schedule (VAS) and augmentative and alternative communication (AAC) charts would have been implemented to see if there is a difference in how the students would have

performed with the charts versus without the charts. This data would have been tracked in Microsoft Excel to assist with visualizing the data that was collected.

**Assessment #3: Student Interviews.** Student interviews would also have been utilized throughout this action research study as it served to give a better understanding of any themes or patterns that would have been seen after collecting data from tally sheets or from student generated artifacts. All the interview notes would have been kept in a field notebook specifically for this action research study. These interviews would have been conducted with rotating students, every Friday throughout the duration of the data collection process with the exception of one Friday which students had off from school. In these structured interviews students would have been asked the following questions:

1. Do you think you were on-task for the entire assignment?
2. If so, why? If not, why?
3. Did you use VAS or AAC charts to help you complete your assignments? (This question would not have been asked during baseline data collection)
4. Why or why not? (This question would not have been asked during baseline data collection)
5. Did you need help throughout the assignment?
6. Where were you able to get help from?
7. How did you communicate throughout the assignment?

Five students would have been pulled each week to ask the above questions. By pulling five students every week, it would have created an opportunity for all students to provide feedback with regards to self-reflection on how they are interacting with the VAS and AAC charts.

**Assessment #4: Observational Field Notes.** Observational field notes would have been recorded as well in the same field notebook as the data gathered from the interviews. The observational field notes would have been coded, and the codes would have been incorporated into the field notebook that would have been used for this action research study. The codes would have been compiled based on themes that would have been captured from the observation field notes collected throughout the academic day with the students in the classroom. Observations would have been focused on observed behaviors that would have taken place throughout this action research study while in the classroom during the baseline data collection process as well as during the intervention data collection process.

This research would have utilized peer debriefing, which Lincoln, Guba, Rossman, and Rallis (2012) described as, “discussing your study with a colleague, peer, or critical friend who is not invested in the study (not as a collaborator)” (p. 65). The peer debriefing would have taken place between this researcher and other teachers within the first-grade level Professional Learning Community (PLC), which meets weekly to collaborate and plan curriculum for the first-grade level band. Within the peer debriefing we would have discussed the study to gain additional knowledge and potentially discuss alternative methods of interpreting the data. (Hendricks, 2017; Lincoln, & Guba, 1985; Rossman, & Rallis, 2012).

According to Lincoln and Guba (2012), “the longer that you are able to collect data the more likely you are to see the true effects of your intervention” (p. 65). Researchers Hendricks (2017) and Rossman, & Rallis (2012) suggested that intervention concerning the overall research should take at least one month and as such this intervention and data collection for this action research study would have been completed over the period of one month to collect the most reliable data possible.

Simmons (2009) also stated that conducting member checks is, “a useful way to reduce bias and increase credibility in your study” (p. 65). In order to follow through with the member checks throughout the research process, there would have been regular meetings with small groups of individuals, such as mentor teachers that were not involved in the research process. As a result, it would have provided additional perspective with the data collected (Hendricks, 2017; Simmons, 2009).

Validity: To increase the credibility and validity, several different strategies would have been employed such as; peer debriefing, engaging in persistent and prolonged observations, and the use of member checks. This research would have utilized peer debriefing, which Lincoln, Guba, Rossman, and Rallis (2012) described as, “discussing your study with a colleague, peer, or critical friend who is not invested in the study (not as a collaborator)” (p. 65). The peer debriefing would have taken place between this researcher and other teachers within the first-grade level Professional Learning Community (PLC), which meets weekly to collaborate and plan curriculum for the first-grade level band. Within the peer debriefing we would have discussed the study to gain additional knowledge and potentially discussed alternative methods of interpreting the data that would have been collected (Hendricks, 2017; Lincoln, & Guba, 1985; Rossman, & Rallis, 2012).

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### **Results**

Unfortunately, due to the effects of the coronavirus (COVID 19) to the 2019-2020 school year, data was unable to be collected. Based on the research outlined in the literature review there are many different inferences one could make with regard to the use of implementing VAS and AAC charts and its ability to promote on-task behavior with students. Based in the completed research it is believed that the use of VAS and AAC charts would have assisted students in improving on-task behavior throughout the academic day. As outlined in Cohen and Demchak’s (2018) research, the use of VAS was shown to increase on-task behavior in an academic setting. Additionally, staff and teachers that worked with the student participants acknowledged that the visual supports were easy to use and implement which can be useful when deciding which type of interventions to utilize within an action research study (Cohen, & Demchak, 2018).

Moreover, Kearney (2018) observed an increase in on-task behavior as well as independence within the classroom while working on independent tasks throughout the use of VAS and AAC charts. Students who participated in the previously mentioned studies differed in

their success rate of increased on-task behavior due in large part to students being different in the way they behaved in the classroom without VAS charts. Due to the fact that all students fluctuated in their behavior, it should also be considered that while most students may have seen an increase in productive, on-task behavior, each student would be impacted in different ways as every student is different thus, their needs may also be different. While each student may increase their on-task behavior, not every student might see an increase in their on-task behavior at the same rate which was observed in research conducted prior to this action research study (Cohen, & Demchak, 2018; Kearney, 2018, Ganz, & Flores, 2018).

### **Discussion**

#### **Conclusions**

To conclude, while research was incomplete, one could ascertain that there would have been an increase with most students on-task behavior while utilizing VAS and AAC charts. Based on the research conducted for the literature review, it was found that utilizing visual communication charts with students in an academic setting did, in most cases, increase on-task behavior as well as independence. One could speculate that by utilizing similar charts in the classroom that the same outcome could be applied for this action research study.

#### **Implications or relevance**

The implications of this action research study could potentially assist students in becoming more successful within their ongoing academic career. Not only could this study potentially yield results that show an increase in on-task behavior within an academic setting, it could provide students further assistance in understanding how to organize thoughts and ideas that work best for them with regard to staying on-task. By increasing on-task behavior within the classroom, teachers would be able to focus on students' conceptual understanding of

concepts, which could lead to greater academic success for students throughout their academic careers.

### **Limitations**

There were two limitations in this action research study. The first limitation was that the data collection process was unable to be started and completed due to COVID-19. Schools were closed and the data could not be collected. The second limitation would have been the accuracy of the data. Just based on how VAS and AAC charts typically function in that every chart is different for every child, this would have created a limitation in results. For example, some students need more, smaller steps that have been broken down from larger steps of next tasks for the students to complete.

### **Recommendations**

One future recommendation for conducting this action research study would be to use just one chart to evaluate the effectiveness of on-task behavior. Another recommendation would be to only focus on students who are impacted by off-tasks behaviors.

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## **Appendix B**

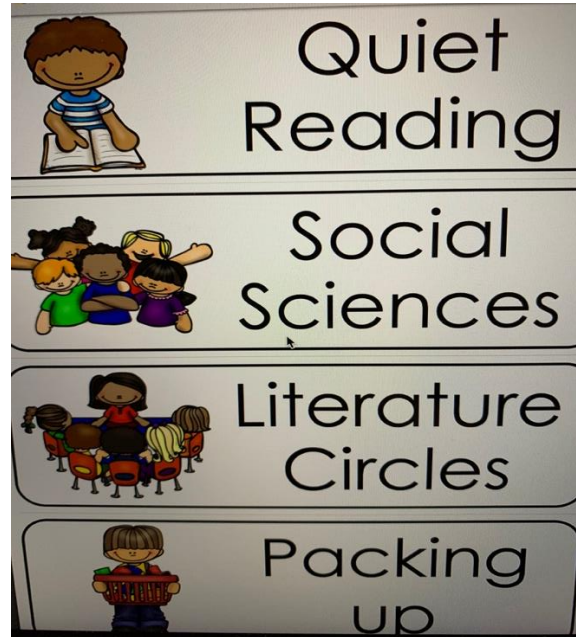
### Interview Questions

1. Do you think you were on-task for the entire assignment?
2. If so, why? If not, why?
3. Did you need help throughout the assignment?
4. Where were you able to get help from it was not from an adult in the classroom?
5. How did you communicate throughout the assignment?

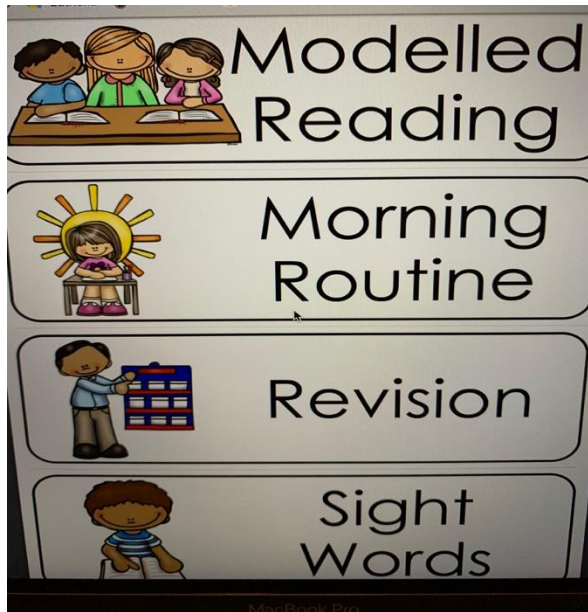
Appendix C



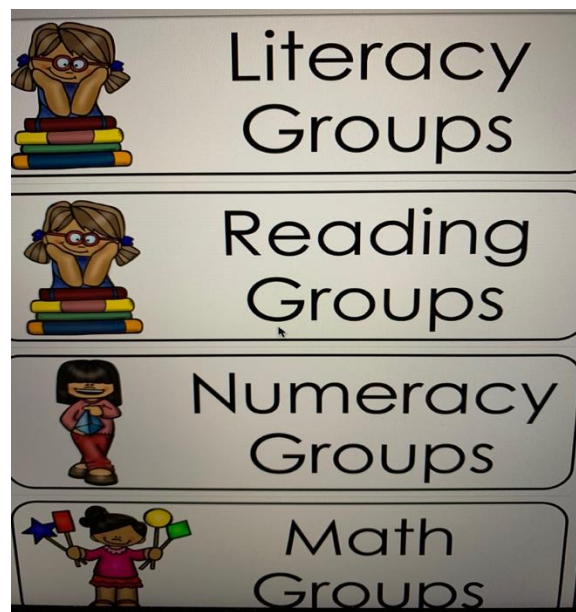
A vertical chart with four sections. The first section shows a girl holding a pencil and the text 'Daily 5'. The second section shows a girl reading a book and the text 'Read To Self'. The third section shows a girl reading to a boy and the text 'Read To Someone'. The fourth section shows wooden blocks spelling 'Word' and 'Work' and the text 'Word Work'.



A vertical chart with four sections. The first section shows a boy reading a book and the text 'Quiet Reading'. The second section shows three children sitting together and the text 'Social Sciences'. The third section shows a girl sitting in a circle of chairs and the text 'Literature Circles'. The fourth section shows a boy holding a basket and the text 'Packing up'.



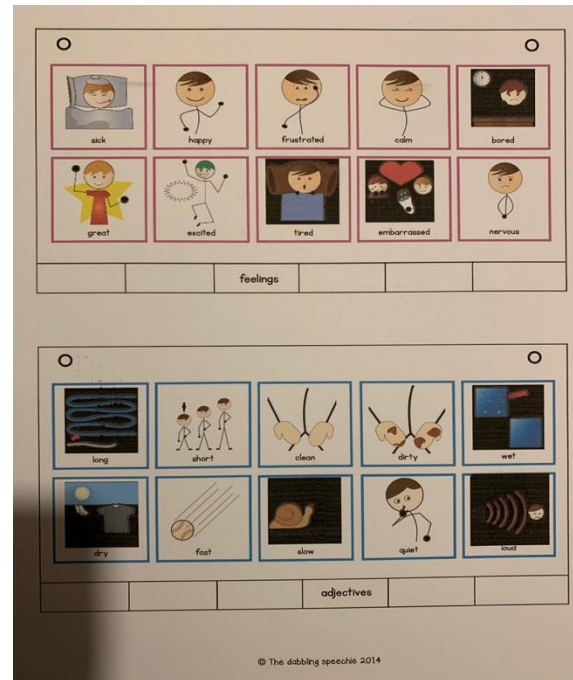
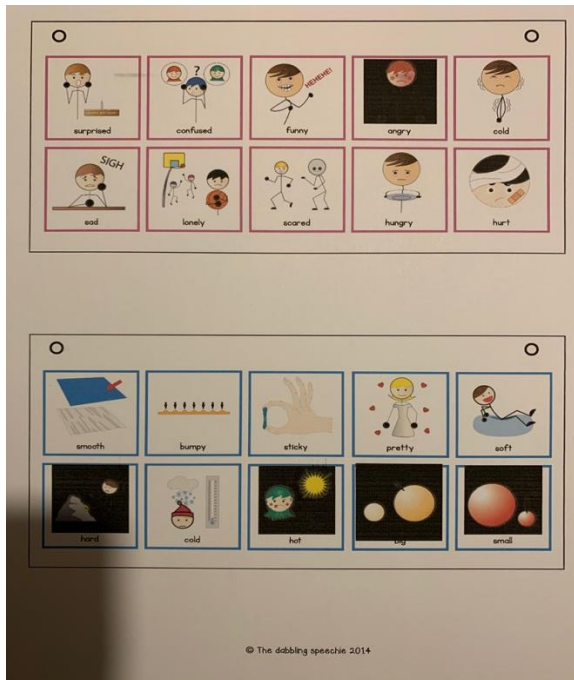
A vertical chart with four sections. The first section shows three children at a desk and the text 'Modelled Reading'. The second section shows a girl reading under a sun and the text 'Morning Routine'. The third section shows a boy pointing to a calendar and the text 'Revision'. The fourth section shows a boy sitting at a desk and the text 'Sight Words'.



A vertical chart with four sections. The first section shows a girl reading and the text 'Literacy Groups'. The second section shows a girl reading and the text 'Reading Groups'. The third section shows a girl reading and the text 'Numeracy Groups'. The fourth section shows a girl holding flags and the text 'Math Groups'.

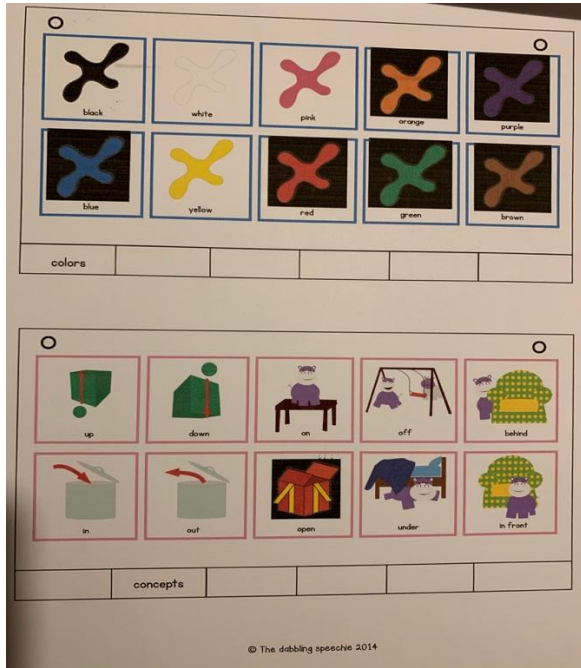
VAS charts to be used in research (Visual Daily Schedule Cards (n.d.)).

Appendix D



AAC charts to be used in research (AAC Starter Kit, (n.d.)).

Appendix E



continued AAC charts to be used in research (AAC Starter Kit, (n.d.)).